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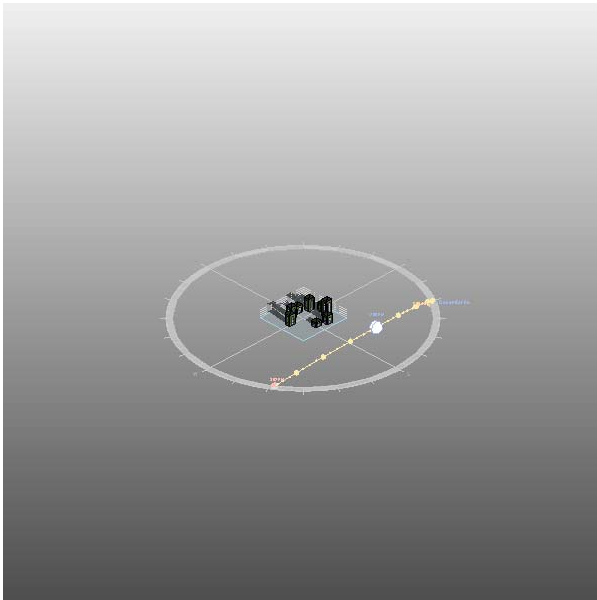
Project2

Project2 Analysis (1)

Analyzed at 12/6/2011 10:26:38 AM

Version 2012.2.21.3448(DOE-2.2-44e4)

Mass



Building Performance Factors

Location:	Belgrade, Serbia
Weather Station:	171981
Outdoor Temperature:	Max: 35°C/Min: -15°C
Floor Area:	720 m ²
Exterior Wall Area:	4,846 m ²
Average Lighting Power:	10.87 W / m ²
People:	25 people
Exterior Window Ratio:	0.40
Electrical Cost:	\$0.09 / kWh
Fuel Cost:	\$0.78 / Therm

Energy Use Intensity

Electricity EUI:	458 kWh / sm / yr
Fuel EUI:	3,246 MJ / sm / yr
Total EUI:	4,895 MJ / sm / yr

Life Cycle Energy Use/Cost

Life Cycle Electricity Use:	9,895,626 kWh
Life Cycle Fuel Use:	70,106,520 MJ
Life Cycle Energy Cost:	\$658,279

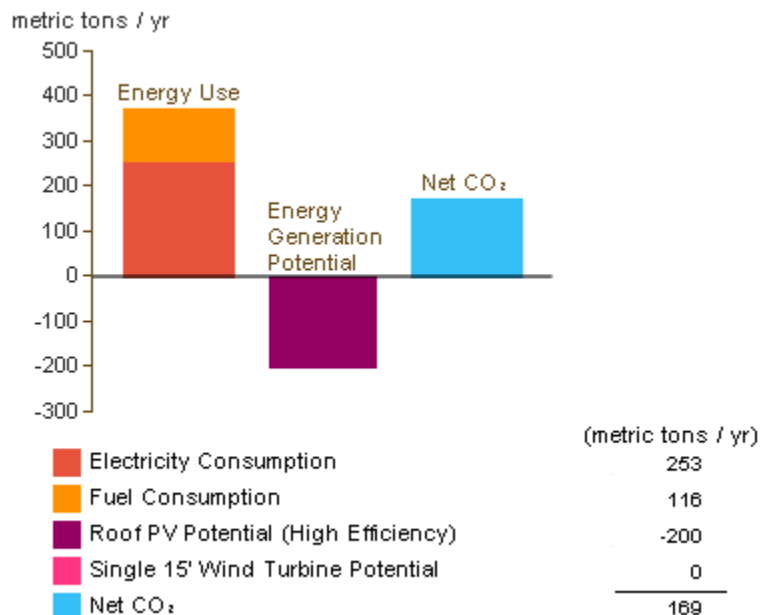
*30-year life and 6.1% discount rate for costs

