



Administration

Berney

Blue Ridge

Edison

Green Park

Prospect Point

Sharpstein

Garrison

Paine

Pioneer

Walla Walla High School

Support Services

ENERGY MANAGEMENT PROGRAM: YEAR 10

The Purpose: To avoid wasting utilities in order to save money to be used for instructional and facility needs.

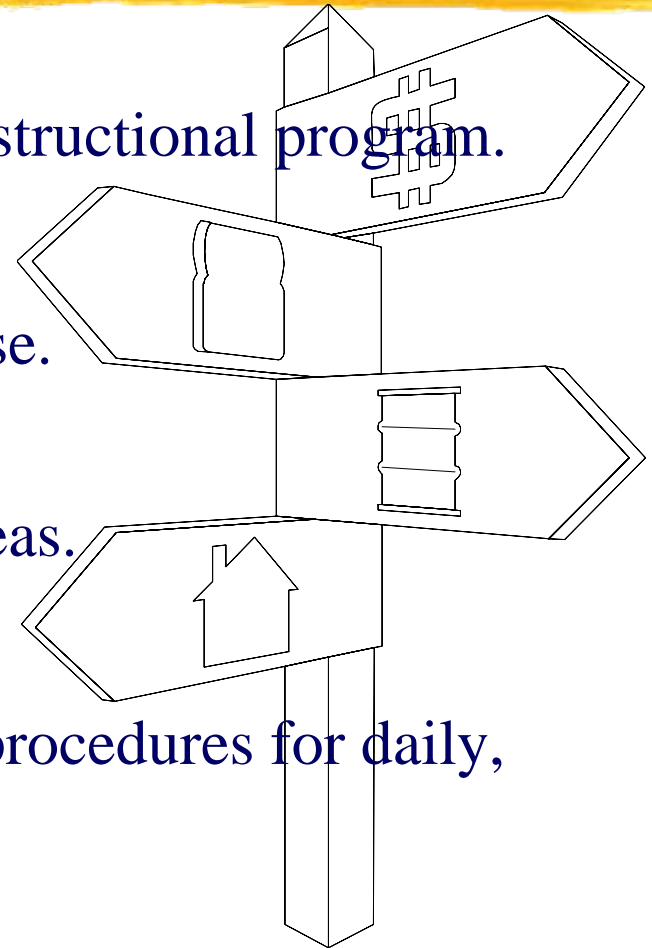
➤ ENERGY REPORT

Background Information:

- Contract awarded to EEI by Board action – June 1999
- Energy Program Start Date – October 1999
- Base Period - October 1998 to September 1999
- Year 1 Reporting Period – October 1999 to September 2000
- Year 5 Reporting Period – October 2005 to September 2006
No longer under contract to Energy Education Inc.
- Year 10 Reporting Period – October 2008 to September 2009

E.M.P. CONSERVATION GOALS

- To not interfere with classroom instructional program.
- To not light areas that are not in use.
- To not heat or cool unoccupied areas.
- To establish equipment shutdown procedures for daily, weekend and holiday savings.



Three Phases of Program



I) Management

II) Education

III) Accounting

Phase I - Management



We know that:

- **Energy efficiency is brought about by conservation strategies and technologies.**
- **People determine and control the use of energy.**
- **The positive spirit and accountability of all the school district employees contribute to the success of the program!**

What is My Role as an Energy Manager?



- **Follow the training, experience, guidelines and advice of Energy Education Inc..**
- **Audit Utility Meters/Bills and District Buildings on a regular basis.**
- **Implement energy saving programs and set up guidelines and procedures for each building.**
- **Help save energy and money for the Walla Walla School District.**

Phase II - Education



Establish an :

- **“Energy Ethic” with each Teacher, Employee and Administrator.**
- **Energy Education and Conservation in the Classroom.**

Phase III – ACCOUNTING

To Determine Cost Avoidance

Automated Logic and Energy CAP computer software is used for energy control and accounting.

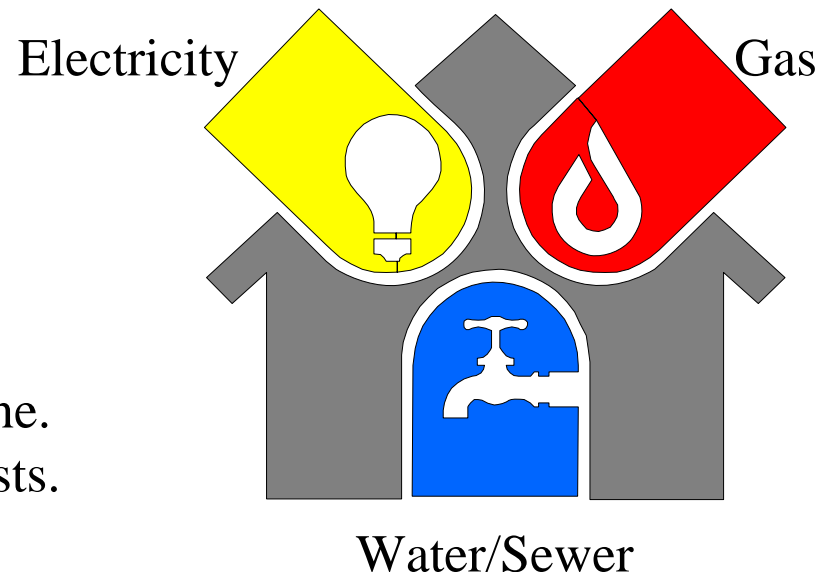
ACCOUNTING PROCESS:

Begins with usage during the base period.

