

## Week 7\_sconde

**1)**

**Solar Radiation (Sunlight)** – The Sun with its high surface temperature emits a great deal of high energy, short wavelength radiation. Energy emitted by the Sun is also referred to as Solar or Shortwave Radiation. Most of Solar Radiation is the visible light we see with our eyes (Sunlight), but it also includes wavelengths that we cannot see like the Ultraviolet Rays that causes sunburn. The Earth However being much cooler than the Sun, emits lower energy, longer wavelength radiation. Energy emitted by the earth is also referred to as Terrestrial which means land-based or long-wave radiation. Although we cannot see long wave radiation with our eyes, we detect it as Heat. In summary, the types of radiation emitted by the Sun and the Earth are determined by their temperatures. The Sun which is very hot (6000 Kelvin) emits high-energy shortwave radiation, while the earth which is much cooler emits long-wave radiation (300 Kelvin).

The Solar Radiation is also reflected to Space by the help of the Ozone Layer and the Glaciers.

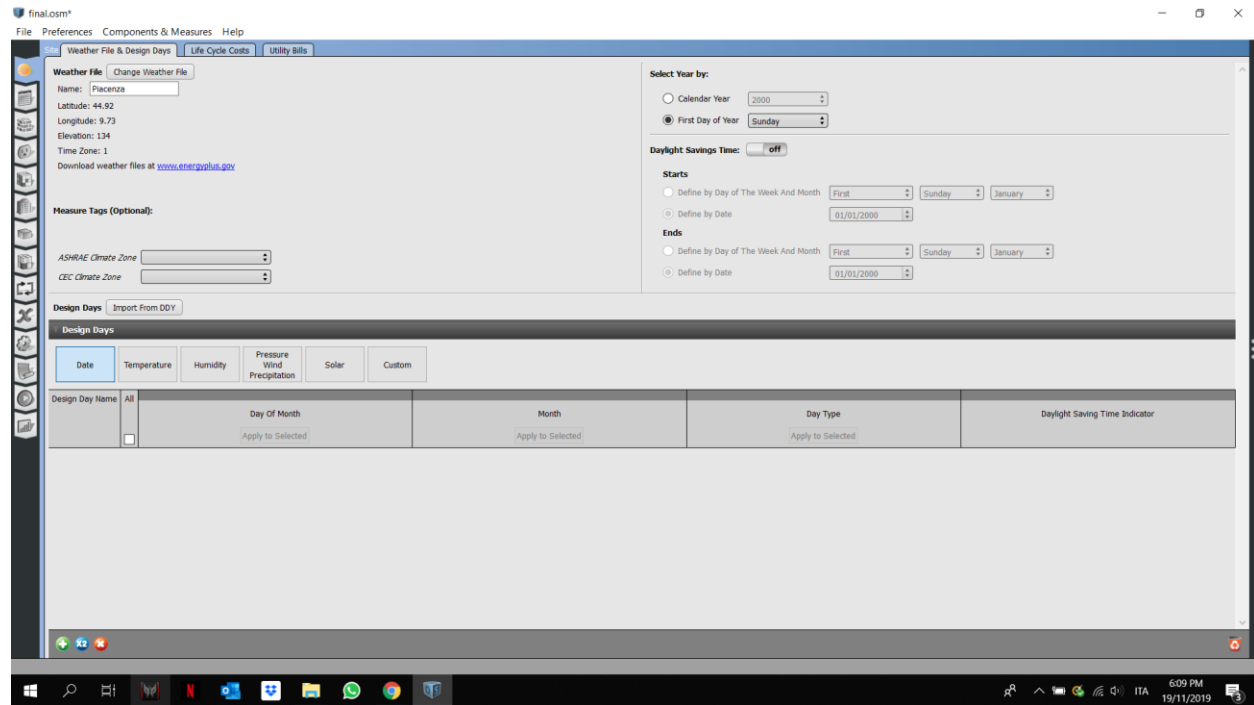
Greenhouse Gases such as Carbon Dioxide prevents the escape of excess Solar Radiation received by the Earth that causes rise in temperature, hence the Greenhouse Effect.

