The Energy Educator

ENERGY MANAGEMENT

YEAR 12

The Energy Management Program

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

Guiding Rules:

Do not interfere with the classroom instructional program.

Do not light areas that are not in use.

Do not heat or cool unoccupied areas. Establish and practice equipment shutdown procedures for daily and holiday savings.

Three Steps to Energy Savings

1. Turn off lights when you leave the room.
2. Turn off <u>all</u> electronic equipment at the end of the day.
3. Turn off or setback the thermostat every day.

Settings for Setback: Heating 55 Degrees/Cooling 90 Degrees
(Fans set on Auto.)

Special points of interest:

The four year contract the district had with Energy Education, Inc. has ended. The district will no longer be required to pay the consulting fee which will result in an additional $78,000 savings each year.

Energy Education Inc. works for and with only K-12 public schools nation wide. They currently have over 500 contracts. 4 in Washington State.

There was a total reduction of $105,000 in energy costs in the 1st year of the Energy management program.

The Energy Management program uses Energy CAP software to track utilities and Automated Logic: Supervision to control energy systems.
Utilities Tracked: Electricity, Gas, Water / Sewer/, Sanitation.
There are three phases to the Energy Management Program:
        Management, Education and Accounting.
Energy Saving Achievements this far: Reduced water meter usage in WA-HI's Agriculture field will save more then $20,000.00 annually. Rebated $35,000.00 on an sewer charges at WA-HI. Rebated $2,500.00 on overcharged water meter at Prospect Point. Rebated $10,000.00 on overcharged water meter at WA-HI. Rebated $800.00 on overcharged water meter at Pioneer Middle School. Removal of 4 meters that were not being used, but were being charged for. Reduction of $200.00 to $500.00 monthly on sanitation charges at various schools.
Energy rate increases have totaled over $ 564,000 in additional costs.
Over the 12 years WWPS Energy Management Program has saved over 24% and 3.3 Million dollars.

Oct. 2010– Sept. 2011	
	Percent Saved
ADMINISTRATION	1%
BERNEY ELEMENTARY	20%
BLUE RIDGE ELEMENTARY	-7%
EDISON ELEMENTARY	11%
GARRISON MIDDLE SCHOOL	23%
GREEN PARK	18%
LINCOLN CAMPUS	10%
PIONEER MIDDLE SCHOOL	19%
PROSPECT POINT	29%
SHARPSTEIN	8%
SUPPORT SERVICES	6%
WALLA WALLA HIGH SCH.	29%
Grand Totals:	**21 %**
Saved: $315,450	
Electical 21% Gas 14% Water 25%	

Year 12 Costs: $1,183,950

- Electricity $696,089
- Gas $175,589
- Water $254,217

Base Year Costs:	$748,288
Year 1 Costs:	$645,033
Year 2 Costs:	$681,280
Year 3 Costs:	$749,180
Year 4 Costs:	$767,412
Year 5 Costs:	$811,367
Year 6 Costs:	$812,237
Year 7 Costs:	$881,543
Year 8 Costs:	$967,473
Year 9 Costs:	$962,116
Year 10 Costs:	$1,083,937
Year 11 Costs:	$1,107,411

Utility Rate Comparison

Electricity
Up 85% ($.086)

Cents(kwh) — vertical axis (0–9)
Electricity

Natural Gas
Up 82% ($.99)

Cents(Therm) — vertical axis (0–1.4)
Natural Gas

Legend:
- Base
- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Year 6
- Year 7
- Year 8
- Year 9
- Year 10
- Year 11
- Year 12

Water/Sewer
Up 86% ($3.15)

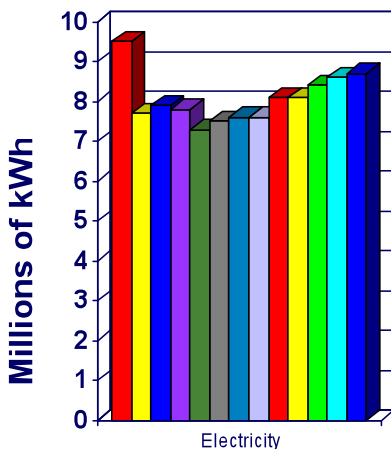Dollars/CCF (100 Cubic Feet) — vertical axis (0–3.5)
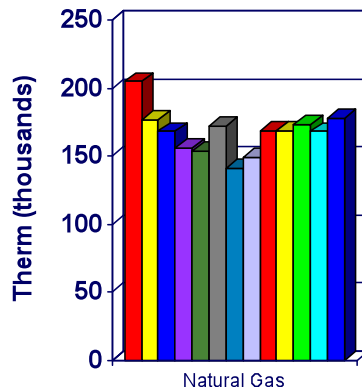Water/Sewer