Adjusts For:

- Temperature changes
- Billing period lengths
- Special adjustments
- Develops adjusted baseline.
- Applies current utility costs.
- Building size changes

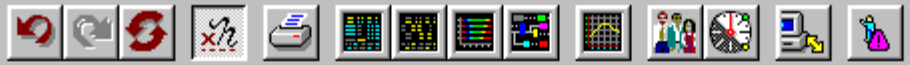
Utilities Tracked:



AUTOMATED LOGIC

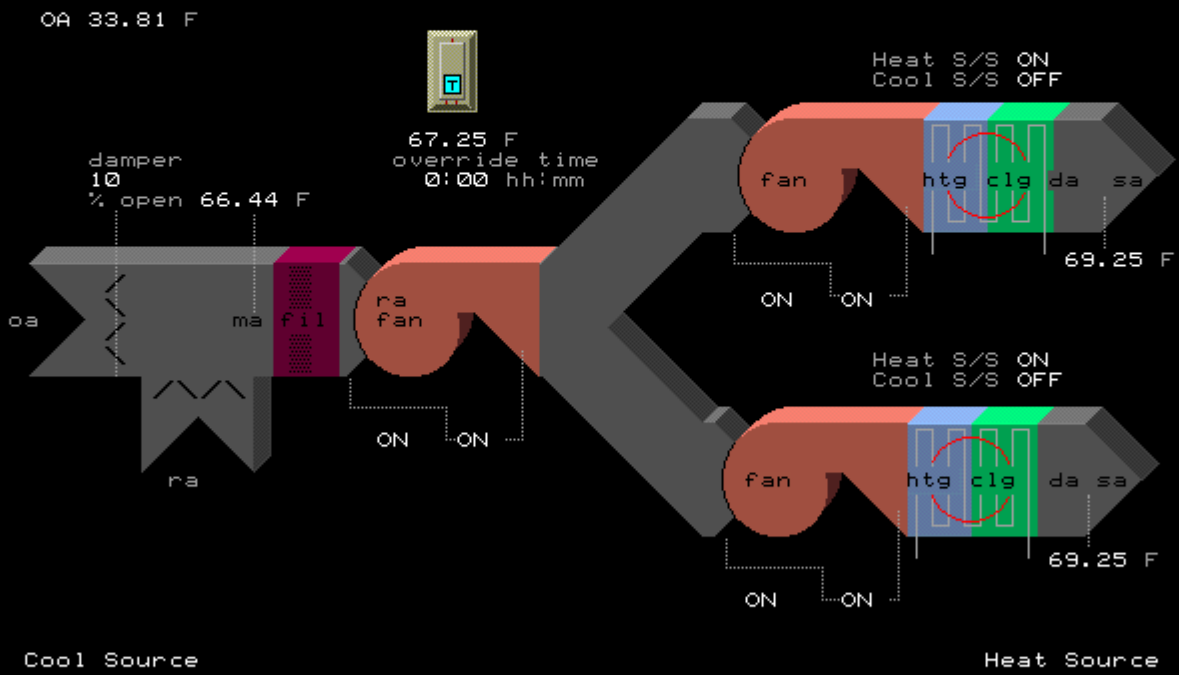


H.P. 9&10 MULTI



(Manual Commands)

