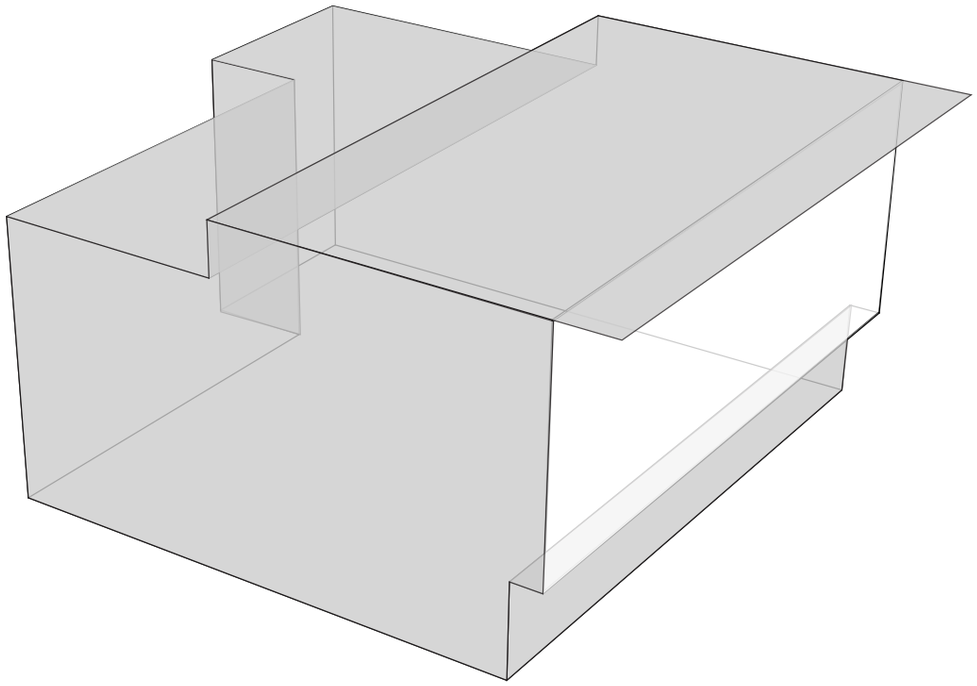
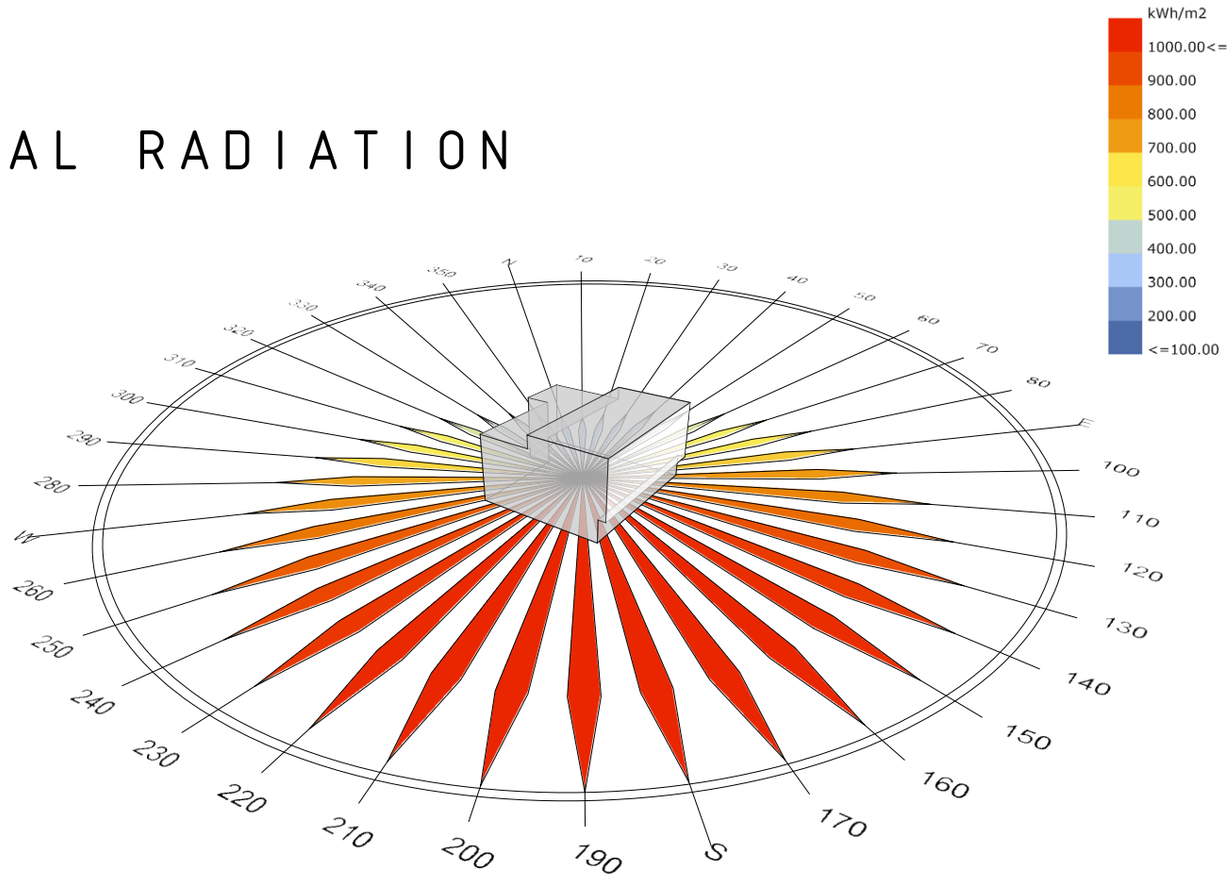
ENERGY SIMULATION