*The amount of Solar Radiation can be affected by these factors:*

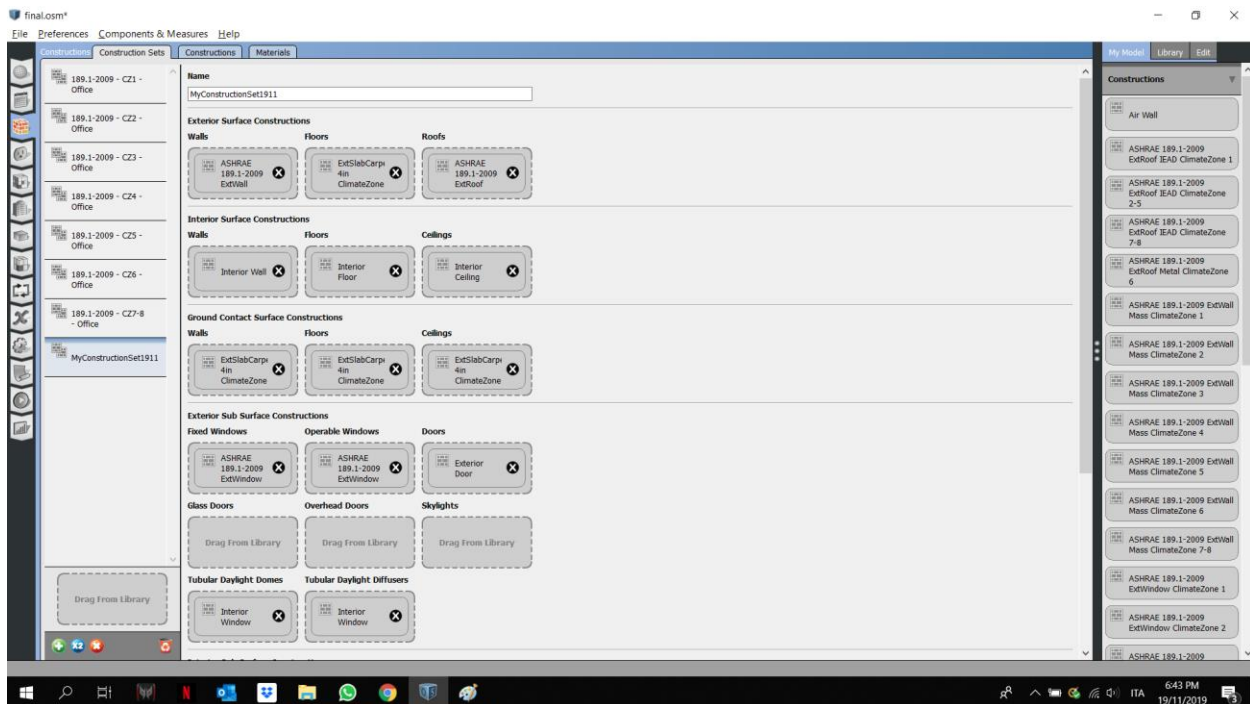
1. The Latitude of the Location.
2. Season.
3. Position of the Sun during the day. (This is also depending on the Season and Latitude)
4. Length of the Day. (Ex. A quarter of Finland's territory lies north of Arctic Circle, and at the country's northernmost point that the Sun does not set at all for 60 days during Winter.)

2)