AUTOMATED LOGIC



Enter Monthly

Reports

Cost Avoidance



Savings



Use Vs Weather



Calculate Savings



Update Meters

Filter

Meter Code: G#05-539-0393-1

Meter: PIONEER MIDDLE SCHOOL

Account: G#05-539-0393-1

Building: PIONEER MIDDLE SCHOOL

Site: PIONEER MIDDLE SCHOOL

Energy Type: Natural Gas

Baseline Start Date: 10/1/1998

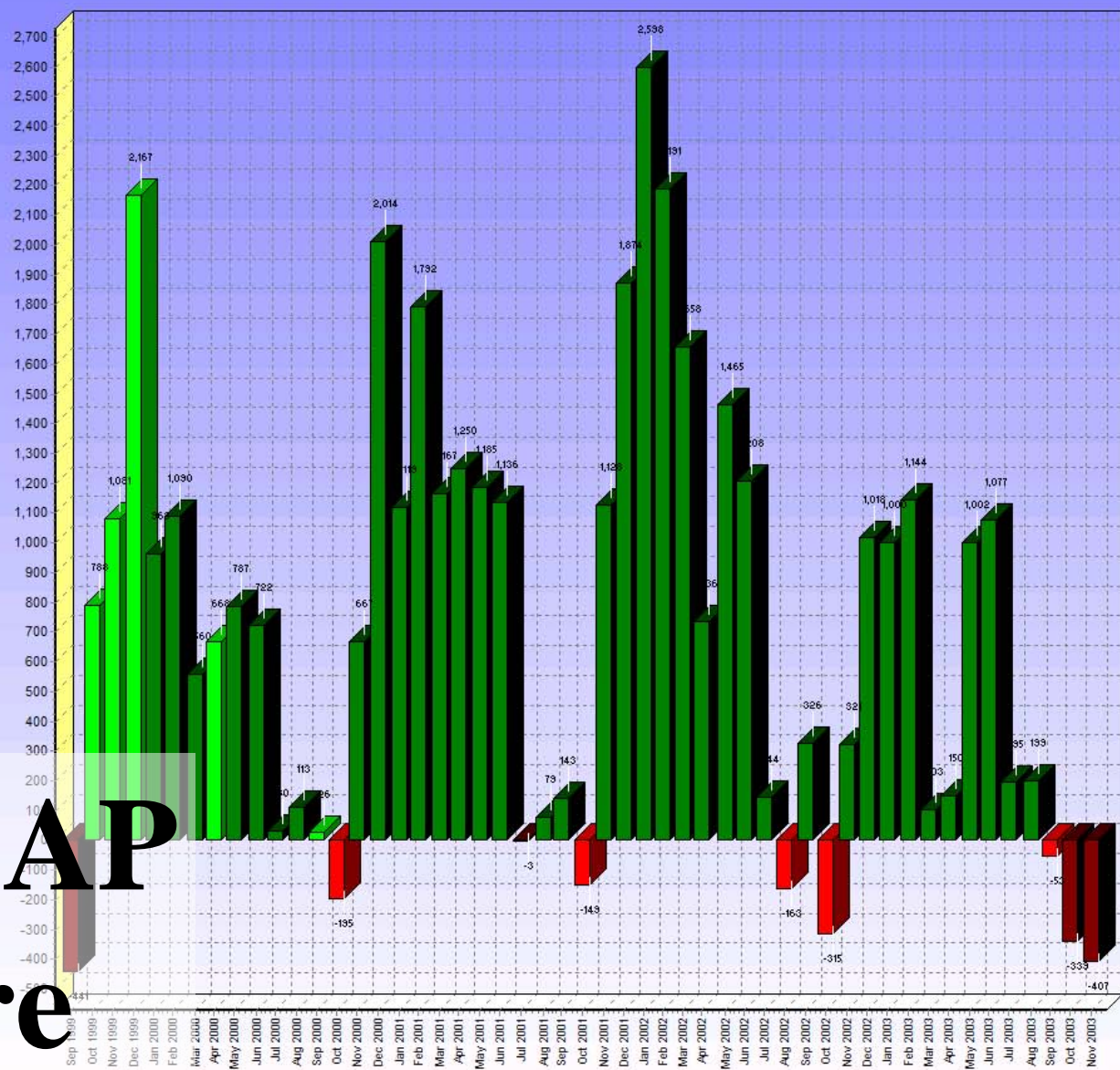
Baseline Length (months): 12

Savings Start Date: 10/1/1999

Mth	Year	Without CAP Cost	Actual Cost	Cost Avoidance	W/Th Htg	W/Th Clg
Nov	2003	\$4,939	\$5,346	-\$407	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Oct	2003	\$1,521	\$1,860	-\$339	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sep	2003	\$492	\$545	-\$53	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Aug	2003	\$334	\$135	\$199	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jul	2003	\$294	\$99	\$195	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jun	2003	\$1,275	\$197	\$1077	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
May	2003	\$2,274	\$1,272	\$1002	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apr	2003	\$2,510	\$2,361	\$150	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mar	2003	\$3,129	\$3,027	\$103	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Feb	2003	\$6,364	\$5,219	\$1144	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jan	2003	\$5,859	\$4,859	\$1000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dec	2002	\$4,776	\$3,757	\$1018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nov	2002	\$5,126	\$4,805	\$321	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Oct	2002	\$2,377	\$2,692	-\$315	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sep	2002	\$579	\$252	\$326	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Aug	2002	\$288	\$451	-\$163	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jul	2002	\$254	\$110	\$144	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jun	2002	\$1,404	\$196	\$1208	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
May	2002	\$2,635	\$1,171	\$1465	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apr	2002	\$2,401	\$1,665	\$736	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mar	2002	\$5,427	\$3,769	\$1658	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Feb	2002	\$6,088	\$3,898	\$2191	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jan	2002	\$6,655	\$4,057	\$2598	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dec	2001	\$5,990	\$4,116	\$1874	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nov	2001	\$4,383	\$3,254	\$1128	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Oct	2001	\$1,954	\$2,103	-\$149	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sep	2001	\$464	\$322	\$143	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Aug	2001	\$349	\$270	\$79	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jul	2001	\$247	\$251	-\$3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jun	2001	\$1,456	\$320	\$1136	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
May	2001	\$2,238	\$1,053	\$1185	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apr	2001	\$333	\$92	\$241	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mar	2001	\$4,127	\$2,577	\$1550	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Feb	2001	\$6,439	\$5,320	\$1119	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jan	2001	\$6,481	\$4,467	\$2014	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nov	2000	\$4,288	\$3,620	\$667	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Oct	2000	\$2,108	\$2,303	-\$195	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sep	2000	\$764	\$488	\$276	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Aug	2000	\$521	\$37	\$484	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jul	2000	\$1,521	\$32	\$1489	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Jun	2000	\$3,344	\$72	\$3272	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
May	2000	\$1,463	\$576	\$887	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apr	2000	\$1,878	\$1,210	\$668	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Energy CAP Software