BASE CASE



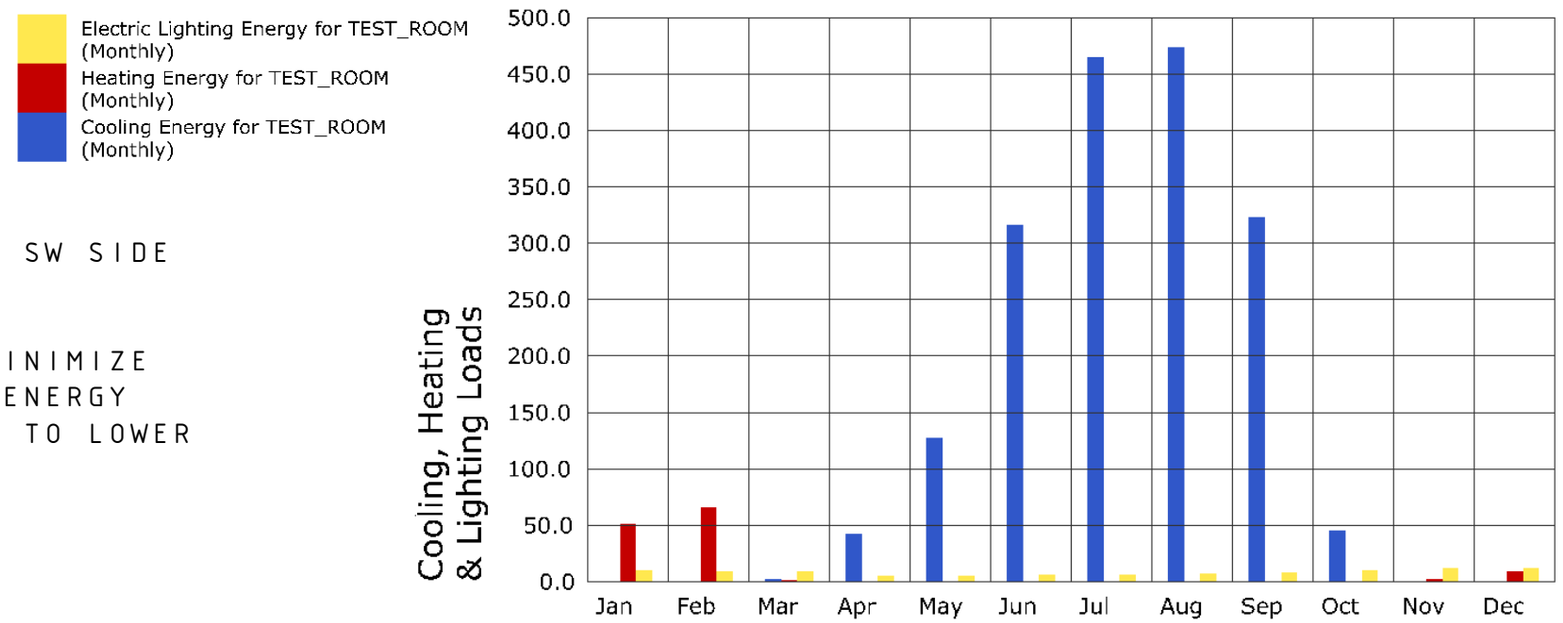
TOTAL HEATING : 131
TOTAL COOLING : 1796
TOTAL LIGHTING: 102
TOTAL LOAD : 2029

