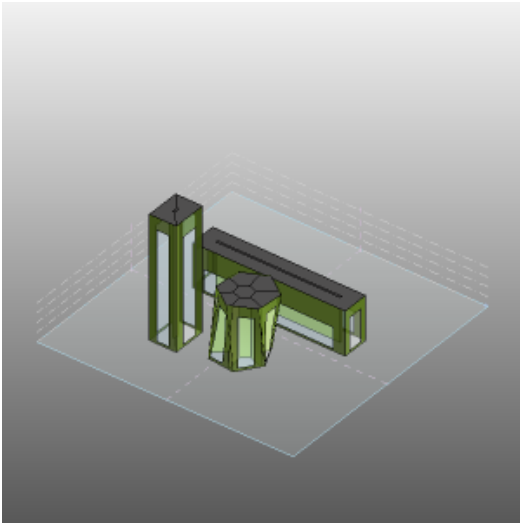


## Project3

## Project3 Analysis (1)

Analyzed at 11/29/2011 11:38:39 AM

## Mass



## Building Performance Factors

Location:	Belgrade, Serbia
Weather Station:	171981
Outdoor Temperature:	Max: 94°F/Min: 6°F
Floor Area:	7,483 sf
Exterior Wall Area:	44,173 sf
Average Lighting Power:	0.69 W / ft <sup>2</sup>
People:	17 people
Exterior Window Ratio:	0.40
Electrical Cost:	\$0.09 / kWh
Fuel Cost:	\$0.78 / Therm

## Energy Use Intensity

Electricity EUI:	44 kWh / sf / yr
Fuel EUI:	347 kBtu / sf / yr
Total EUI:	495 kBtu / sf / yr

## Life Cycle Energy Use/Cost

Life Cycle Electricity Use:	9,790,143 kWh
Life Cycle Fuel Use:	778,171 Therms
Life Cycle Energy Cost:	\$694,233

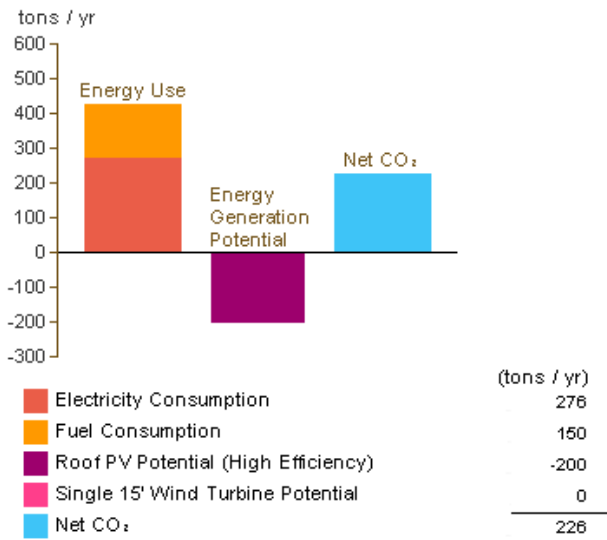
\*30-year life and 6.1% discount rate for costs

## Renewable Energy Potential

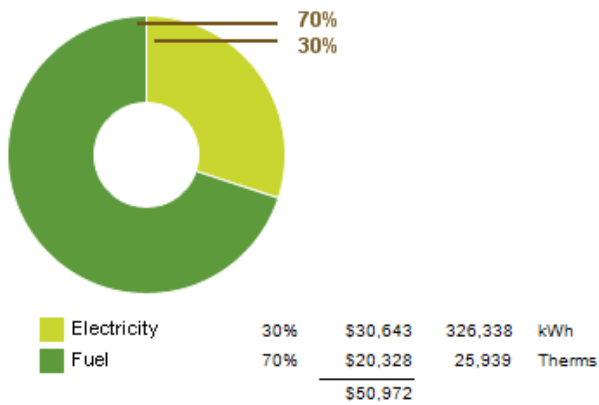
Roof Mounted PV System (Low efficiency):	78,884 kWh / yr
Roof Mounted PV System (Medium efficiency):	157,768 kWh / yr
Roof Mounted PV System (High efficiency):	236,652 kWh / yr
Single 15' Wind Turbine Potential:	670 kWh / yr