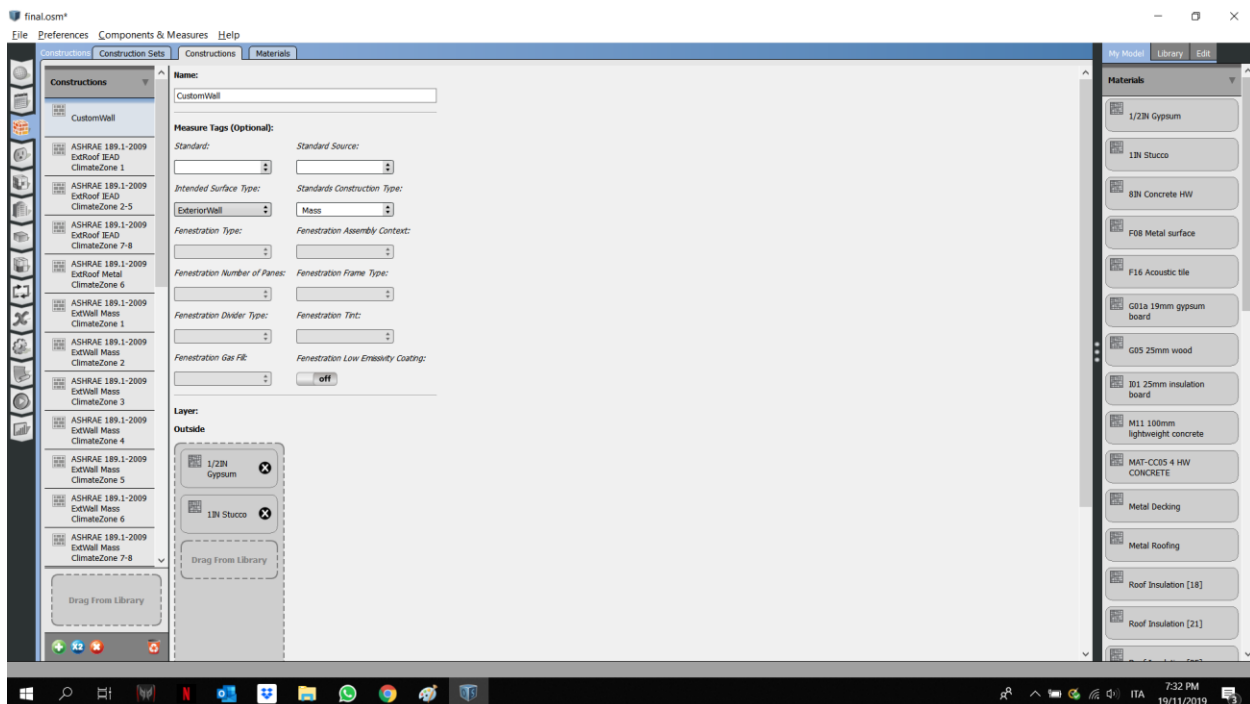
a. First, make sure that you've added the Weather Data of Piacenza.



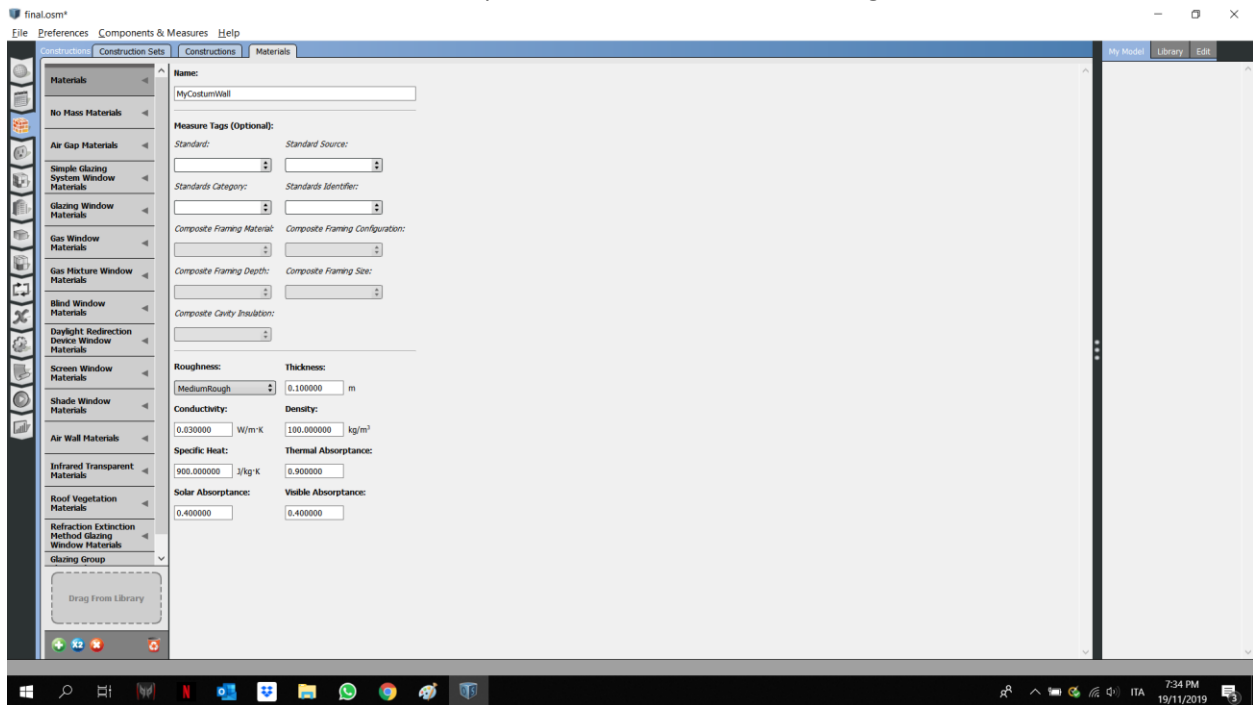
b. Go to Constructions > Create a copy of one of the default Construction Set > Edit its Name as you desire.