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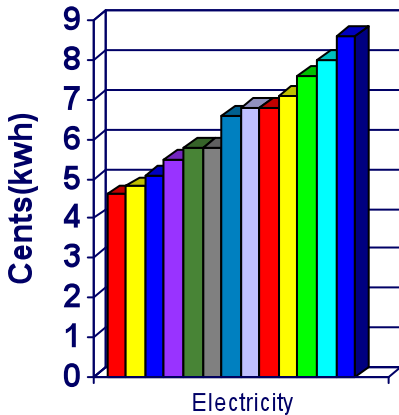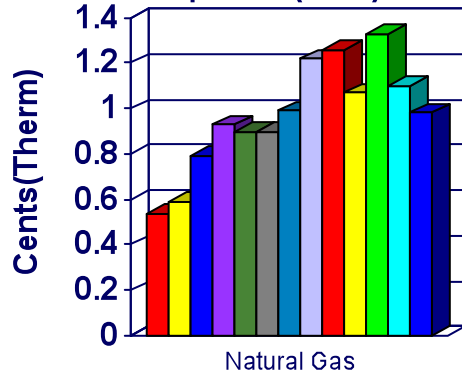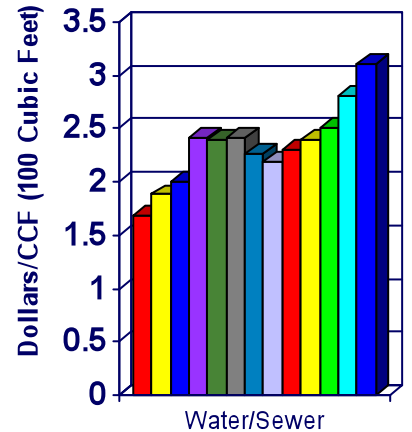
DID YOU KNOW?

The benefits of turning equipment off include financial savings, longer equipment life and reduced risk of damage to motors, computers and lighting caused by power fluctuations/lightening.

It takes 20 times the energy to keep a classroom at 68 degrees for 14 hrs., then it does to set it back to 55 degrees for 14 hrs. and then bringing it back up to 68 degrees(in 10 degree weather).

It is more economical to turn incandescent and fluorescent lights off each time you leave the room.

A F40 rapid start fluorescent lamp operating continuously lasts 4.3 yrs. The same lamp used for a normal 40 hr. work week, lasts 10 ½ yrs. You cut Power Consumption and Replacement Costs.

A computer left on 24 hrs. Per. day is wearing out its components at least 3 to 4 times faster then necessary. A computer operating continuously will have an average life of 2.3 yrs.   Turned off nights and weekends it increases to 9.6 yrs.

Experts in the computer industry have determined that turning them off will not hurt them. They have determined that heat is the primary reason for failure. A computer left on for 8 hrs. a day will cost the district about $50.00 annually, 24 hrs. = $150.00 annually.

WWPS uses Vending Misers on vending machines and the Watt Stopper: Isole Occupancy Power Strips on desktops.

Consumption Comparison

Electricity
Saved 682,672 kWh
7% (9.5 - 8.7)

Millions of kWh — vertical axis (0–10)
Electricity

Natural Gas
Saved   26,727 therms
13% (205 - 178)

Therm (thousands) — vertical axis (0–250)
Natural Gas

Legend:
- Base
- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Year 6
- Year 7
- Year 8
- Year 9
- Year 10
- Year 11
- Year 12

Water/Sewer
Saved 3,445 CCF
(34,457 CF)
30% (115 - 83)

100 Cubic Feet — vertical axis (0–120)
Water/Sewer