Cost Avoidance Graph



Dec. 1998 = 640,000 kWh
Base Year Cost = \$24,000

Dec. 2002 = 368,000 kWh
Used: 42% Less Cost = \$18,000

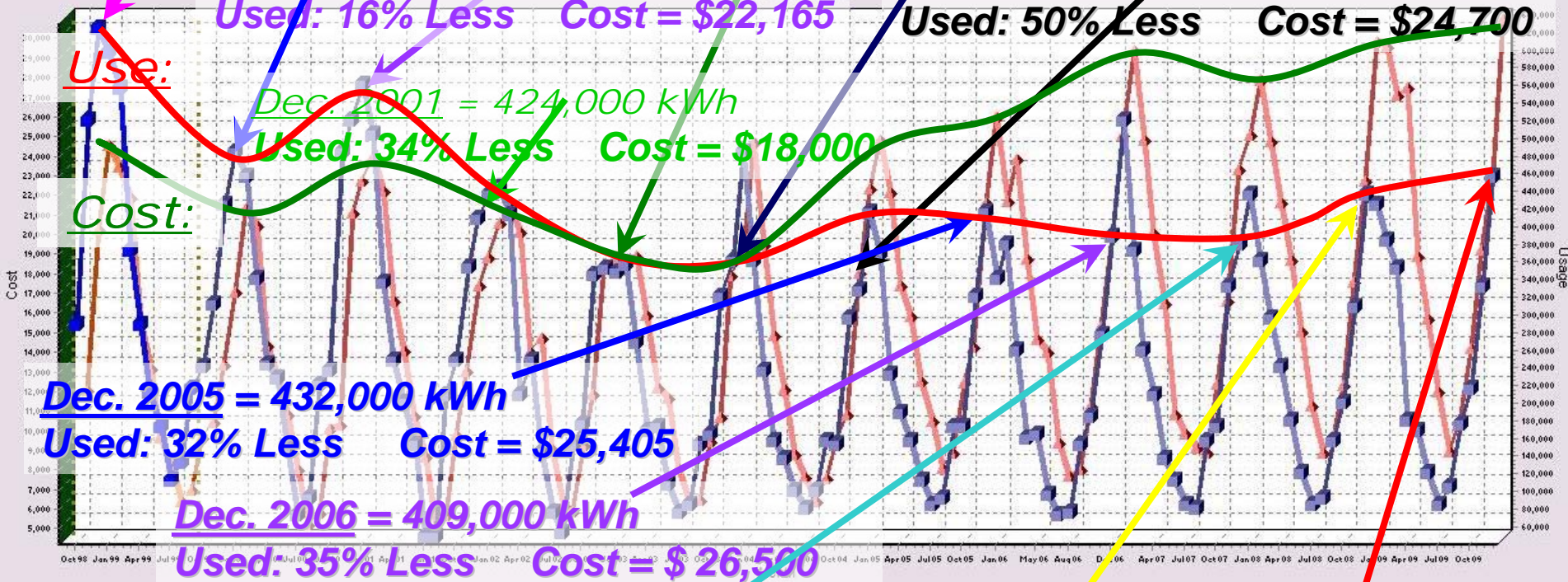
Dec. 1999 = 440,000 kWh
Used: 32% Less Cost = \$16,486

Dec. 2003 = 376,000 kWh
Used: 41% Less Cost = \$18,600

Dec. 2000 = 536,000 kWh
Used: 16% Less Cost = \$22,165

Dec. 2004 = 324,000 kWh
Used: 50% Less Cost = \$24,700

Dec. 2001 = 424,000 kWh
Used: 34% Less Cost = \$18,000



Dec. 2005 = 432,000 kWh
Used: 32% Less Cost = \$25,405

Dec. 2006 = 409,000 kWh
Used: 35% Less Cost = \$26,500

Dec. 2007 = 396,000 kWh
Used: 37% Less Cost = \$24,465

Dec. 2008 = 452,000 kWh
Used: 30% Less Cost = \$29,280

WA-HI

Dec. 2009 = 472,000 kWh
Used: 27% Less Cost = \$30,422

Electric Meter: Cost and Use

CHANGES IN THE DISTRICT “AFFECTING UTILITY CONSUMPTION”



CHANGES:

- Increased Technology**
- Increased Building Usage/Square Footage**
- Repair/Maintenance of Existing HVAC Equipment**

