673rd CES --

ENERGY MANAGEMENT

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JBER Energy Program

- Basics:

- Supervisors are in charge.
- Senior Supervisor in office must delegate authority to individuals in writing.
- One senior Facility Manager (FM) per building minimum; one per activity in multi-use building
- FM Training is mandatory; annual retraining.
- Apply common sense to saving energy.

Getting People to Do Something.

Manager: Decide if voluntary or part of one's job: Supervise anything you delegate.

How to kill the energy program – what to observe:

- 1. Don't assign duties in writing.
- 2. Don't attend meetings, or arrive late.
- 3. Never have anything to say at a meeting.
- 4. Sit in the back and talk with others about anything but the meeting topics.
- 5. Talk cooperation, but don't cooperate.
- 6. Never accept an office, nor give it any time.
- 7. If asked to help, say you don't have time.

JBER Energy Program

- Facility Manager Briefing:

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IAW JBER ENERGY POLICY (JBER CO Policy Letter JBER-29, dated 24 June 2014)

- Assure thermostats are set to an approved temperature:
  - Buildings should be set no higher than 70° during duty hours and no higher than 65° during off-duty hours.
  - Shops/warehouses (not hangars), set no higher than 65°
- Turn off all copy machines, computer monitors, printers, computer speakers, and other computer peripherals at the end of each duty day.
  - Do not shut down computers. This does not apply to mission-essential computers peripherals and other office equipment.
- Turn off all personal electronic devices (radios, CD/tape players, fans) when not in use, and never leave devices on at the end of the duty day.

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- Personal refrigerators intended/utilized for only one person's use are prohibited in work/office areas.
  - Exceptions are allowed for general officers and commanders who have conference room meeting requirements that justify single use.
  - Authorized "shared" refrigeration is 1 CF per person in the work areas. Large, kitchen refrigerators = 12 CF, small bar type = 6 CF

- Assure facility personnel turn off lights in areas which are unoccupied during the day.
  - Maximize ambient, outside light, and task lighting to safely illuminate areas.

- Review procedures within your facility to turn off any unnecessary interior or exterior lighting that may be left on at night.
  - End-of-day facility checks should include procedures to turn off any lighting not necessary to meet safety/security requirements.

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- Remind facility occupants that exterior lights which remain on during the day (**day burners**) are prohibited
  - If switched, these lights are to be turned off during daylight hours.
  - If controlled by photocells which no longer shut the lights off during daylight hours, report these to the 773 CES Customer Service at 552-3727
  - Facility managers should review with unit supervisors the use of lights which are switched. Lights turned on only when needed (e.g. loading dock) may remain with a switch. Lights turned on for the night with a switch should be called in Customer Service. Use the phase “Day burner, install daylight sensor” when making the request.

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- The Facility Manager (Unit Energy Manager) should not purchase incandescent light bulbs.
  - Only compact fluorescent lamps (CFLs) or LEDs will be purchased.
  - The base standard for tubular fluorescent lamps and ballasts is T8 lamps and electronic ballasts, with the goal of eliminating all T12 lamps (and larger tubes) and magnetic ballasts.
  - T12 fixtures and magnetic ballasts are prohibited for all new construction and/or renovation. Replacing a burned out or malfunctioning T12 lamp with a new T12 lamp is acceptable as long as the ballast is functioning properly.
  - If, on the other hand, the T12 ballast is no longer operating correctly, then the fixture is to be retrofitted with new T8 electronic ballasts and lamps.

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- Facility Managers, or other representatives designated by the squadron and tenant unit leadership, will be responsible for ensuring compliance and obtaining requisite approval for exception to JBER Energy policies through 673 CES/CENPE.

- Facility Managers should be aware that for new construction and lighting, LED fixtures will be considered in the design for office, warehouse and maintenance facilities, and all exterior lighting.

- If you have questions about purchasing CFLs or LED lamps please email JBEREnergy@us.af.mil , or calling the IEM at 384-6644.

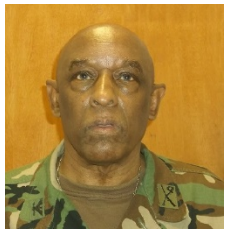
Example of Contract Information

Place on bulletin boards, inside break rooms, etc.

This is **Building 16305**

Your Installation Energy Manager is __George Smith__.
phone 907-555-1234 .

Your **Facility Manager (for Energy)** is __**John H. Doe**__



phone__**907-555-5678**_____

Please report any problems with this building to the Facility Manager as soon as possible.

Energy Definition

Energy Conservation can be defined in 4 categories:

1. Saves Energy but not money.
2. Saves Money but not energy.
3. Saves both Money and Energy.
4. Makes you feel good.

Energy Quiz

Remember to ask “why” when you observe something wrong.

1. What's Wrong with this Picture?

1. What's wrong Answer

Light Pollution vs an Extreme Dark Skies Initiative

It illustrates that energy conservation taken to extremes does not improve QOL or Mission Accomplishment.

The proper use of energy is:

Use the energy you need to accomplish the mission; just do not waste it.

Energy wasted is energy denied for future missions and future generations

North Korea at 8:00 pm local time

North Korea vs South Korea (to the south) and China (to the north). The one small bright spot is Pyongyang, the capital of North Korea.

2. Energy vs Lumens

Incandescent (60 watt bulb)

Compact Fluorescent Bulb

LED Bulb

Note:
Comparison usage is the same application for all bulbs.

How many watts per hour does each bulb use?

2. Energy vs Wattage Answer

<u>Each bulb equivalent uses</u>:

Incandescent = 60 watts per hour

CFL bulb = 14 watts per hour

LED bulb = 9 watts per hour

Follow up question (extra points):
Which one is the better buy (First cost/life-years) ?