TOTAL RADIATION



PHILADELPHIA, PA

MONTHLY ENERGY LOADS



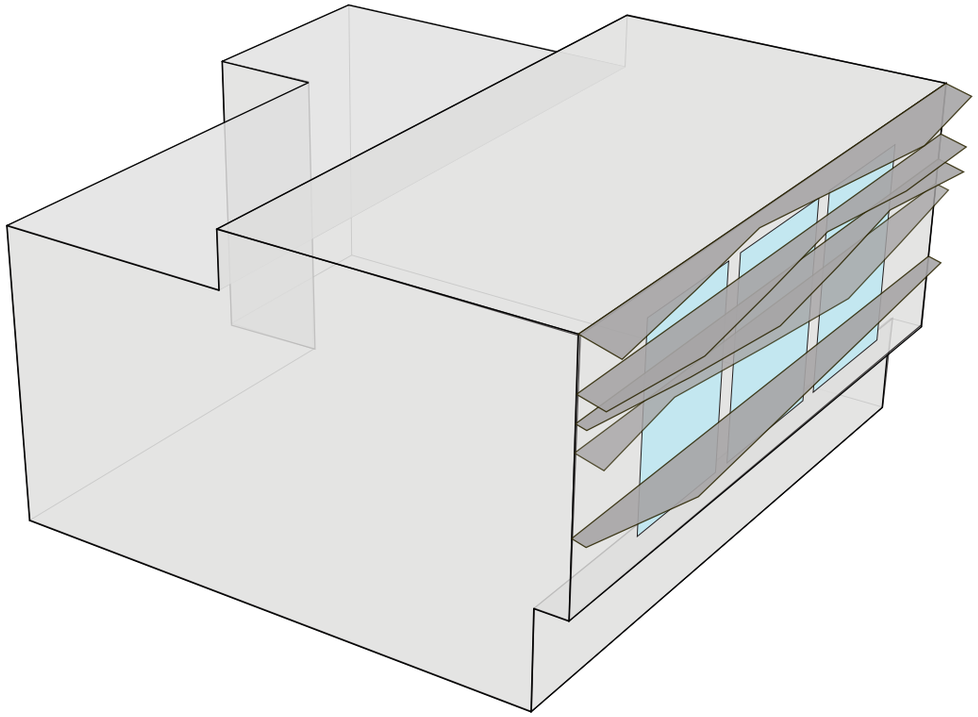
MAJORITY OF RADIATION IS COMING FROM SW SIDE OF THE FACADE

SHADING DESIGN NEEDS TO BE ABLE TO MINIMIZE SUNLIGHT IN SUMMER TO LOWER COOLING ENERGY USE, AND MAXIMIZE SUNLIGHT IN WINTER TO LOWER HEATING ENERGY USE