Renewable Energy Potential

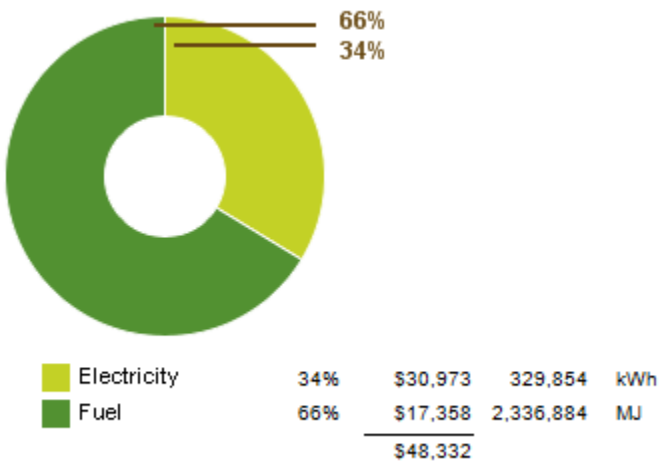
Roof Mounted PV System (Low efficiency):	86,965 kWh / yr
Roof Mounted PV System (Medium efficiency):	173,930 kWh / yr
Roof Mounted PV System (High efficiency):	260,895 kWh / yr
Single 15' Wind Turbine Potential:	670 kWh / yr

*PV efficiencies are assumed to be 5%, 10% and 15% for low, medium and high efficiency systems

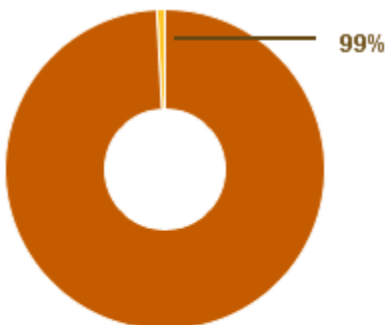
Annual Carbon Emissions



Annual Energy Use/Cost

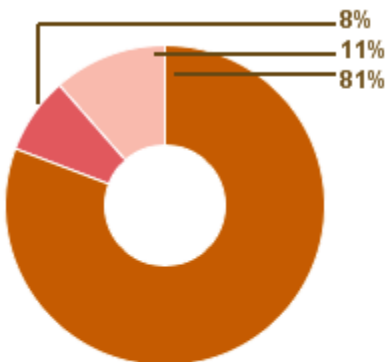


Energy Use: Fuel



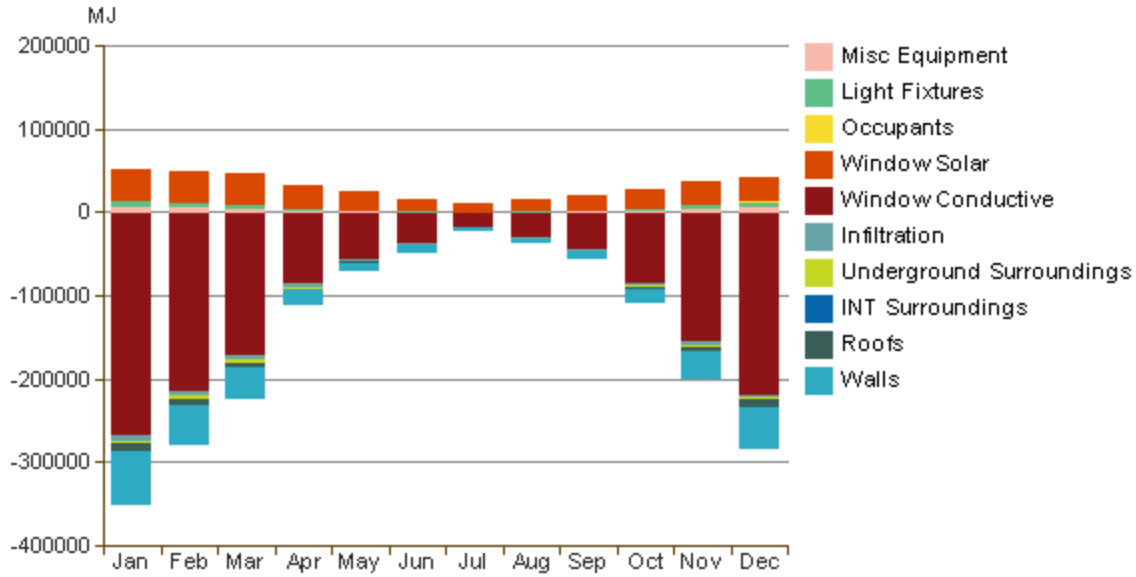
			(MJ)
HVAC	99%	\$17,215	2,317,580
Domestic Hot Water	1%	\$143	19,304
		<u>\$17,358</u>	<u>2,336,884</u>