2. Energy vs Wattage Answer

Cost & life data from 2017 Home Depot catalog:

Incandescent = Costs $ 0.50 per bulb, lasts 1.4 years (on average)
= 35 cents per year

CFL Bulb = Costs $ 1.49 per bulb ($ 5.97 four pack), lasts 9 years (on average)
= 17 cents per year

LED Bulb = Costs $ 7.80 per bulb, lasts 16 years (on average)
= 48 cents per year

Based on cost, life and inflation, what do you think is the best buy 5 years from now?

Third question: Based upon the first slide for this section on light bulbs, what was the error in terminology usage? Why?

2. Energy vs Wattage Answer

Terminology Mistake:
"Watts" is used for power, bulbs should be rated in lumens.

60 Watts

800 lumens

60 Watt Equivalent (14 watts)

797 lumens

60 Watt Equivalent (9 watts)

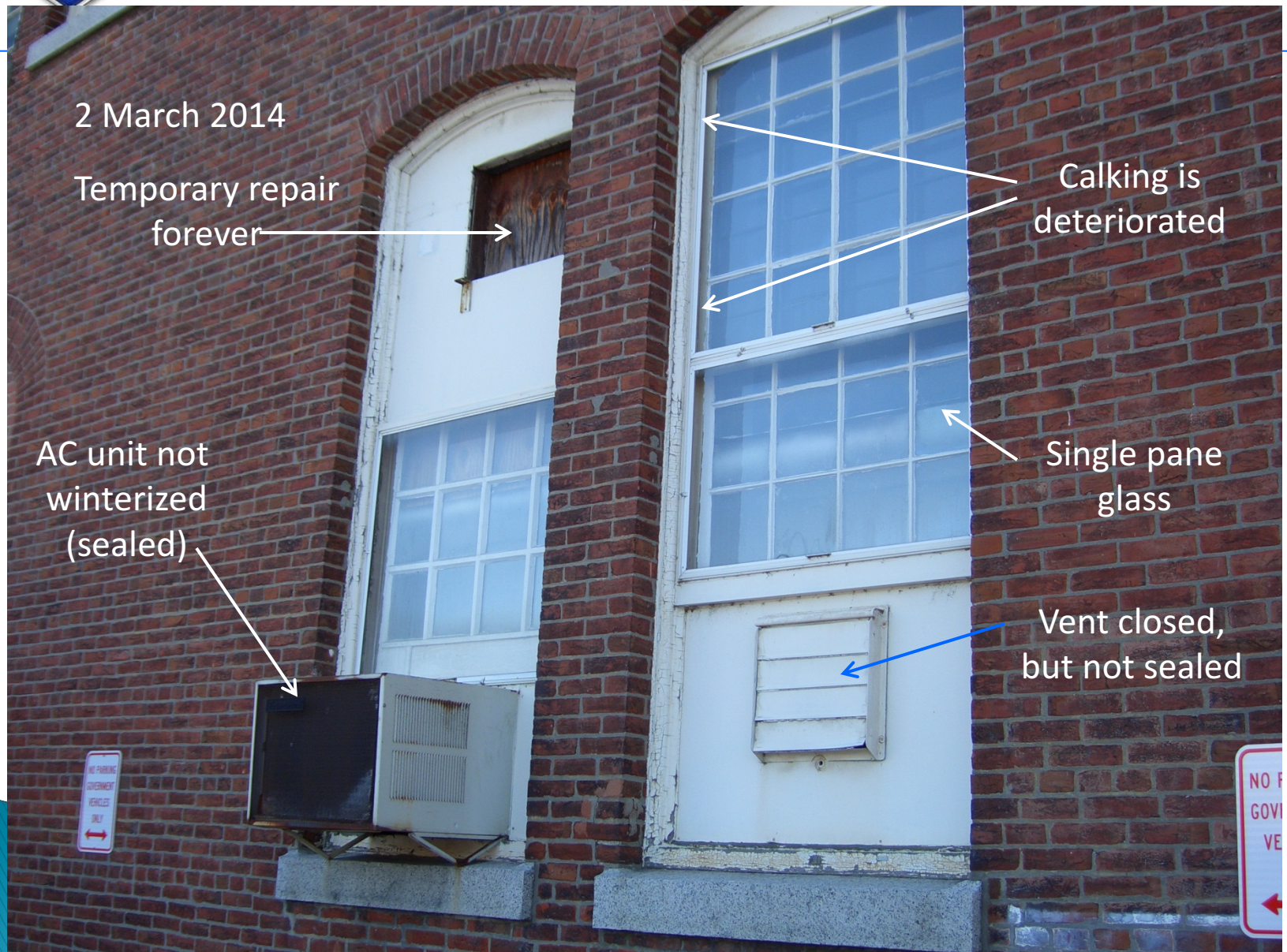
809 lumens

3. What's Wrong with this picture?

What's wrong Answer

4. What's wrong with this Picture?

What's wrong Answer



6. What's wrong with this Picture?

Fort Greely, Alaska
3 October 2009

6. What's wrong Answer

7. What's Wrong with this picture?

7. What's wrong Answer

8. What's Wrong – Question

What is the most under utilized piece of energy saving equipment in the modern office building today?

8. What's Wrong –Answer

- The Common Light Switch

Throwing Money Away

- How much can a good Energy Conservation program save in your buildings?
  - Answer: 7 to 15 percent of the annual cost of
  - heating and electricity.
    - At JBER: that is $ 3.2 Million saved every year.

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Any Questions?