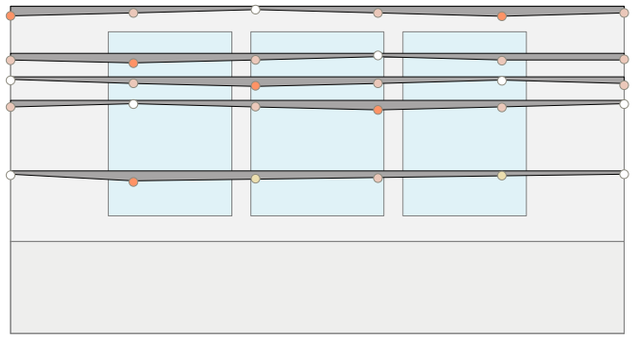
MUNAZZA BHATTI

ENERGY SIMULATION

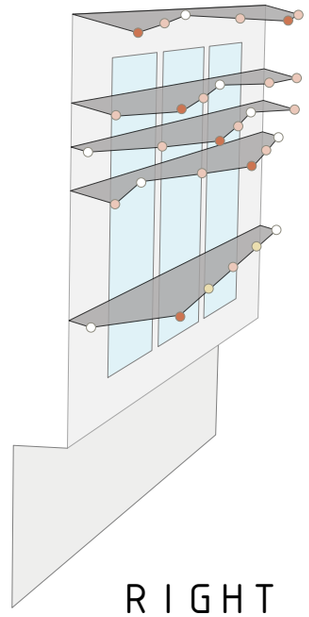
SHADING CASE



EXTRUSION DISTANCE



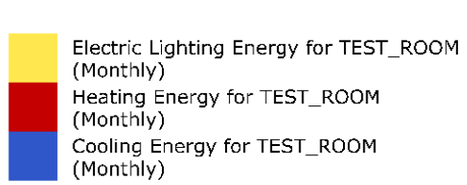
FRONT VIEW

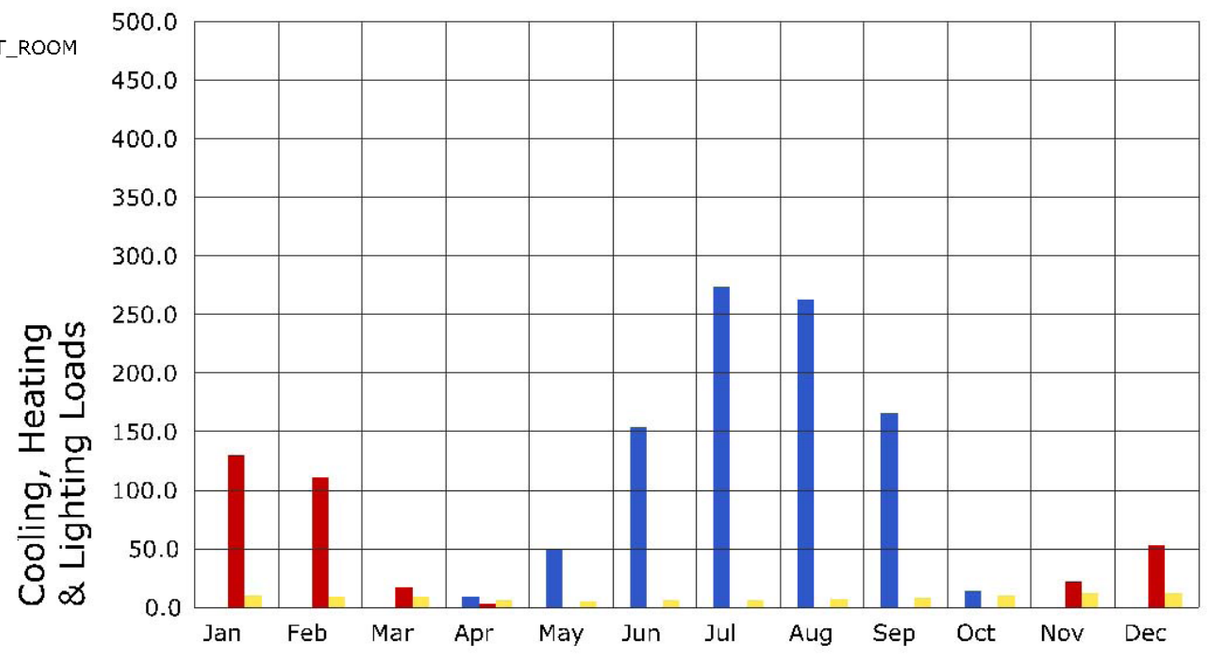


RIGHT VIEW

TOTAL HEATING : 337
TOTAL COOLING : 929
TOTAL LIGHTING: 102