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

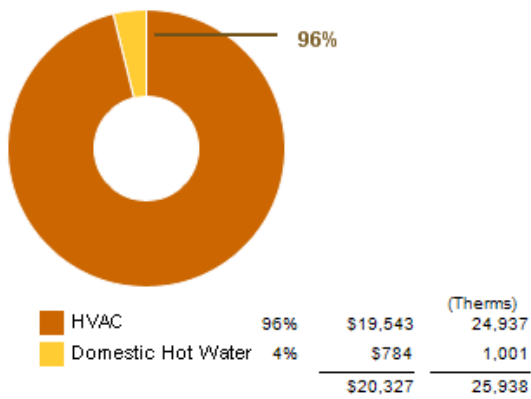
## Annual Carbon Emissions



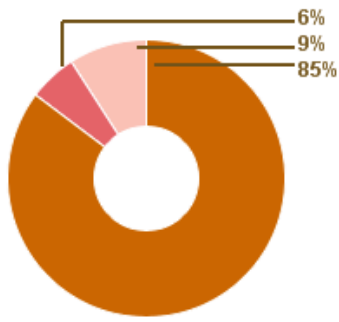
### Annual Energy Use/Cost



### Energy Use: Fuel

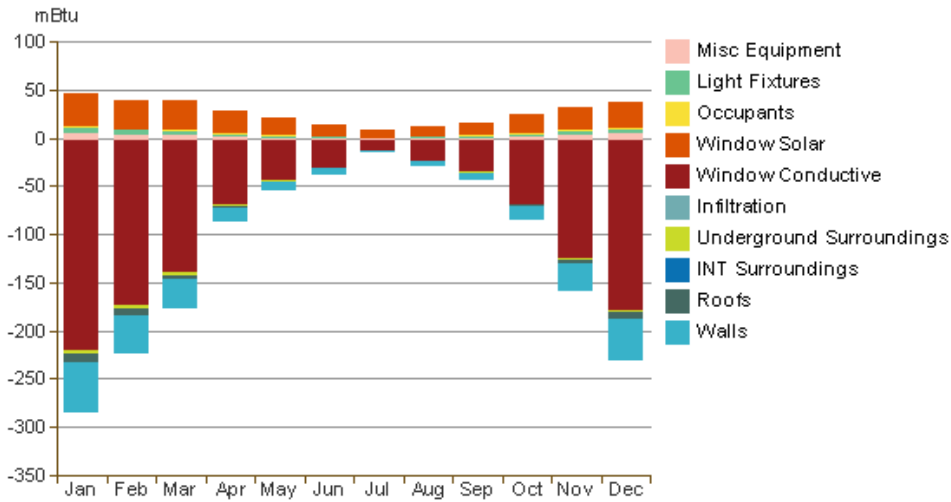


### Energy Use: Electricity

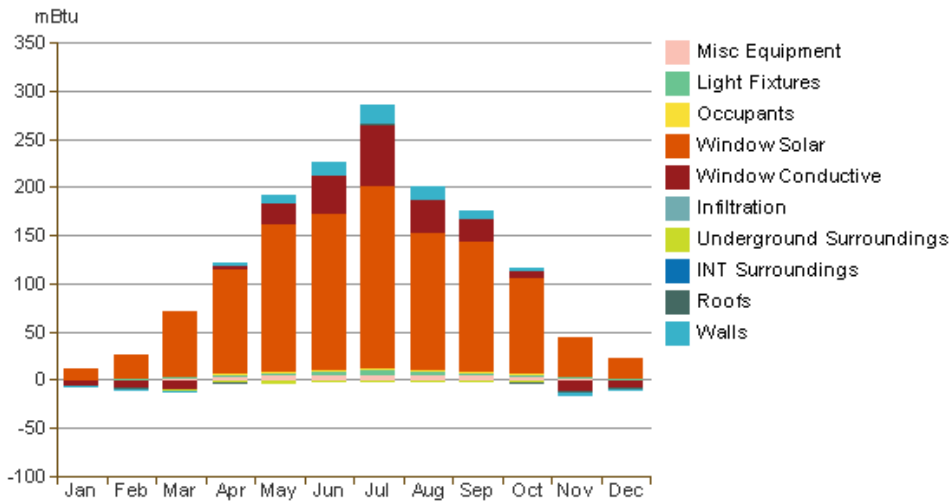


			(kWh)
HVAC	85%	\$26,131	278,294
Lighting	6%	\$1,721	18,335
Misc Equipment	9%	\$2,789	29,707
		\$30,641	326,336

