

## Action Plan Template • LIGHTING—Page 1

| Action   | Roles & Responsibilities | Implementation Dates               |  |  |  |  |  | Notes |
|--|--------------------------|------------------------------------|--|--|--|--|--|-------|
| <b>Once</b>  |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Establish voluntary teacher/student program to turn off lights to save energy  |                          |                                    |  |  |  |  |  |       |
| Install building automation system to monitor lighting energy use  |                          |                                    |  |  |  |  |  |       |
| Commission or re-commission timer controls, photosensors, and motion sensors   |                          |                                    |  |  |  |  |  |       |
| Install timer controls, photosensors, and motion sensors where appropriate, especially in occasionally used spaces<br>- Consult the manufacturer manual for setting calibrations<br>- All timer and sensor settings should be adjusted for school activities and for changing sunset/sunrise times<br>- All sensor settings should be adjusted to turn off lights after 15 minutes of inactivity<br>- Place contact information near the control in case occupants need assistance |                          |                                    |  |  |  |  |  |       |
| Install dimming ballasts if appropriate and compatible with lighting system  |                          |                                    |  |  |  |  |  |       |
| Install LED lights on exit and emergency signs   |                          |                                    |  |  |  |  |  |       |
| <b>Daily</b>   |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Turn off lights in unoccupied rooms (work with teachers, students, and other building occupants to make this a habit through "lighting patrols" or other programs), if lighting monitor and control systems are not installed or functional  |                          |                                    |  |  |  |  |  |       |
| Turn off all lights at night with the exception of security lights and exit signs, as safety considerations allow, if lighting monitor and control systems are not installed or functional   |                          |                                    |  |  |  |  |  |       |
| Turn outdoor lights off selectively, as safety considerations allow, if lighting monitor and control systems are not installed or functional   |                          |                                    |  |  |  |  |  |       |
| Delay turning lights on in the morning until staff arrive, if lighting monitor and control systems are not installed or functional   |                          |                                    |  |  |  |  |  |       |
| <b>Monthly</b>   |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Check that all interior and select exterior lights are turned off during nights  |                          |                                    |  |  |  |  |  |       |
| Analyze lighting building automation system for opportunities to decrease lighting electricity use   |                          |                                    |  |  |  |  |  |       |
| Check for broken lamps and replace   |                          |                                    |  |  |  |  |  |       |
| Check settings for timer controls, photosensors, and motion sensors  |                          |                                    |  |  |  |  |  |       |
| Maintain notes on service records and electricity consumption. Prepare the notes when the information is fresh   |                          |                                    |  |  |  |  |  |       |
| Compare lighting energy consumption with similar school buildings seasonally, normalized for heating degree days   |                          |                                    |  |  |  |  |  |       |
| <b>Quarterly</b>   |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Consider installing window blinds and window films to reduce the amount of solar heat loss or gain (depends upon the season)   |                          |                                    |  |  |  |  |  |       |

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| Action  | Roles & Responsibilities | Implementation Dates               |  |  |  |  |  | Notes |
|---|--------------------------|------------------------------------|--|--|--|--|--|-------|
| <b>Bi-Annually</b>  |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Clear outdoor lights of overgrowth by trees and shrubs  |                          |                                    |  |  |  |  |  |       |
| Evaluate daylighting in summer and winter to identify differences. Compare strategies with heating/cooling to determine whether daylighting is effective  |                          |                                    |  |  |  |  |  |       |
| Consider installing window film to reduce heat gain in the summer   |                          |                                    |  |  |  |  |  |       |
| <b>Annually</b>   |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Conduct delamping survey to decrease lighting use where lights are not necessary or where daylighting can replace lights  |                          |                                    |  |  |  |  |  |       |
| Check relamping schedule and replace lights with decreased output, or conduct group relamping. Determine the cost-effectiveness of individual or group relamping and act accordingly (dispose lamps according to local waste regulations) |                          |                                    |  |  |  |  |  |       |
| Evaluate opportunities to upgrade to more efficient lighting (T-12 to T-8, incandescent to CFL and mercury to metal halide)   |                          |                                    |  |  |  |  |  |       |
| Clean lights, fixtures, and luminaires  |                          |                                    |  |  |  |  |  |       |
| Replace light coverings (diffusers) as they age, if necessary. Aged diffusers reduce light output   |                          |                                    |  |  |  |  |  |       |
| <b>Training</b>   |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Train facilities staff to conduct lighting energy consumption comparisons with similar school buildings and season-to-season comparison, normalized for heating degree days   |                          |                                    |  |  |  |  |  |       |
| Train facilities staff to maintain detailed notes on the equipment service records and energy use (electricity consumption). Prepare the notes when the information is fresh  |                          |                                    |  |  |  |  |  |       |
| Train facilities staff on how to use the Energy Management System (EMS)   |                          |                                    |  |  |  |  |  |       |
| Train or hire qualified technicians for specialized equipment maintenance (e.g., ballasts, daylighting controls)  |                          |                                    |  |  |  |  |  |       |
| Train teachers, students, or other staff on how to use sensors, timers, and dimmers if these systems are installed in the school  |                          |                                    |  |  |  |  |  |       |
| <b>Communications</b>   |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Communicate the importance of conducting lighting energy consumption comparisons with similar schools and season-to-season comparison   |                          |                                    |  |  |  |  |  |       |
| Communicate the importance of maintaining notes on service records and electricity consumption for lighting   |                          |                                    |  |  |  |  |  |       |
| Communicate lighting energy consumption comparison results to school and district administrators to demonstrate the benefits of energy management   |                          |                                    |  |  |  |  |  |       |
| Maintain adequate communications between central staff and building operators   |                          |                                    |  |  |  |  |  |       |
| Remind teachers and students about the appropriate timer, photosensor, and motion settings  |                          |                                    |  |  |  |  |  |       |
| Communicate to facilities staff, teachers, students, and staff the benefits of using window blinds and window films to reduce the amount of solar heat loss or gain (depends upon the season)   |                          |                                    |  |  |  |  |  |       |
| Remind teachers and students about the importance of turning off lights during unoccupied periods   |                          |                                    |  |  |  |  |  |       |
| <b>Other Actions</b>  |                          | <b>Fill in implementation Date</b> |  |  |  |  |  |       |
| Install dimming ballasts to replace traditional ballasts. Ballasts last 7–10 years  |                          |                                    |  |  |  |  |  |       |