TOTAL LOAD : 1368

MONTHLY ENERGY LOADS





GLAZING REDUCED FROM ENTIRE WALL TO THREE SMALLER WINDOWS TO REDUCE SOLAR GAIN

LOUVERS BROKEN INTO FIVE PARTS TO PUSH AND PULL SHAPE TO FOLLOW THE DECLINING AFTEROON SUN

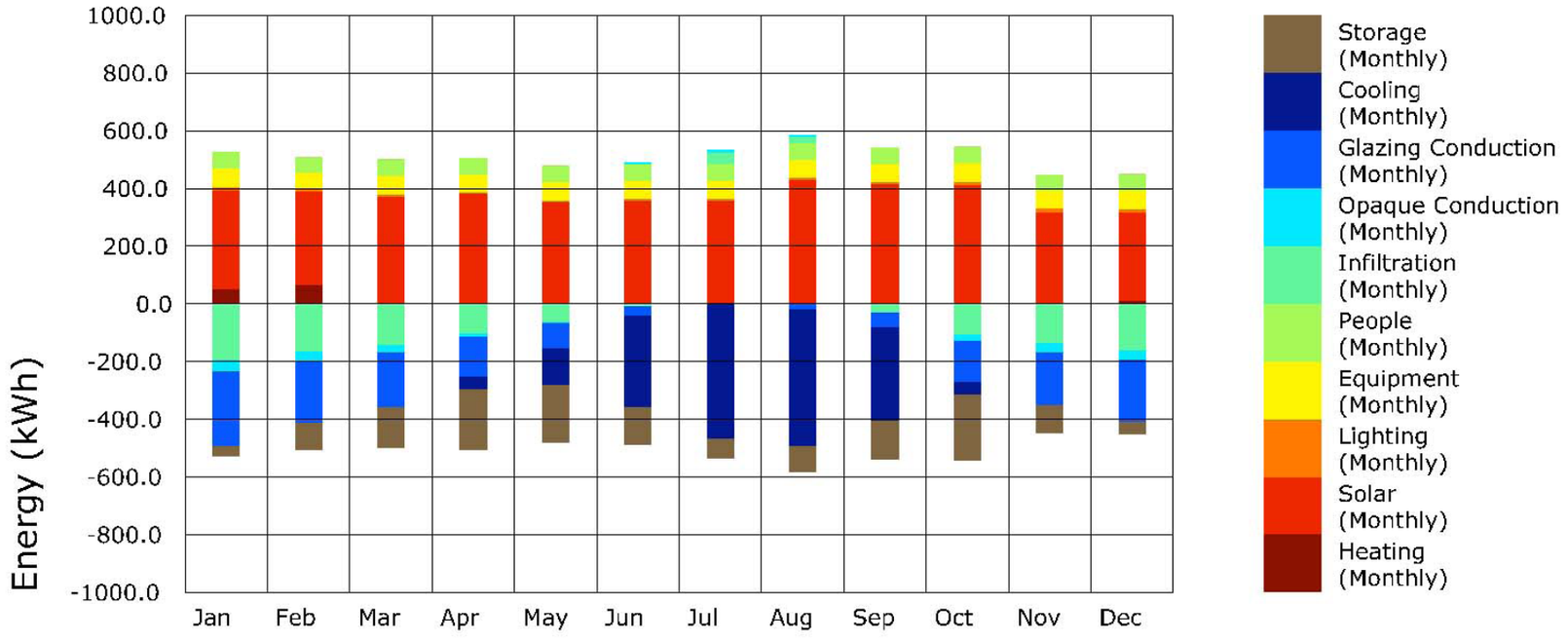
MAXIMUM EXTRUSION OF LOUVER SHIFTS OVER WITH EACH LOUVER

