

CASE STUDY

New Land: a small office with a hybrid work policy

Mesa reduced 33% total energy use without compromising thermal comfort.



Savings with Mesa

33%

overall energy use reduction

58%

heating energy reduction

43%

smart plug savings

New Land Enterprises

3,420 sqft of open office, private office, and conference room space on one floor
Two heat pumps

1840 N Farwell Ave
Milwaukee, Wisconsin

sidewalklabs.com/mesa

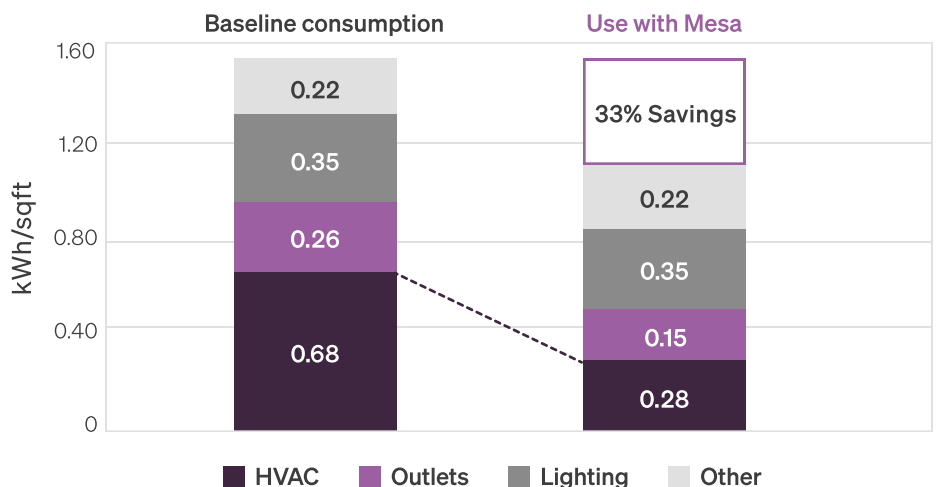
Mesa turns on HVAC just in time

It is too late to start HVAC operation when occupants arrive. Mesa pre-conditions the space to ensure that the zone temperature is within the comfort range right when occupants arrive using minimum energy.

Mesa knows when to start preheating

When the outside temperature is cold, it takes longer to preheat the space. Mesa estimates how fast a space can heat under different indoor and outdoor circumstances and historical data. In the Milwaukee winter, Mesa determines warm up rate daily. Each morning Mesa determines the minimum time required to reach the preferred temperature, so the office is heated just in time. With a hybrid work schedule, that time may vary daily. Mesa uses data patterns to determine when the office will open, getting smarter each week.

*The baseline model assumes a 73 °F cooling setpoint running 24/7.



Data source:

Simulated lighting, outlet and others energy consumption based on DOE prototype building. Modeled and observed HVAC energy use estimated based on constant HVAC power.