Energy Use: Electricity

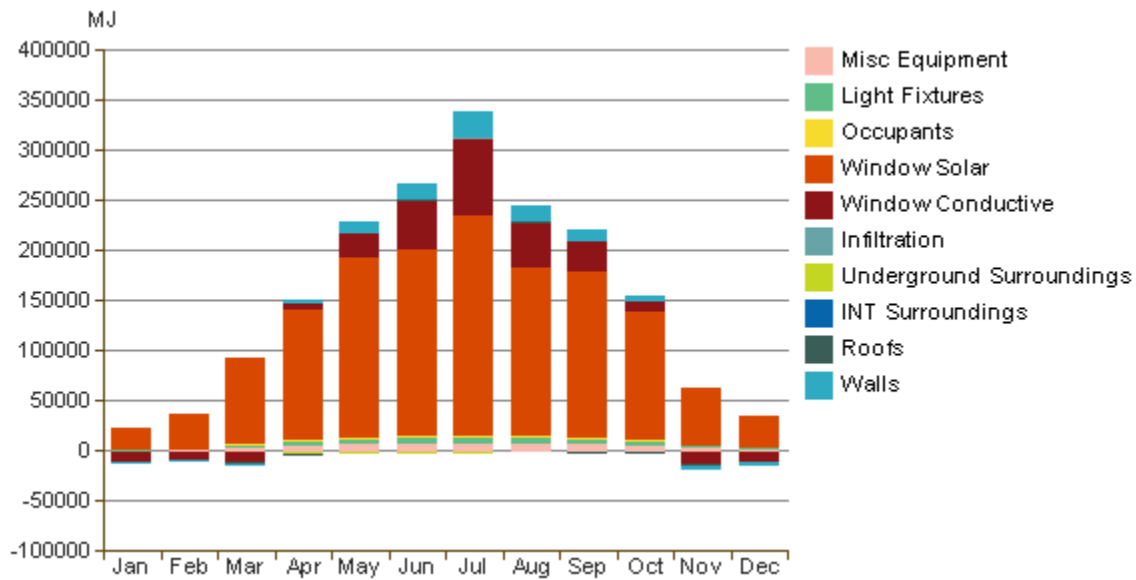


			(kWh)
HVAC	81%	\$25,011	266,367
Lighting	8%	\$2,400	25,563
Misc Equipment	11%	\$3,560	37,922
		<u>\$30,971</u>	<u>329,852</u>

