Module: BENV0119 MLiSB

Week 1: Data Readme

The data

The data (Week1_data.csv) provided in week 1 was generated using parametric simulations in EnergyPlus for a simple box model as shown in Fig 1. Each row of data represents an EnergyPlus simulation with inputs and outputs provided.

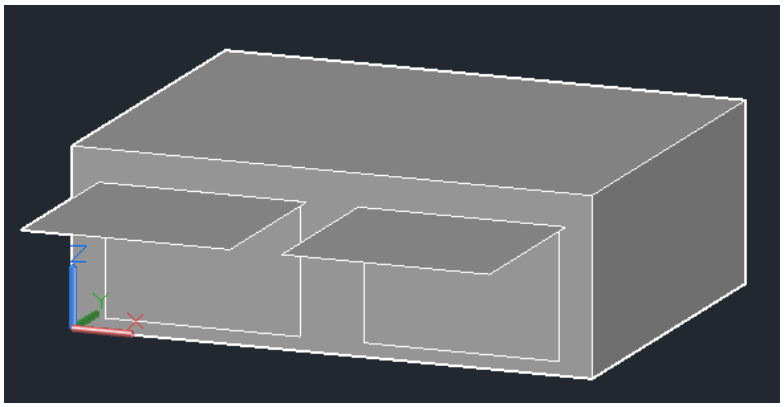

Fig 1. Simple box model with overhangs.

Input variables:

The input variables varied within the simulation are provided in table 1.

Table 1. Input parameters

#	Column title	Parameter description
1	@@ORI@@	Orientation relative to North
2	@@WINS@@	Wall Insulation Conductivity (W/mK)
3	@@RSA@@	Roof Solar Absorptance (0-1)
4	@@OVER@@	Overhang depth (m)
5	@@HS@@	Heating Setpoint (ºC)
6	@@LIGHTS@@	Lights Level (W)

Output variables:

The output variables varied within the simulation are provided in table 2.

Table 2. Output parameters

#	Column title	Parameter description
1	Electricity:Facility [J](RunPeriod)	The annual electricity consumption of the buildings (Joules)

2	DistrictHeating:Facility [J](RunPeriod)	The annual heating consumption of the buildings (Joules)
3	DistrictCooling:Facility [J](RunPeriod)	The annual cooling consumption of the buildings (Joules)
4	ZONE ONE:Zone Thermal Comfort ASHRAE 55 Simple Model Summer or Winter Clothes Not Comfortable Time [hr](RunPeriod)	Number of hours outside of the ASHRAE 55 thermal comfort bands. More info here: https://designbuilder.co.uk/helpv5.0/Content/Comfort_Analysis.htm