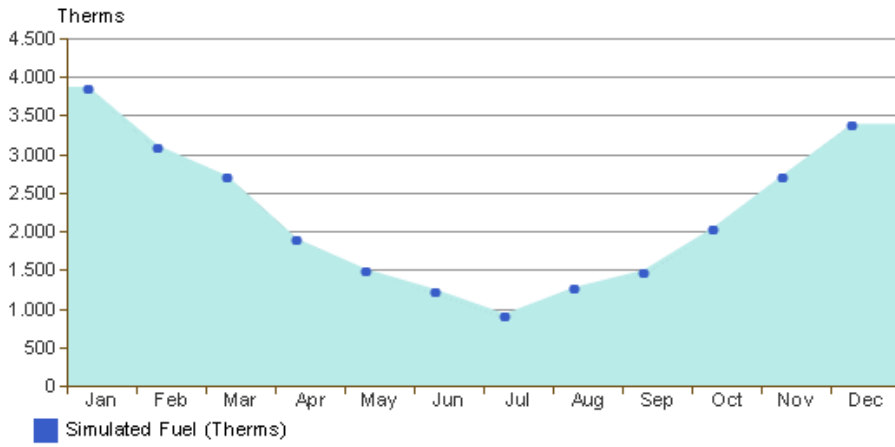
### Monthly Heating Load



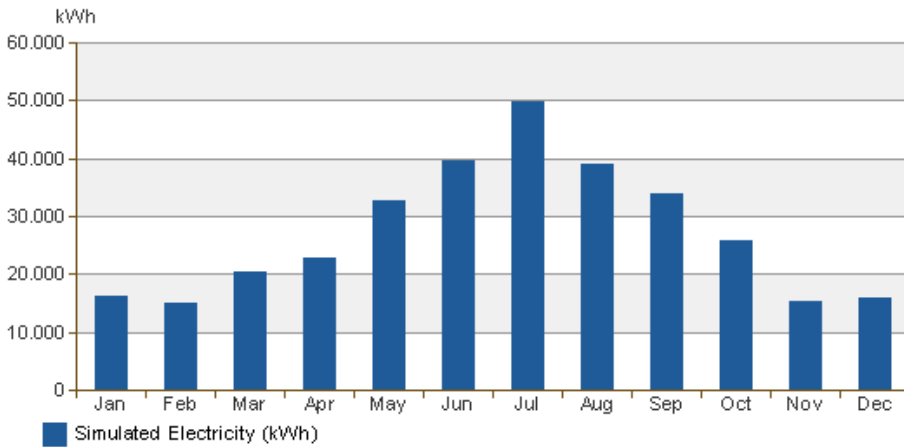
### Monthly Cooling Load



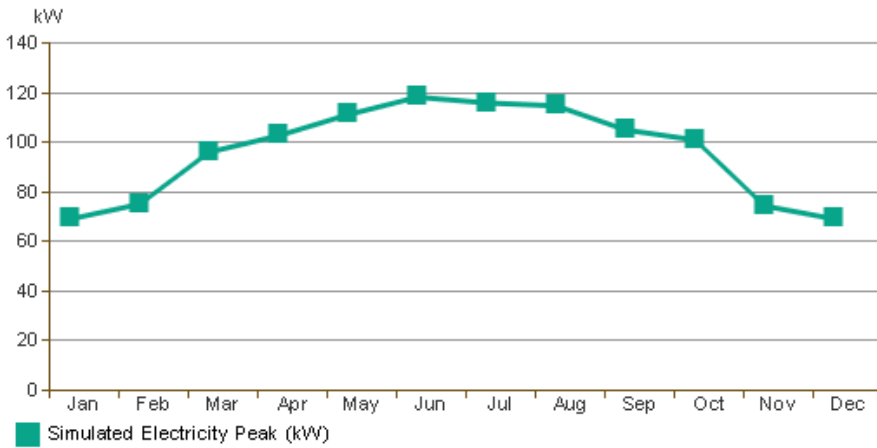