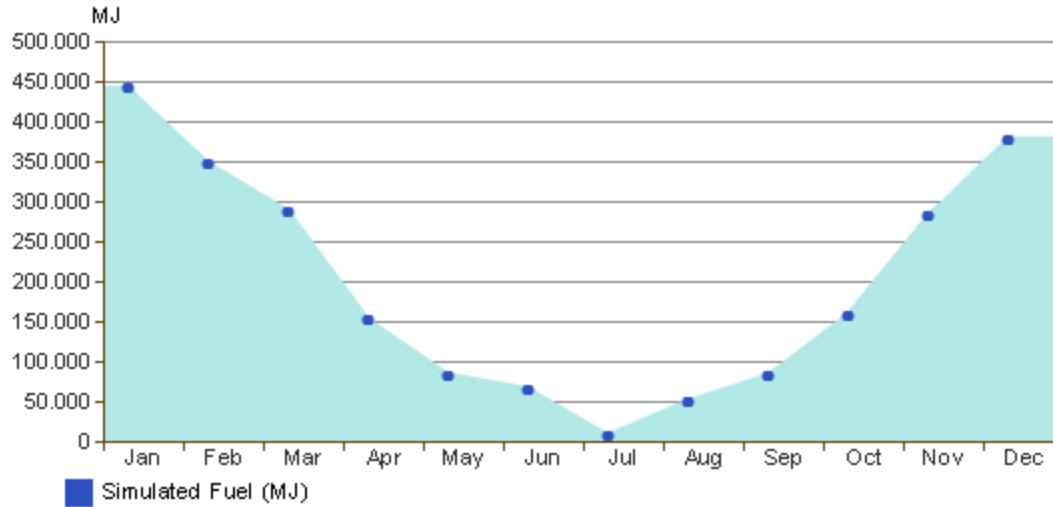
Monthly Heating Load



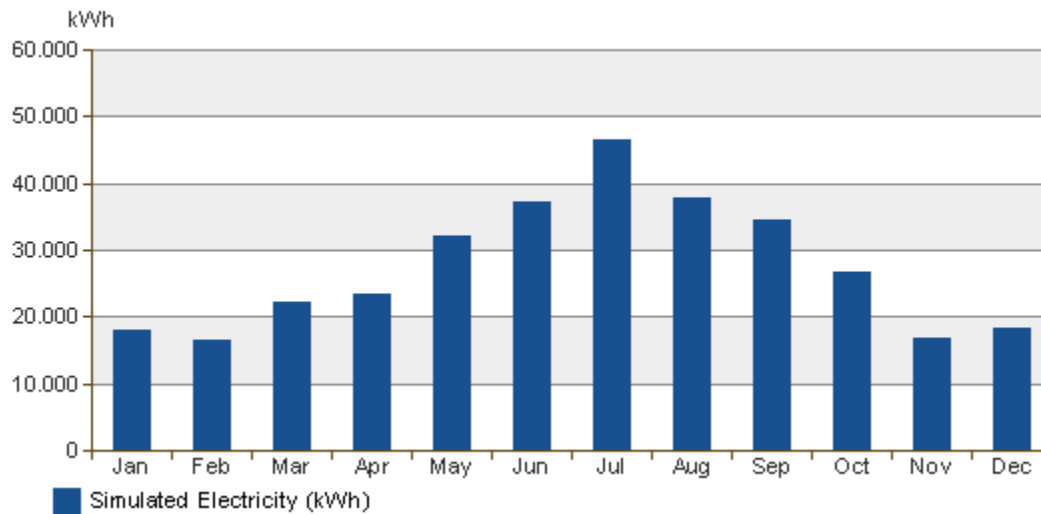
Monthly Cooling Load