Overall Utility Costs

Reporting Period - October 2008 to September 2009

Base Year Costs: \$748,288

Year 6 Costs: \$812,237

Year 7 Costs: \$881,543

Year 8 Costs: \$967,473

Year 9 Costs: \$962,116

Year 10 Costs: \$1,072,046

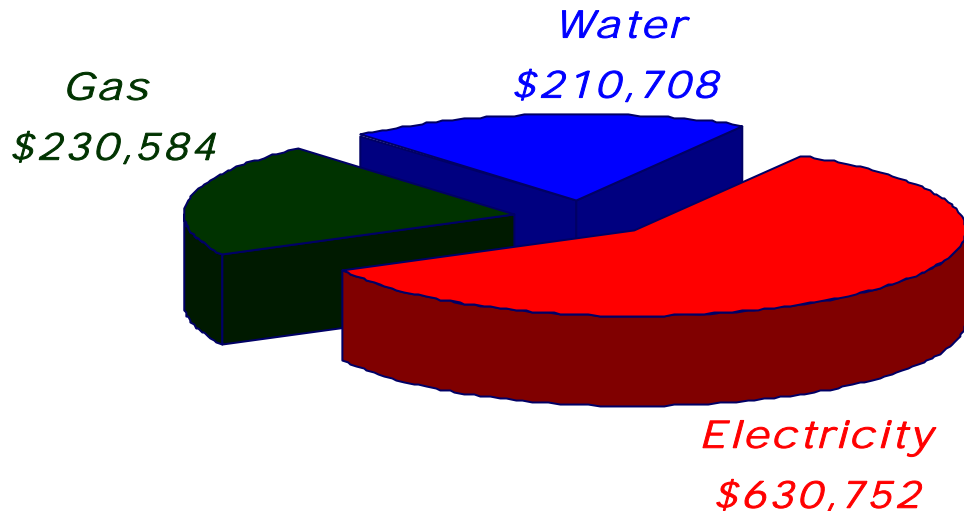
Year 1 Costs: \$645,033

Year 2 Costs: \$681,280

Year 3 Costs: \$749,180

Year 4 Costs: \$767,412

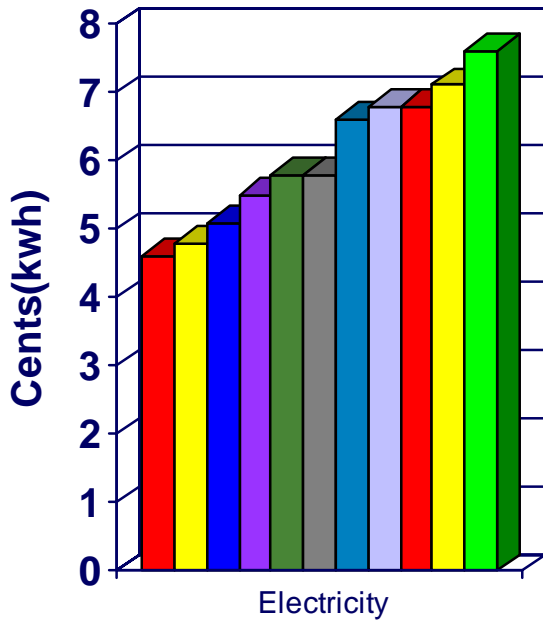
Year 5 Costs: \$781,437



Walla Walla Public School System Utility Rate Comparison

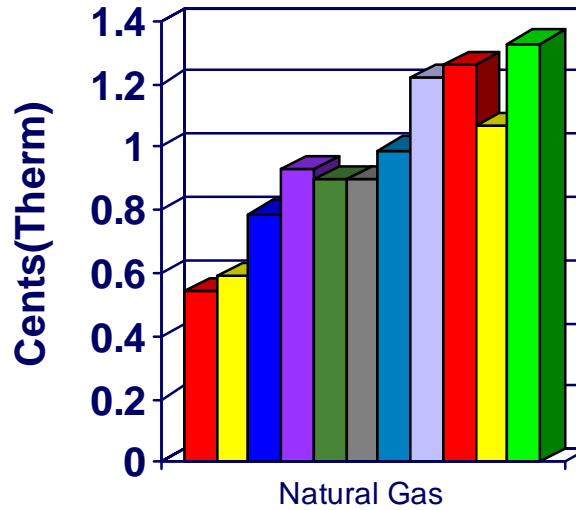
Electricity

Up 64% (7.6 Cents)



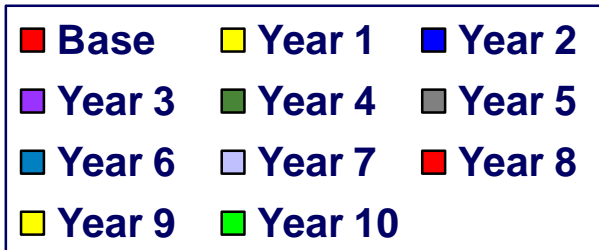
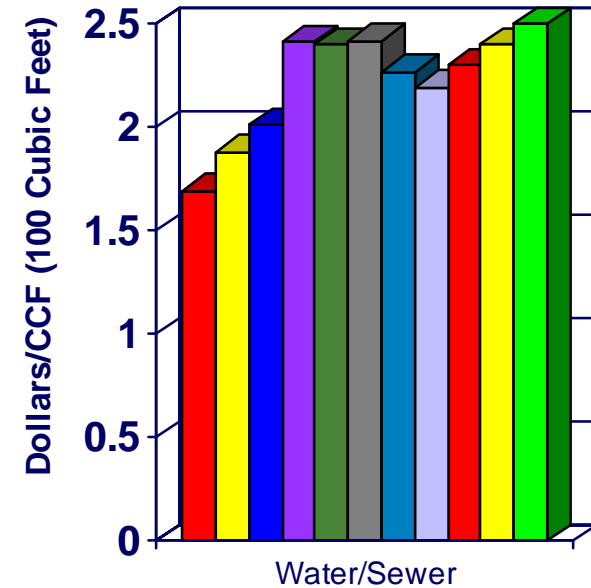
Natural Gas