ADDING MANY LOUVERS PROVES TO BE BENEFICIAL IN SUMMER BUT COSTLY IN WINTER

MUNAZZA BHATTI

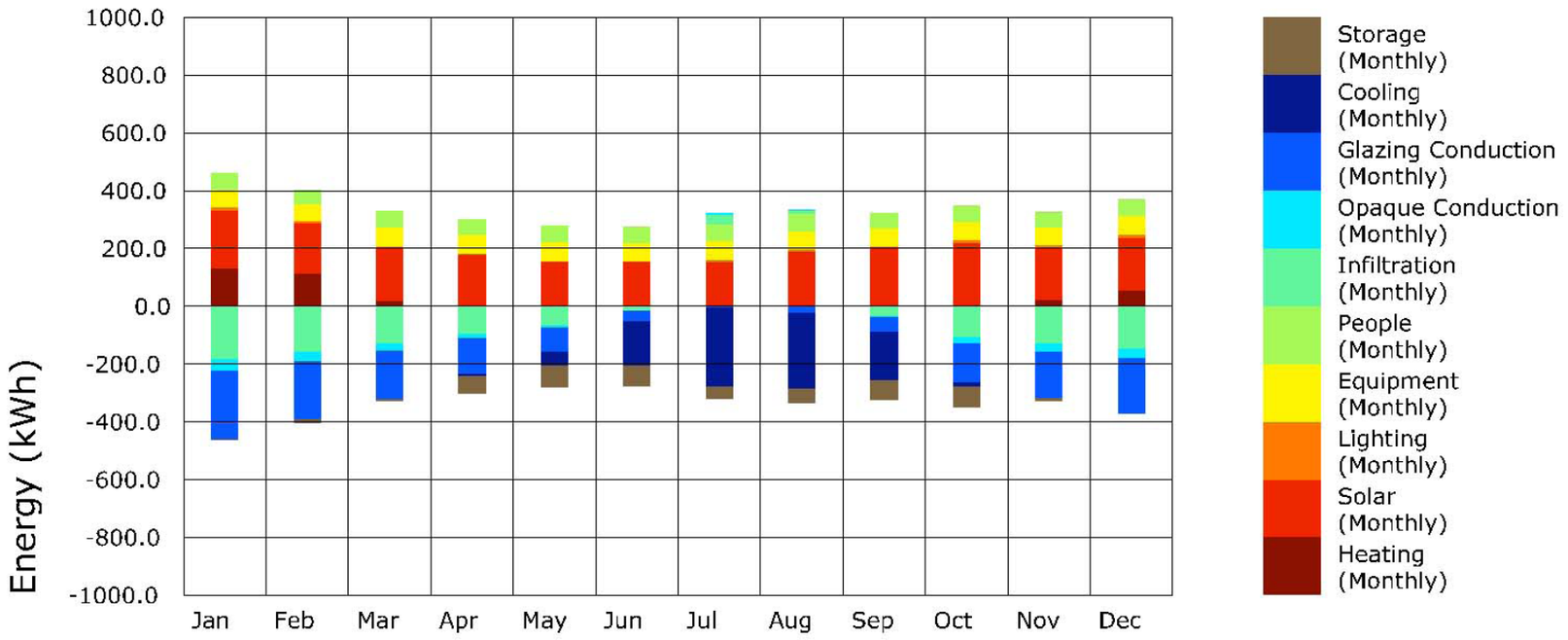
ENERGY BALANCE

BASE CASE



MidriseApartment::Apartment

WITH SHADING



MidriseApartment::Apartment