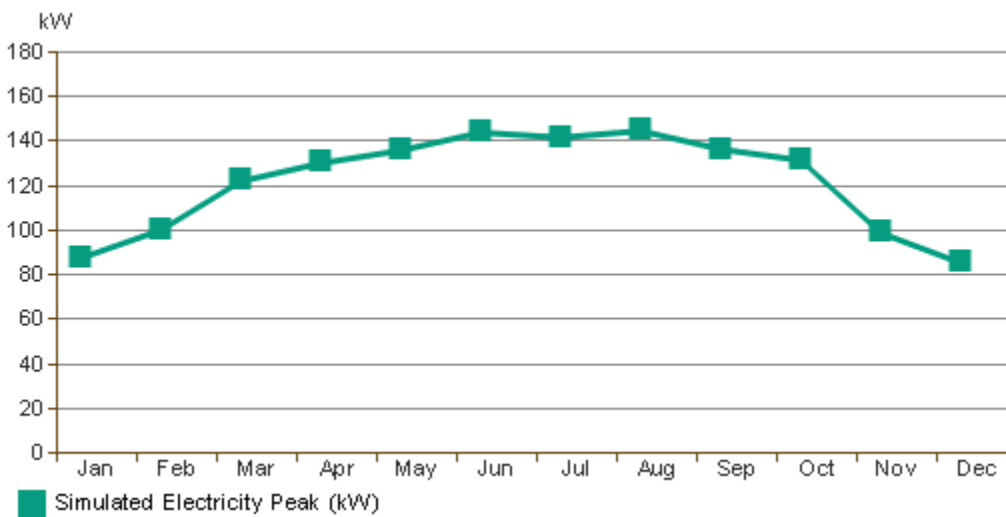
Monthly Fuel Consumption



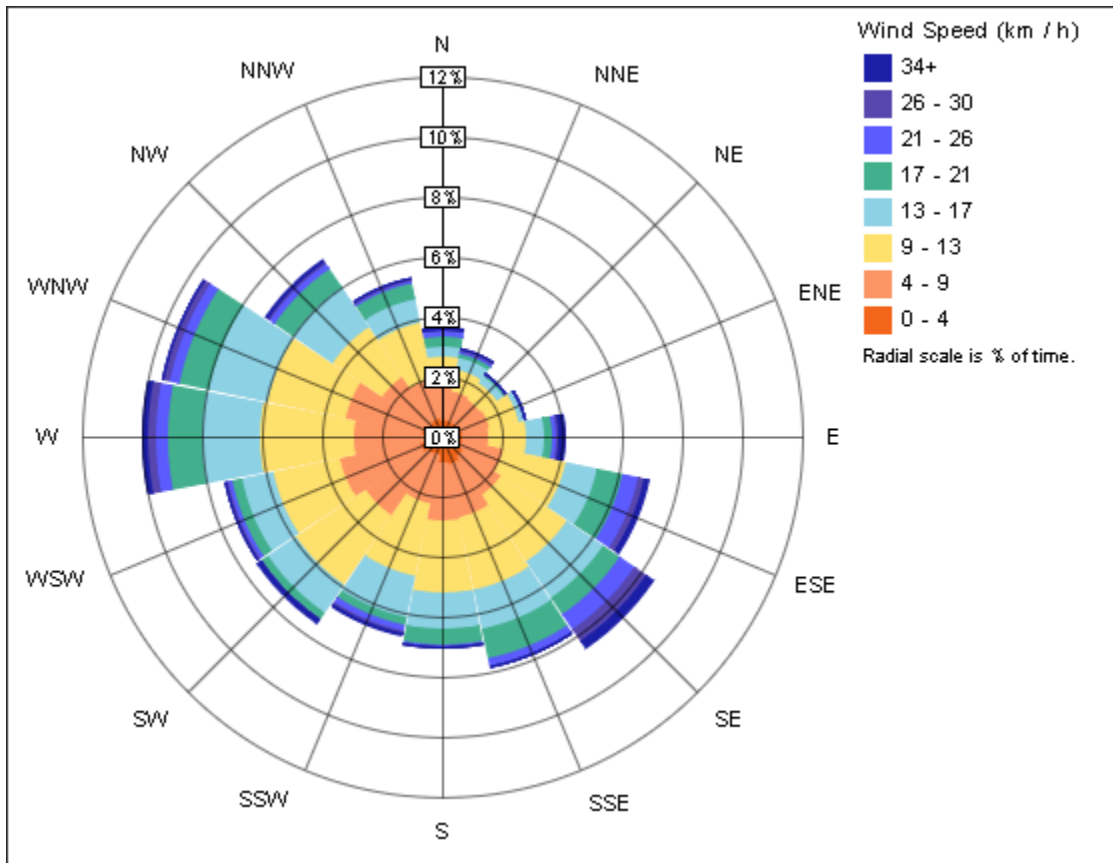
Monthly Electricity Consumption



