

# Weill Hall Energy Conservation

## Weill Hall

### Life Sciences building is Cornell's first LEED™ Gold rated building

Weill Hall was designed and constructed with many energy conservation features that are leading edge. Together these features result in a building that uses **30 to 40%** less energy.

Weill Hall houses a number of functions including research, research incubator, offices, class room and cafeteria, and public areas.

Features in the building are focused on the highest energy use areas including ventilation, building conditioning equipment and systems, plant growth chambers, and lighting. In addition, the building includes heat recovery on exhaust air to pre-heat and pre-cool the make up air.



**Building Envelope** Daylighting minimizes electricity use for lighting, and increased insulation and high performance glass reduce heat loss in winter/solar gain in summer.

## Active Energy Conservation Features



### **Variable flow air and water systems**

Cooling and heating systems vary air and water flows to match loads, significantly reducing energy use. All fume hoods vary air flow with sash position, and reduce 35% if open when rooms are unoccupied. Labels instruct users to close sashes to “Be Safe and Save Energy.”

### **Demand controlled ventilation and temperature**

Ventilation air is controlled by occupancy sensors in laboratories, cutting minimum air flow 50% (8 to 4 air changes / hour) when vacant.

CO2 is used to modify ventilation in all public and teaching spaces.

Daily schedules with user override in offices minimizes air flows.

Temperatures are relaxed in all spaces during unoccupied periods.

### **Heat recovery**

All exhaust from laboratories helps heat or cool incoming makeup air, saving 30 to 40% during the heating season.

### **Lighting**

High efficiency fixtures, daylighting, and occupancy sensors reduce energy use.

### **Equipment**

Innovative growth chambers using campus cooling and heating instead of refrigeration significantly reduce electricity use.

Campus chilled water removes waste electric heat from special equipment corridors.

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