Up 145% (\$1.33)



Water/Sewer

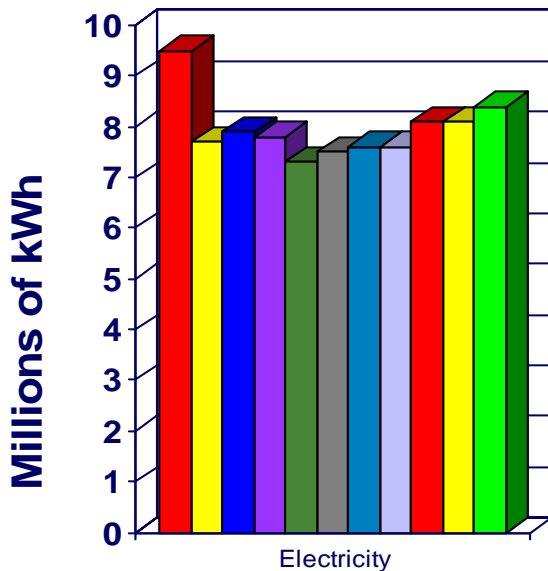
Up 50% (\$2.54)



Walla Walla Public School System Consumption Comparison

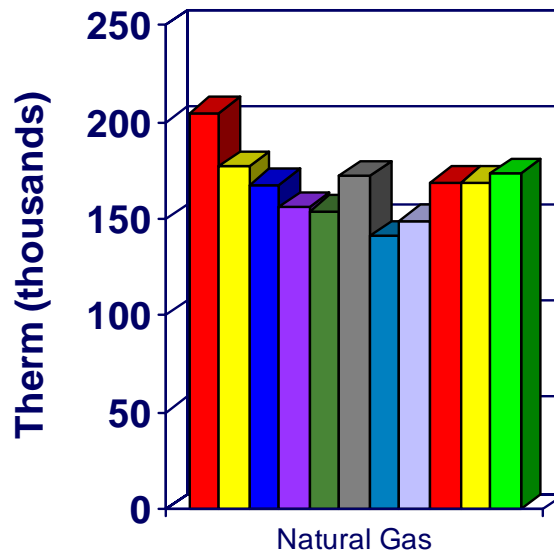
Electricity

Saved 1,104,893 kWh
12% (9.5 - 8.4)



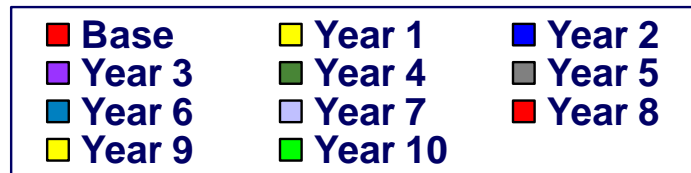
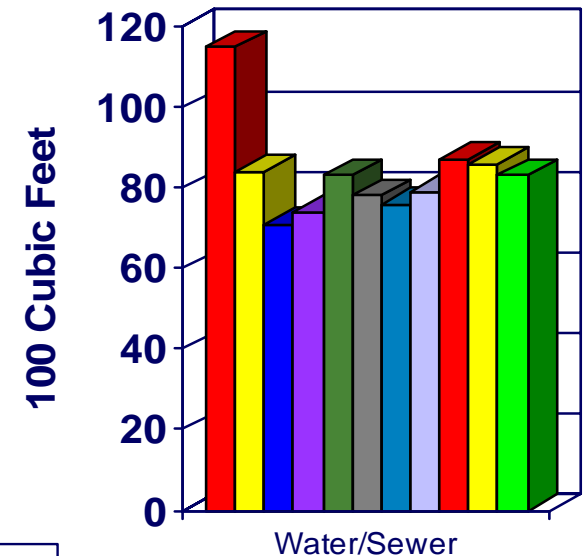
Natural Gas

Saved 31,321 therms
15% (205 - 173)