### Monthly Fuel Consumption



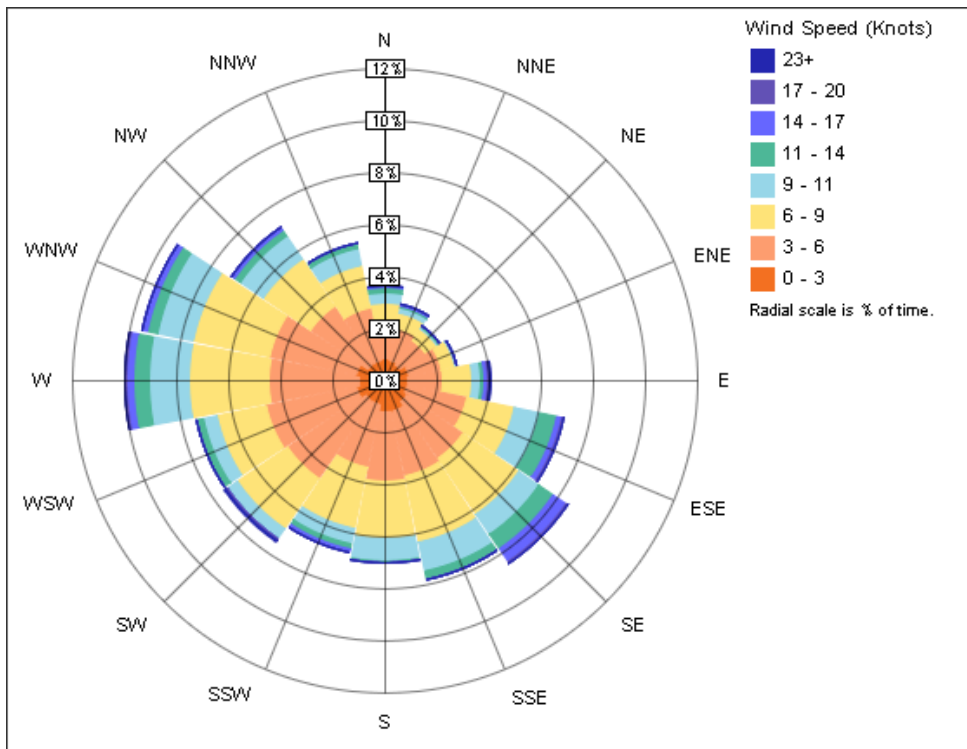
### Monthly Electricity Consumption



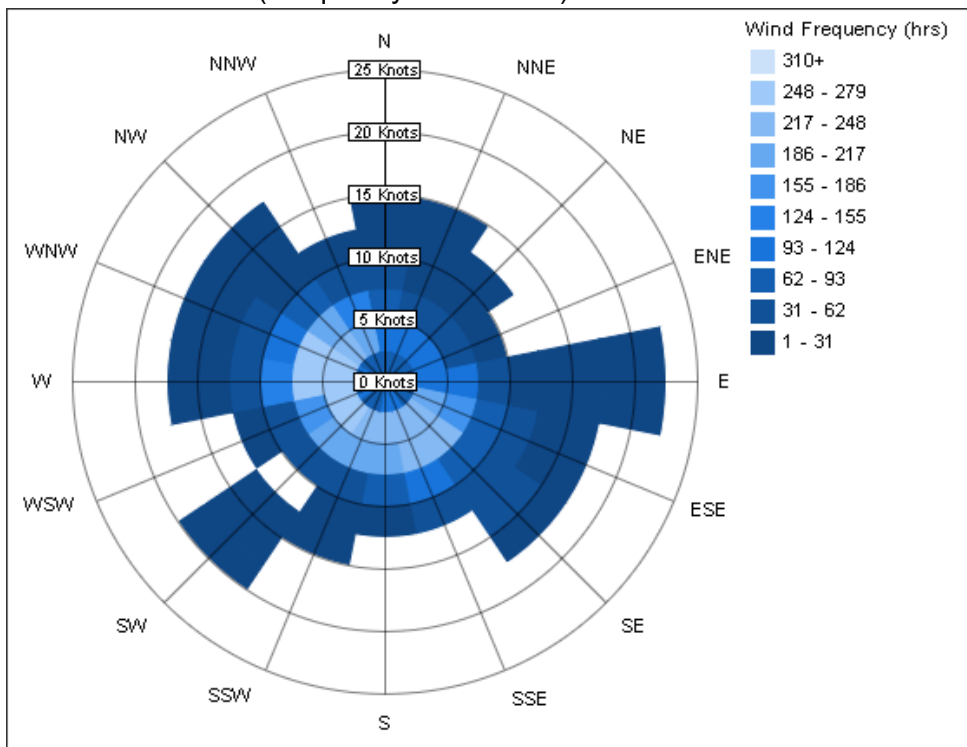
