

Prior to the retrofit, lighting in the Human Ecology Building was responsible for 20 per cent of the electricity consumed and often did not meet occupant needs, as some areas were over lit and others were dim. The retrofit replaced all incandescent and fluorescent bulbs with LEDs. This provided an opportunity to reduce the lighting demand by nearly half, improve lighting levels and quality, and pilot a project which could be applied to a majority of the university's buildings.



100 per cent  
of the building's  
lighting was  
converted to LEDs



## ENVIRONMENTAL IMPACT

Recycled 650 fluorescent lamps

Donated 1,200 fluorescent lamps to Habitat for Humanity's ReStore

Removed 253 polychlorinated biphenyl (PCB) ballasts and disposed of them as hazardous waste

Reused all electronic ballasts and fixtures



## INNOVATION & TECHNOLOGY

LED bulbs allow lighting levels to be adjustable for light-sensitive textile displays

Improved lighting quality for both colour and consistency

Removing magnetic ballasts resulted in quieter lighting fixtures

The longer life of LEDs reduced lamp replacements to half the previous frequency



## ESTIMATED SAVINGS

42 per cent reduction in fixture electricity demand

13 per cent reduced electricity for the entire building

100 MWh per year avoided

\$10,000 per year in energy cost savings

Reduced maintenance of magnetic ballasts as electronic ones are more reliable

**PROJECT TEAM** | Energy Management and Sustainable Operations

**LESSONS LEARNED** | The project took four weeks but would have only taken one if ballasts hadn't needed replacing.