

“Home Run” Energy Retrofits

(Proven measures with near-certain cost/benefit results)

LIGHTING

1. Re-lamp fluorescent fixtures with 25-watt, high-K, low-mercury lamps.
 - a. Concurrently, retrofit low-output (~0.7BF) ballasts
 - b. Replace yellowed and/or translucent diffusers with high-transmission clear diffusers
2. Spaces with two lighting circuits should have one circuit controlled auto-on/auto-off and the second circuit manual-on/auto-off
3. Install timer switches on single lighting circuits in small spaces such as janitorial closets, mail rooms, storage rooms, etc.
4. Replace PAR-type lamps with LED direct replacement lamps
5. Install LED floodlights and wall packs
6. Retrofit LED or induction, bi-level, high-K parking lot and path lighting fixtures
7. Replace HID lamps with high-output fluorescent or LED lighting in gymnasiums and assembly spaces
8. Install bi-level fixtures in stairwells
9. Install bi-level controls for most corridor, lobby, and atrium lighting

HVAC

10. Retro or monitoring-based commissioning of existing systems. Energy waste of HVAC systems can be largely tied to failed components and uncalibrated control systems.

SUB-METERING | DASHBOARDING

11. Electrical metering
 - Interior and exterior lighting metered separately
 - Fan and pump energy metered separately
 - Plug load
12. Building management system
 - Graphical interface of air handlers, exhaust fans, pumps, and boilers
 - Graphical trends of equipment operations