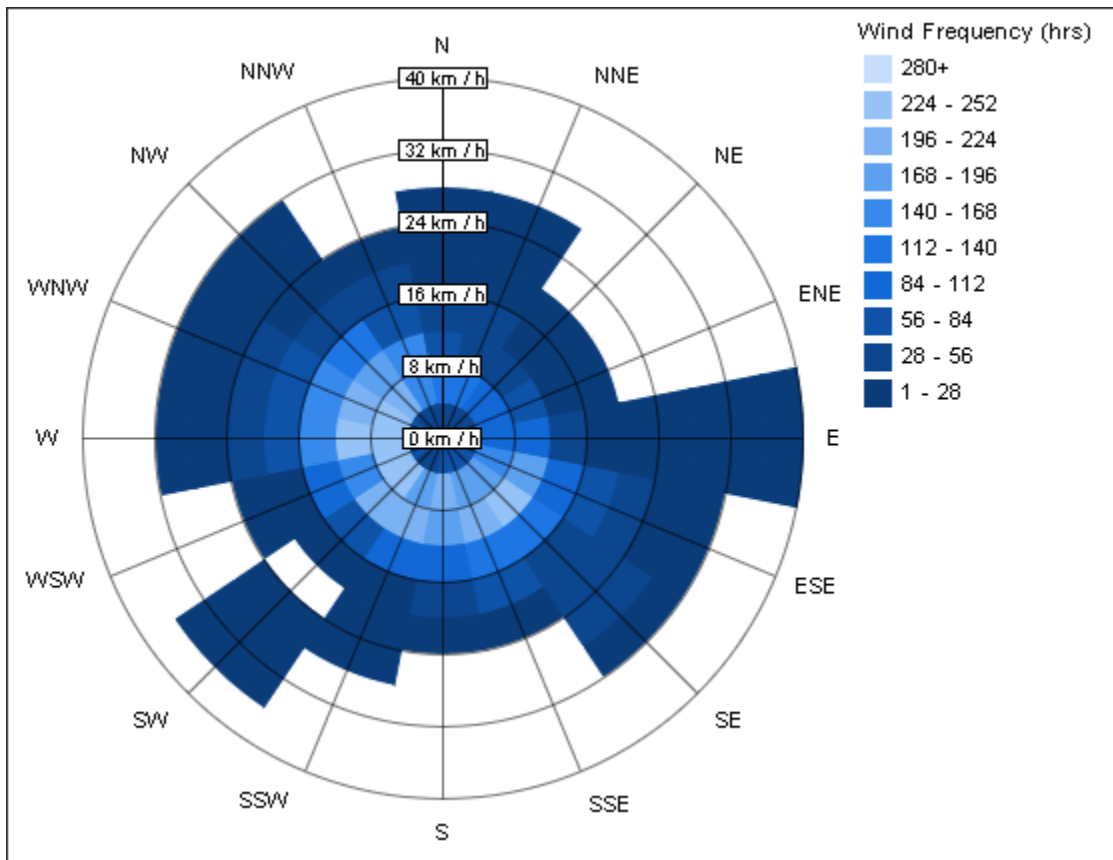
Monthly Peak Demand



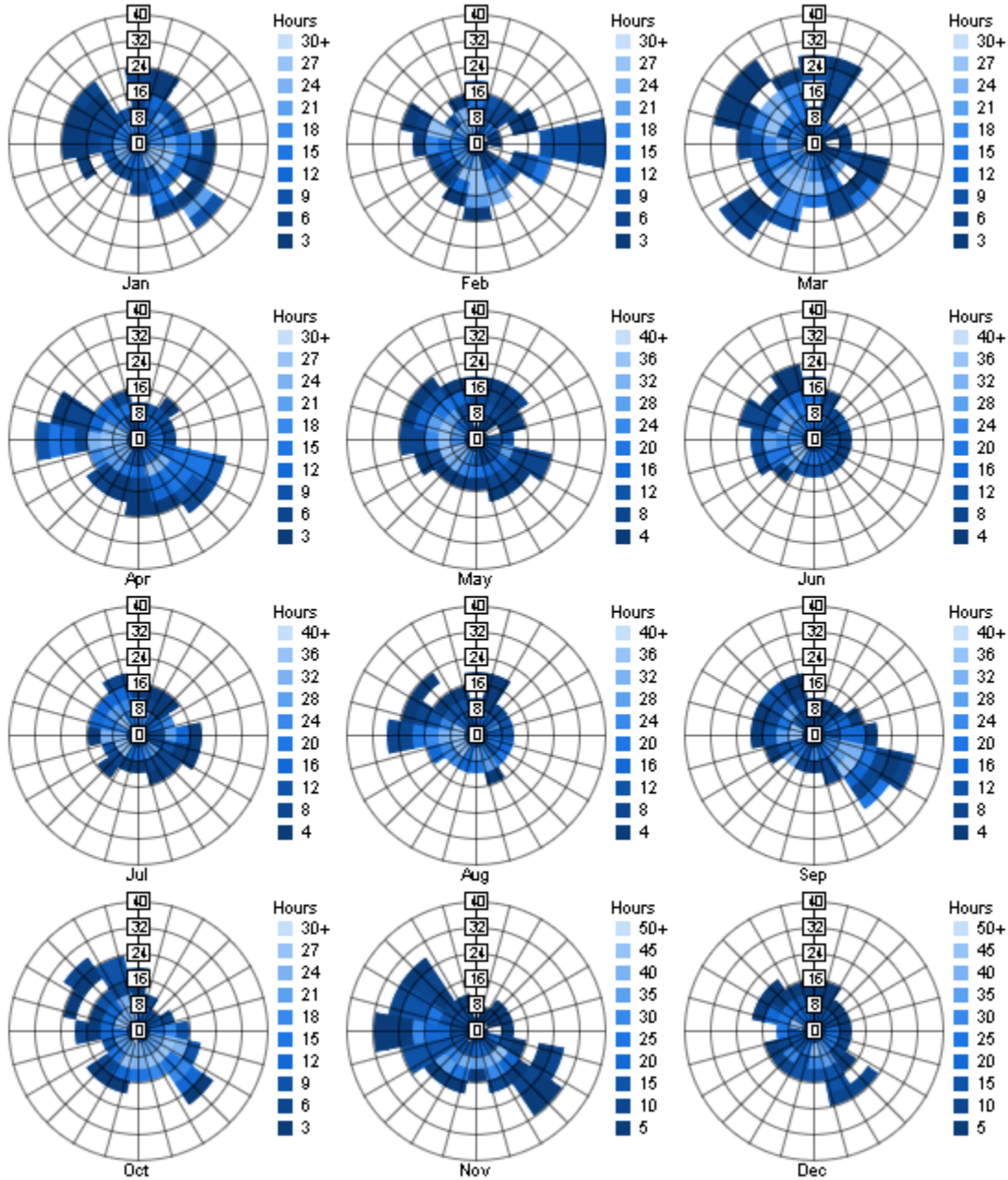
Annual Wind Rose (Speed Distribution)