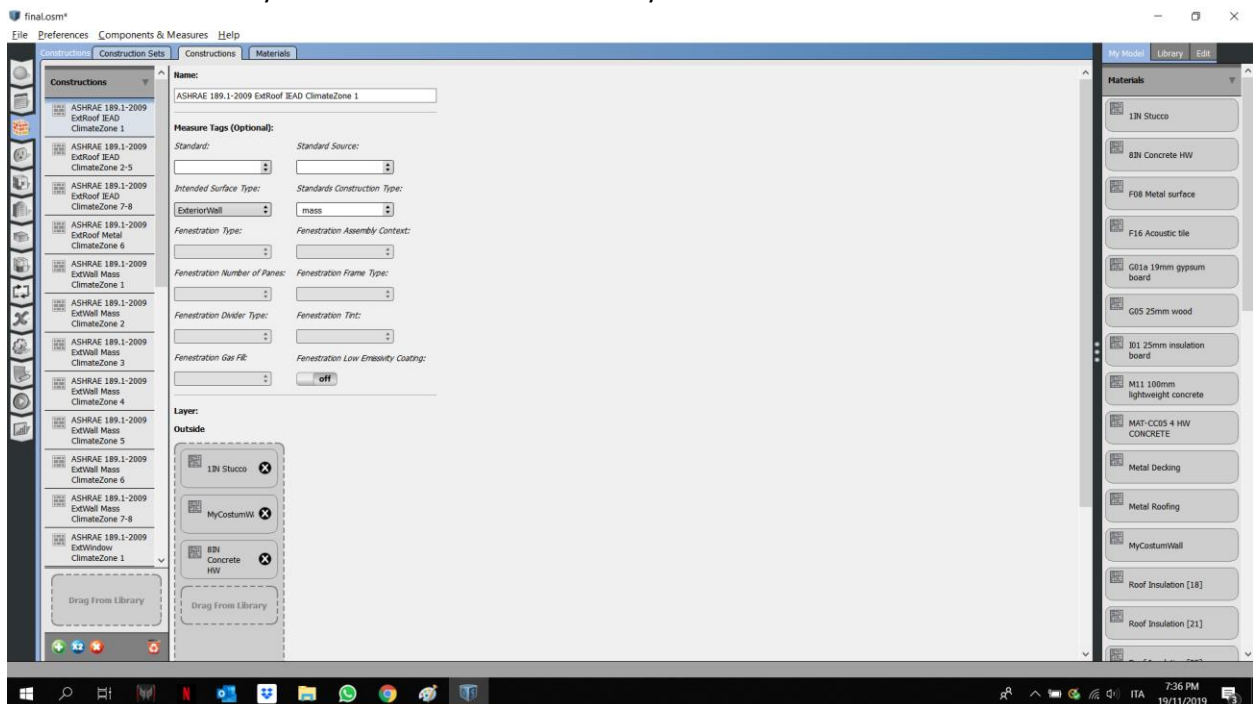
c. Go to Construction Tab



d. Create a custom material and set its specification as shown in the image.



e. Go back to Construction Tab > Add your Customized Material to your Layers. You can find the Customized Material you made at the “Materials” Tray.



f. You can repeat the Process back again if you desire to create a new wall or material.

