HEATING AND COOLING:

ACCE has:

- 128,000+ sq feet of classroom and office space
- 375 windows
- 6 exterior doors that are regularly used
- 20 individual room air conditioners

One of its biggest uses of power is heating. Cooling is limited to some offices and a several classrooms that are used year-round. Solar gain is a big issue. In the winter, it warms the classrooms and reduces the need for heat, but in summer, it makes many rooms too hot for comfort.

ACCE has planted over thirty trees in the last year and taken up .75 acres of asphalt. While the primary benefit from this is storm water related, the building also benefits from the trees being able to help moderate the air temperature around the building, and reduce reflected heat in the summer.

LIGHTING

ACCE has over 2400 florescent light tubes

If they are on 12 hours/day, the cost is $144/day

For 261 days/year, that equals $37,584/year

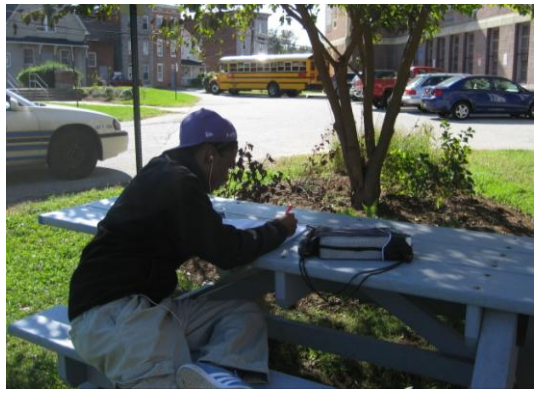
- 10% are closet or utility areas where lights are needed only 1-2 hours/day
- 70% are classroom lights where there are less than 6 hours/day of teaching time.
- 2/3 of classrooms have south, southwest, or west facing windows
- Artificial light is not needed during those hours when the sun is on that side of the building.
- Classrooms lit by natural light have a calmer feel.
- Even north facing classrooms do not need light on all day.

If the light usage was reduced to less than 2 hours/day for closets and storage areas and classrooms had lights on only 3 hours/day, the daily cost of lights could be reduced to $55.44, or 38% of the 12 hour per day use cost.

The students recommend putting lights on timers to turn them off when the sun is on that side of the building and when not in use.

WHAT THE HOME and BUSINESS OWNER CAN DO:

- Use rooms at times that natural light can provide needed illumination
- Turn off lights when not in the room, especially storage areas
- Get used to working in natural light; it has a calmer feel
- Plant trees to prevent solar gain into the house
- Remove asphalt and concrete from areas that reflect heat into the house.
- If the asphalt cannot be removed, paint it white, or plant a tree nearby to shade the area.



ACCE STUDENT LIGHT and POWER STUDY