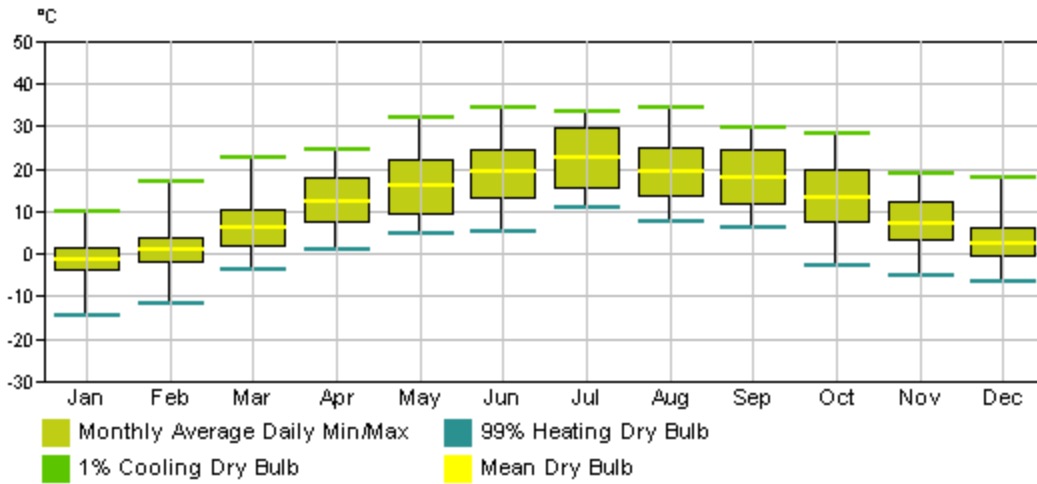
Annual Wind Rose (Frequency Distribution)



