

# TOP TEN LONG-TERM SCHOOL FACILITIES IMPROVEMENTS

Students, teachers, faculty, administration, and facility managers may participate in these efforts. The costs vary but are relatively inexpensive and bring return on investment with savings over time. The ten presented are intended to encourage thinking about different ways that energy is used in schools and on school-grounds.

	ACTION	CURRENT USE		ACTION	CURRENT USE
1	south facade		6	lighting retrofits	
2	seal leaks		7	motion sensors	26% elec.
3	deter winds	34% gas 5% elec.	8	bulb dimmers	
4	replace filters		9	aerators	8% gas 2% elec.
5	power strips	26% elec.		xeriscaping	10% elec.

### 1. SOUTH FACADE

Deciduous trees can provide shade in the warmer months, and allow the sun to heat the building during winter months. Installing shades in southern windows can also be very helpful in avoiding unwanted heat gain.

<https://bit.ly/2lIHxID>

### 2. SEAL LEAKS

Use a thermal imaging camera to identify areas of your building where heat may be escaping. Use caulk or weather-stripping to seal these leaks and avoid heat transfer. This will lessen the work that your HVAC system needs to do to reach optimal thermal comfort.

<https://bit.ly/2lIHxID>

### 3. DETER WINDS

Coniferous trees and shrubs can be planted along the north, west and east sides of the site to deter winds away from your building. According to the Department of Energy, this can reduce your buildings heating bills by up to 33%.

<https://bit.ly/2pUncDx>

### 4. REPLACE FILTERS

Air Handling Unit filters should be replaced every 1-3 months so that the equipment can work efficiently. In a climate where schools need to be heated for the majority of the year, this can make a huge impact upon your utility bill.

<https://bit.ly/2lIHxID>

### 5. POWER STRIPS

Even when electronics are turned off, they can still be consuming energy. Power strips will allow you to completely cut off power to equipment when it's not in use. Occupancy sensors can ensure power strips are turned off whenever the room is unoccupied.

<https://bit.ly/2lIHxID>

## 6. LIGHTING RETROFITS

Replace incandescent bulbs with energy efficient lighting options. We recommend either LED or CFL bulbs. By upgrading your lighting system, you can see significant reductions in your electricity bill.

<https://bit.ly/1t8H6qp>

## 7. MOTION SENSORS

Although it's best to have occupants turn off lights when they aren't in use, it can be hard to remember to do so. Install lighting controls into your lighting system so that energy isn't being wasted on unoccupied spaces. Sensors that measure motion and lighting can help curb excess lighting use.

<https://bit.ly/1C6jvL4>

## 8. BULB DIMMERS

By installing dimmable lights into your school, you can more easily control lighting levels and reduce energy use. Our lighting needs change throughout the day, so by using dimmable lights we can better address our lighting level needs. When lights are dimmed, it also reduces their wattage, adding to energy savings.

<https://bit.ly/1C6jvL4>

## 9. AERATORS

It takes a lot of energy to heat water; by adding aerators to your faucets, you can decrease the amount of warm water used each time. User's will still be able to efficiently wash their hands while additionally saving energy used by the water heater and reducing water consumption.

<https://bit.ly/2lIHxID>

## 10. XERISCAPING

To reduce the amount of water needed to maintain your school's landscaping, use native plants that thrive in your climate. You should also try to reduce the amount of turf areas to what is necessary, because they often require additional energy with regular maintenance work.

<https://bit.ly/1wlnlyC>