### Monthly Peak Demand



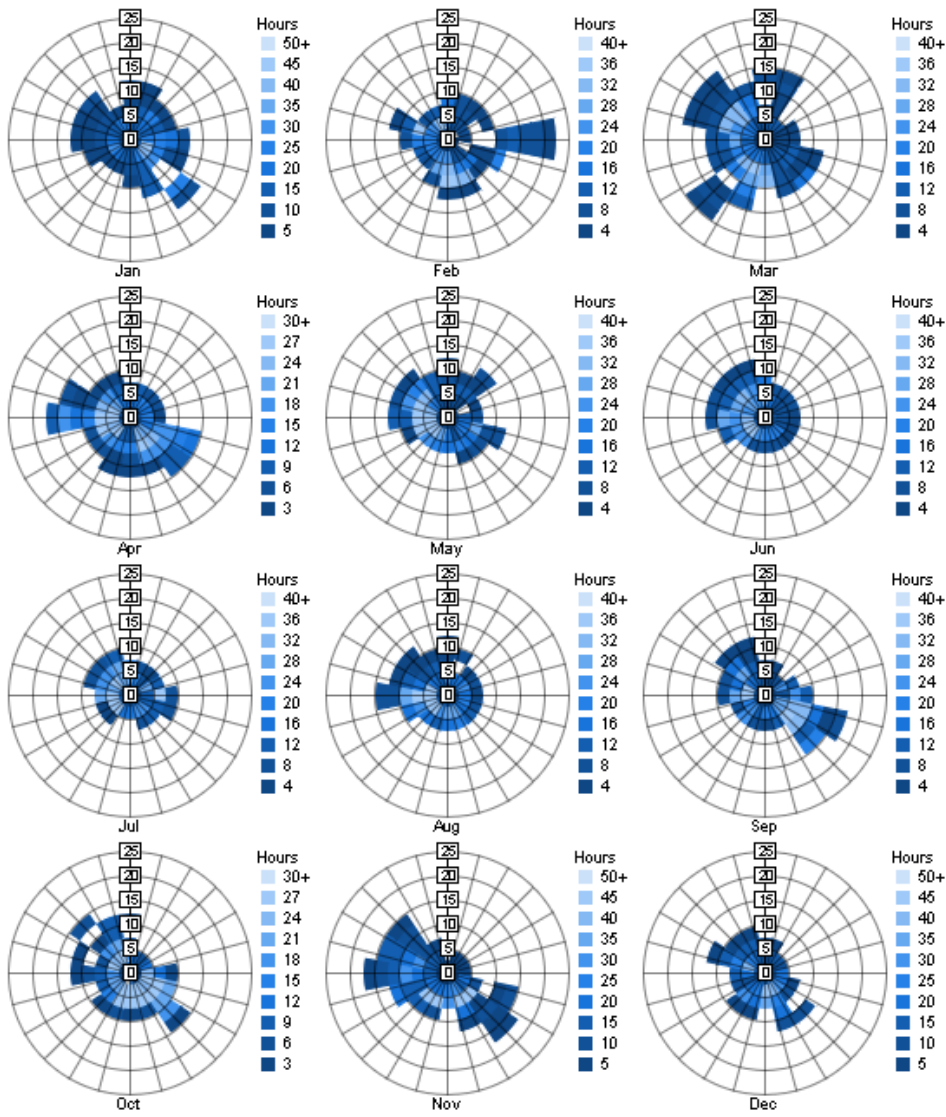
### Annual Wind Rose (Speed Distribution)



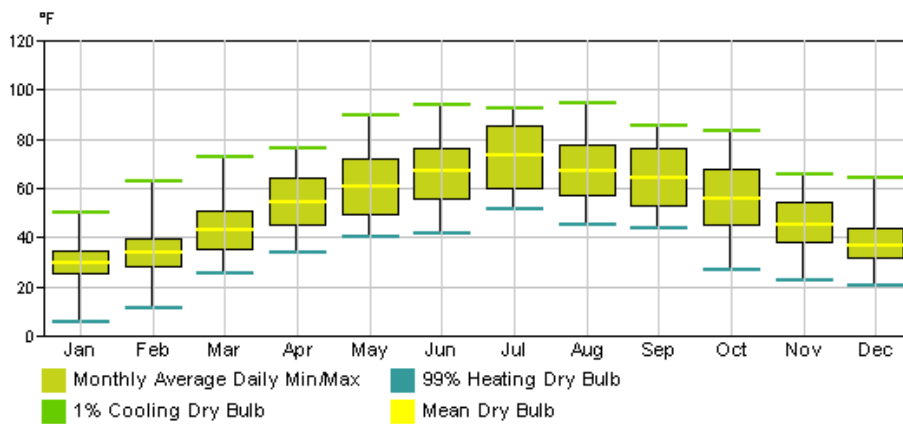
Annual Wind Rose (Frequency Distribution)