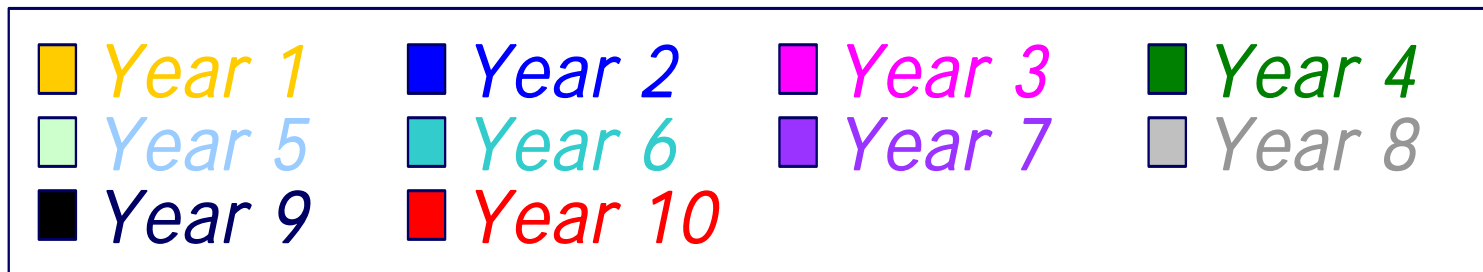
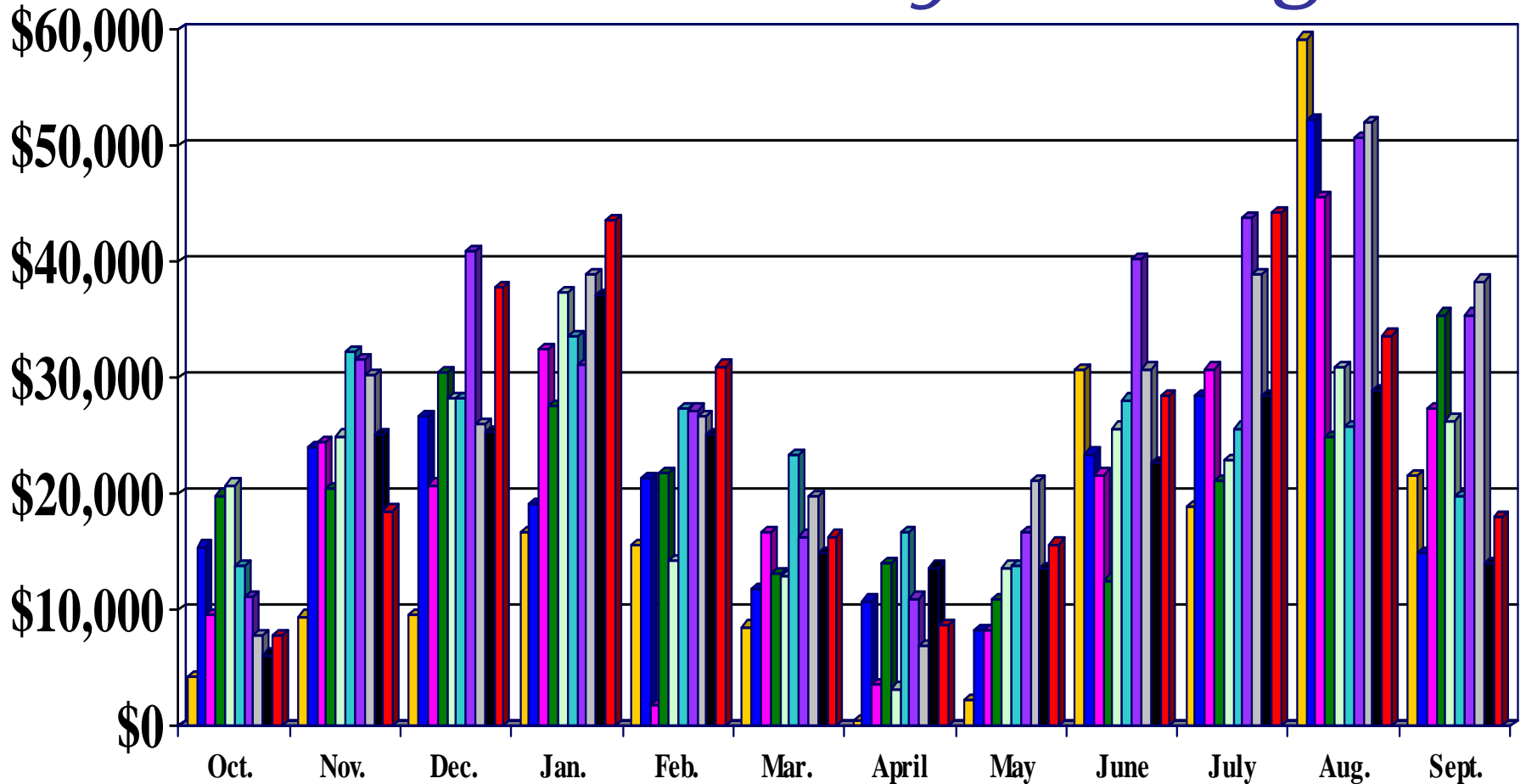


Water/Sewer

Saved 3,166 CCF
(31,660 CF)
27% (115 - 83)

