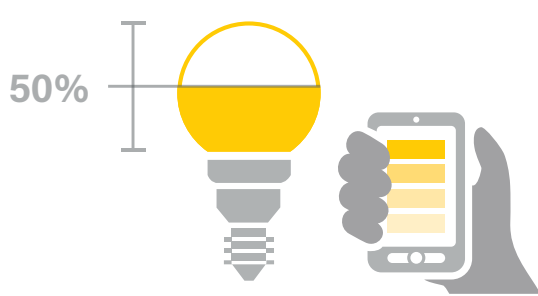


How can Minnesotans improve their light levels and save on cost?

Turn down the lights

RESEARCH IN MIDWESTERN STATES SHOWS that Light-Emitting Diode (LED)-lit spaces in commercial **BUILDINGS ARE OFTEN OVER-LIT**, making occupants unhappy and increasing energy use.



TASK TUNING ENHANCES LIGHT LEVELS in commercial buildings with dimmable LEDs and controls. **This allows for light level adjustment in existing overlit spaces, saving electrical energy.** Currently, not many Minnesota buildings have task-tuned lighting systems.

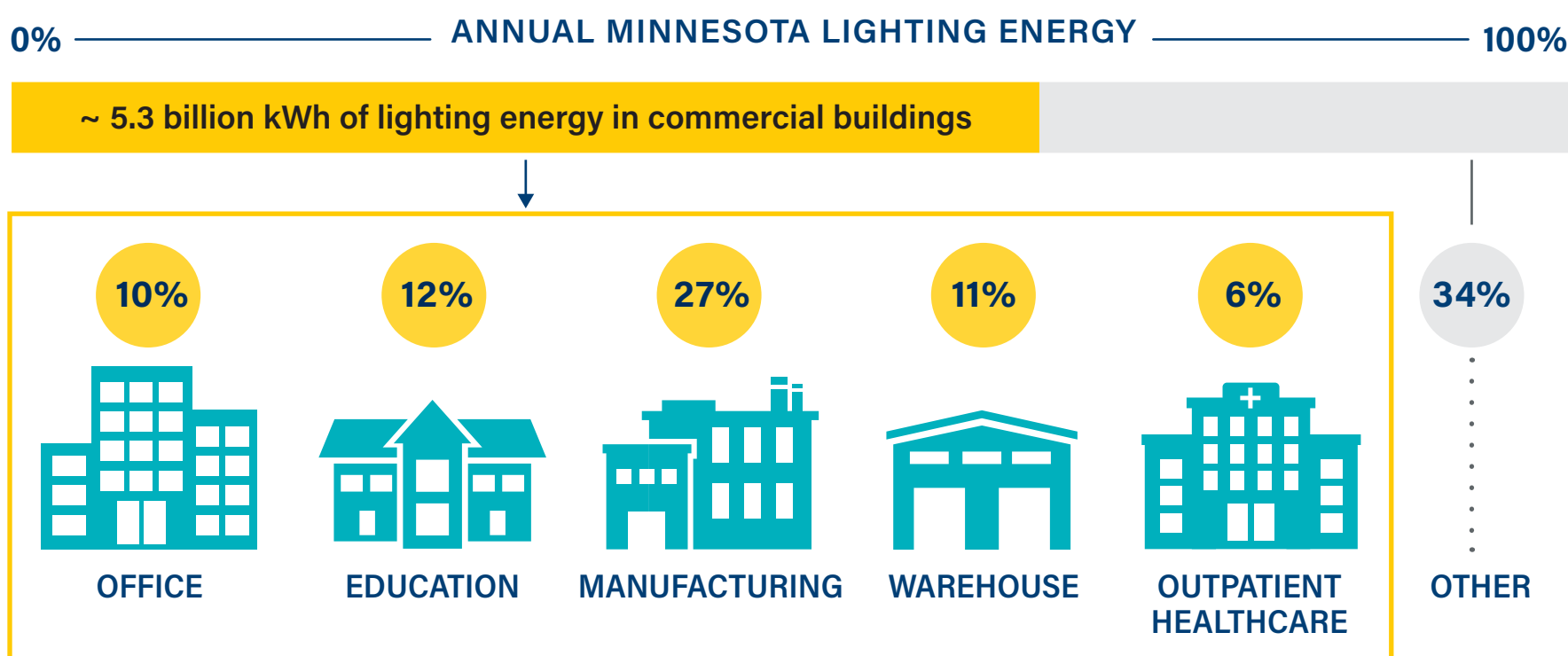


TASK TUNING IS COST EFFECTIVE when implemented in **new construction or major renovation projects where a dimming system is already planned as part of the lighting design.** Existing facilities that have a dimming system can also achieve cost-effective savings by implementing task tuning.

Lighting energy use in Minnesota buildings

SLIPSTREAM MEASURED LIGHT LEVELS in a representative sample of Minnesota businesses and quantified the potential for **energy savings from optimizing light levels.**

Commercial and manufacturing buildings in **MINNESOTA USE APPROXIMATELY 5.3 BILLION kWh OF LIGHTING ENERGY ANNUALLY.** Five building types comprise approximately **two-thirds of the lighting energy.**



Results

FOR ALL SPACE TYPES, THE MEAN ILLUMINANCE WAS HIGHER THAN THE ILLUMINATING ENGINEERING SOCIETY RECOMMENDATION.



In total, we estimate that adjusting light levels could potentially **SAVE MINNESOTA APPROXIMATELY 167,000 MEGAWATT HOURS (MWH) ANNUALLY**, with most of these savings coming from the office and education sector.

This study was funded by Minnesota Department of Commerce, Division of Energy Resources through the Conservation Applied Research and Development (CARD) program.