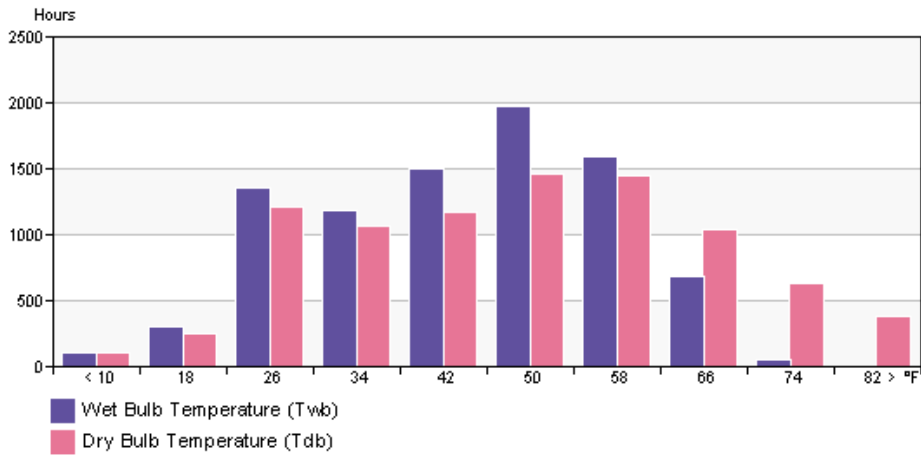
Monthly Wind Roses



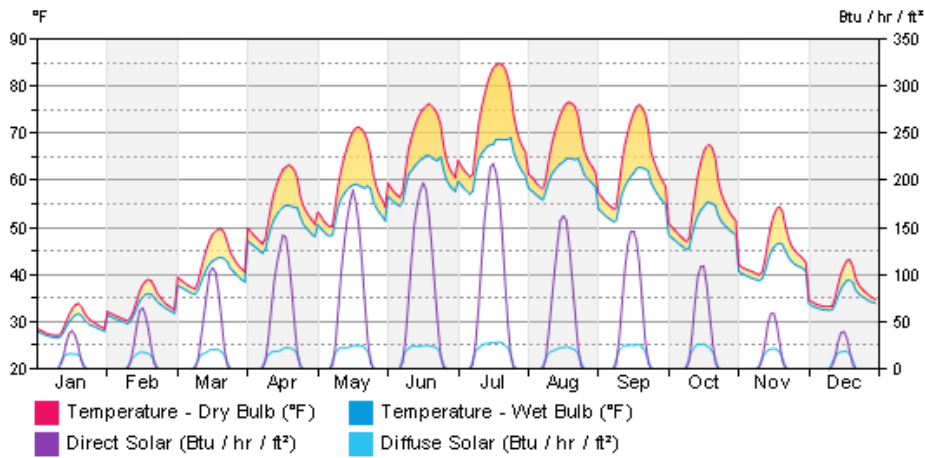
### Monthly Design Data



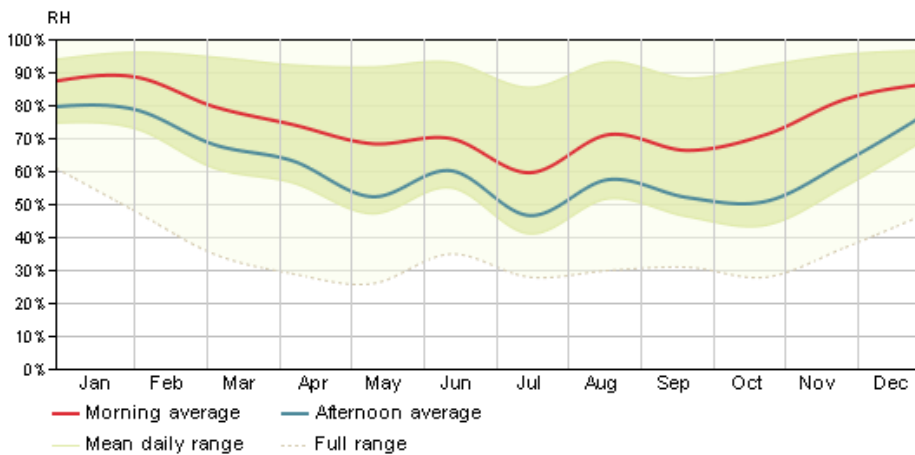
### Annual Temperature Bins



### Diurnal Weather Averages



### Humidity



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