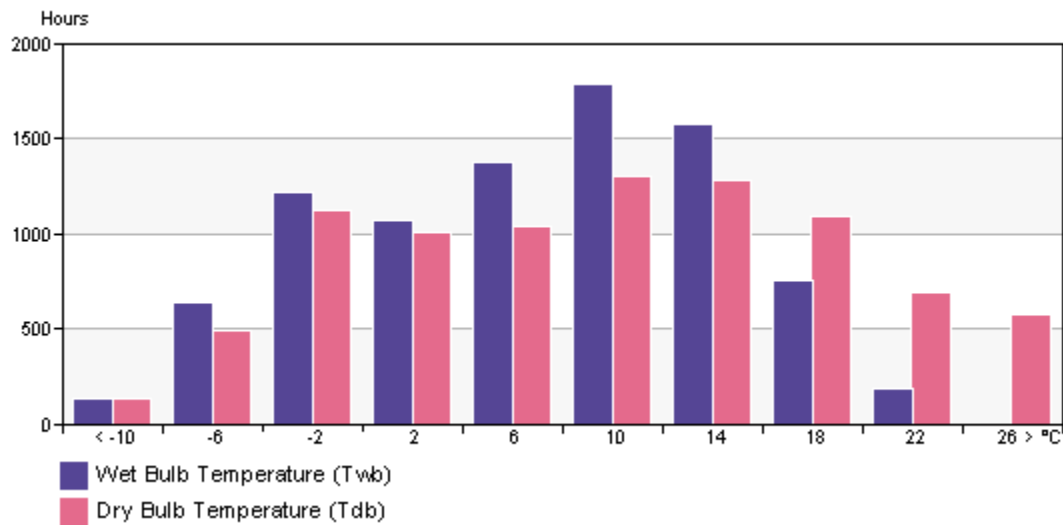
Monthly Wind Roses



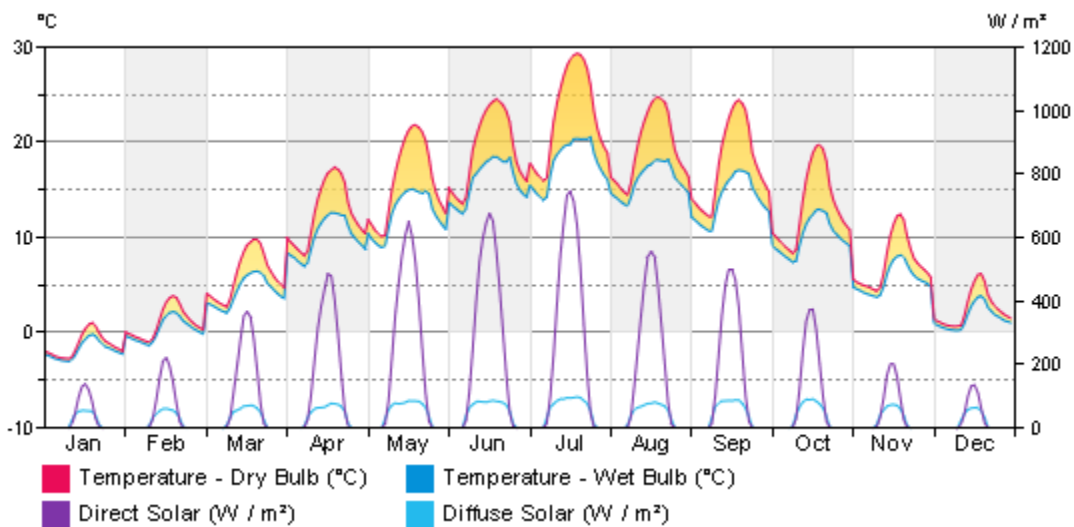
Monthly Design Data



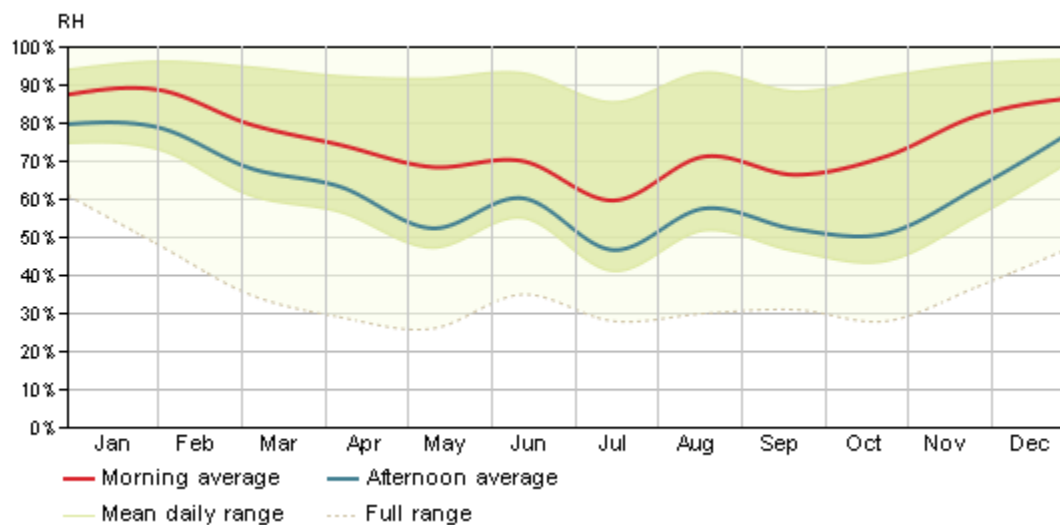
Annual Temperature Bins



Diurnal Weather Averages



Humidity



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Revit Conceptual Energy Analysis Data