

APES Energy Lab-Monitoring and conservation

Part 1: Faculty Cottages

1. Go to <http://10.14.8.2/>
2. Select each of the 8 cottages, one at a time
3. If a hot water heater uses 4 kW, when does the hot water timer go on in each cottage every day?
4. Why would a heater go on twice in one evening?
5. If today is a sunny day, would expect the hot water heater to go on more in the evening or the morning?
6. If a refrigerator were running, how could you see it on the use graph?
7. Try to correlate the energy use with number of persons in each cottage (ask your teacher about how many in each)
8. How could each cottage conserve energy?

Part 2: Dorms

1. Which dorm uses the most power through the day?
2. When?
3. How could you detect refrigerators using this data?
4. If electricity used between 6 PM and 6 AM costs the school \$0.40/kWh, how much does each dorm cost the school per day?
5. Per year?
6. When do students stop using power-lights out or another time?
7. How could we conserve energy in each dorm?

Part 3: Classrooms

1. Which classroom uses the most power through the day?
2. How can you tell when school starts and ends in each building?
3. What loads do you think could be changed to conserve

energy?

4. What advice would you give the school to conserve power in each of these three cases?