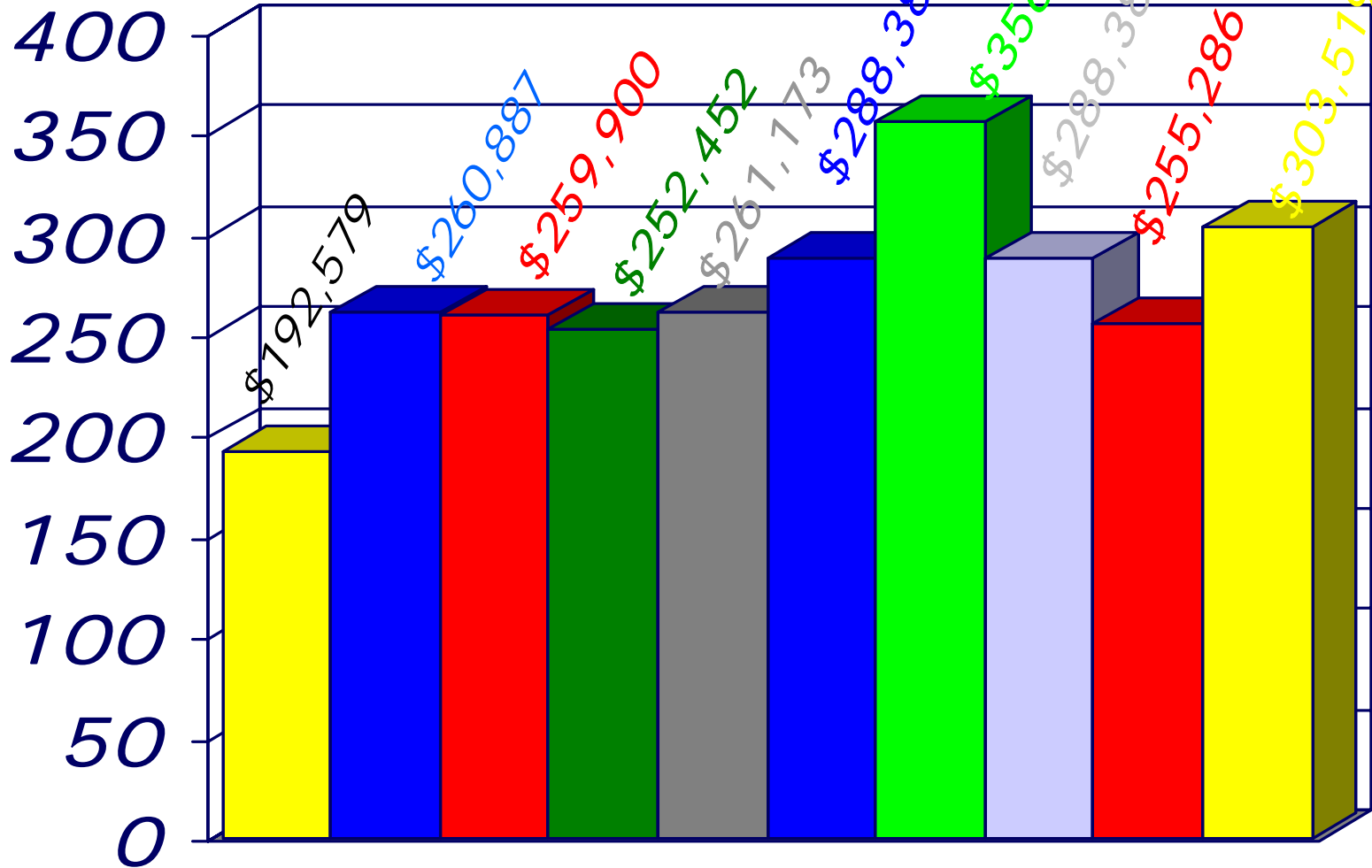


Actual Monthly Savings



Thousands

Energy Cost Avoidance



- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Year 6
- Year 7
- Year 8
- Year 9
- Year 10

SUMMARY (Year 10)

October 2008 - September 2009

Anticipated Costs Without Energy Program

Actual Base Year Costs	\$ 746,854
Rate Changes (Increase)	\$ 526,626
Weather (Harsher)	\$ 79,443
Technology/Utility Load Increase	\$ 24,754
Billing Period Change (4 days less)	\$ -13,968
Refunds and Rebates	\$ 11,856

Total Anticipated Energy Cost **\$ 1,375,565**

Actual Year 10 Costs **\$ 1,072,046**

Total Cost Avoidance from Energy Reduction

\$ 303,519

*Total Energy Cost Avoidance
Oct. 1999 through Dec. 2009
10 Years - 3 Months*



Energy Star Ratings

Walla Walla School District



<u>Building</u>	<u>Date</u>	<u>Rating</u>
<i>Scale: 1-100</i>	<i>Larger the number the Greater Energy Efficiency</i>	
BE - BERNEY ELEMENTARY	02/24/2010	84
BR - BLUE RIDGE ELEMENTARY	02/24/2010	64
EE- OLD EDISON	02/24/2010	65
GP - GREEN PARK	02/24/2010	87
PP - PROSPECT POINT	02/24/2010	64
SE – SHARPSTEIN	02/24/2010	81
WH - WALLA WALLA HIGH SCHOOL	02/24/2010	27
GMS - GARRISON MIDDLE SCHOOL	02/24/2010	90
PMS - PIONEER MIDDLE SCHOOL	02/24/2010	58
LIN - LINCOLN CAMPUS	02/24/2010	79