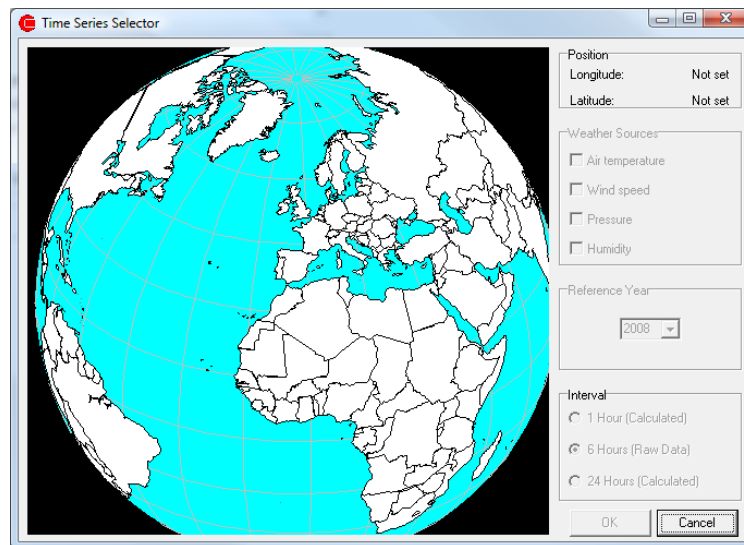




EnergyPRO

Import of weather data from EMD online server



EnergyPRO - Import of weather data from EMD online server

Instead of importing climate time series from files and spreadsheets energyPRO offers the opportunity to do this using online data provided by EMD International.

The data originates from the NCAR reanalysis project¹ and are modelled data available in a grid covering the whole world. The modelled data are based on measurements. In the following the data is described followed by a description of how to do it.

NCAR Data

The data originates from the NCAR reanalysis project, which provides climate data 4 times daily in a global grid since 1948 to present. The data that is available in energyPRO is:

- **Air temperature** : Instantaneous air temperatures in Celsius calculated at 0, 6, 12,18
- **Wind speed** : Mean wind speed in m/s at 10 meters calculated at 0-6,6-12,12-18,18-24
- **Air pressure** : Mean air pressure in HPa calculated at 0-6,6-12,12-18,18-24

Relative humidity : Mean relative humidity in % calculated at 0-6,6-12,12-18,18-24

In energyPRO we offer the possibility to convert NCAR data in to different intervals than the standard 4 times daily. You can either convert the data to 24 times daily or 1 time a day.

The conversion from 4 times daily to 24 times daily is done using linear interpolation so e.g. if the air temperature at 0 is 2 and at 6 it is 8 the calculated air temperatures will be:

Time	Air temperature	Source
0	2	From NCAR
1	3	Calculated
2	4	Calculated
3	5	Calculated
4	6	Calculated
5	7	Calculated
6	8	From NCAR

¹ The data are from the NCAR - reanalysis project NCEP Reanalysis data provided by the NOAA-CIRES Climate Diagnostics Center, Boulder, Colorado, USA, from their Web site at <http://www.cdc.noaa.gov/>.

The conversion from standard 4 times daily to 1 time a day is simply done by finding the mean value of the 4 NCAR values from that day.

Adding time series from online NCAR data

To add time series from online NCAR data you can either use the globe icon button at the toolbar or right click on the External Conditions folder in the folder structure, as shown in Figure 1.

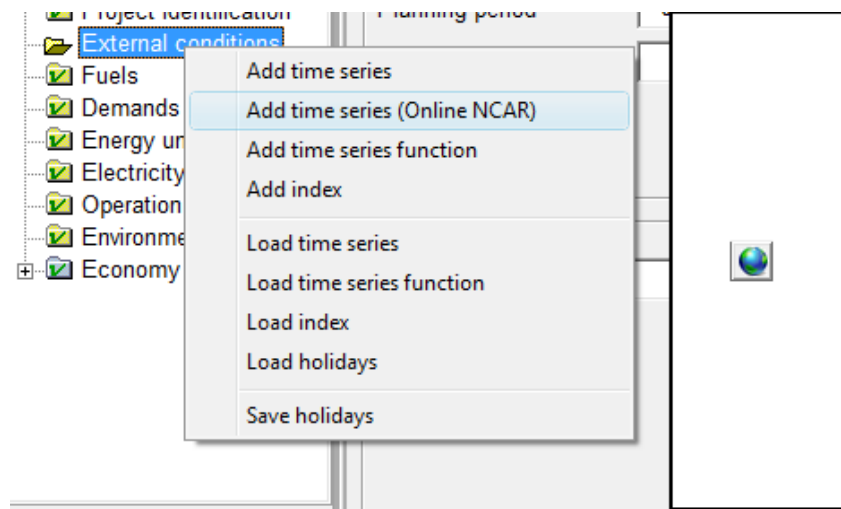


Figure 1: Shows how you can add time series from online NCAR data. On the left it is accessed via the folder structure and the right side shows the icon in the toolbar that can be used

After using either of these methods you will be presented with the window shown in

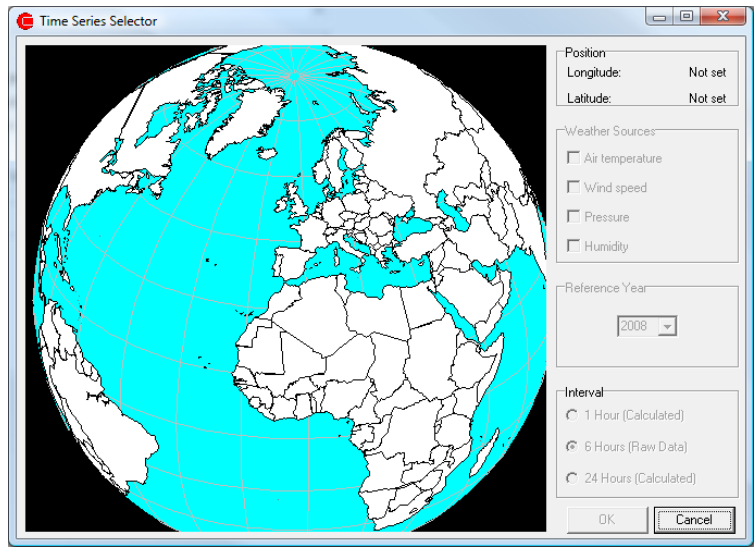


Figure 2: Dialog presented when adding time series from online NCAR data

In the window a globe is presented on the left-hand side which is used to select the coordinate you wish to add climate time series from. To move the globe around you use the press and hold the left mouse button while dragging the mouse around. You can zoom in by moving the mouse wheel up and zoom out by moving the mouse wheel down.

Once you have the area of interest in focus you can click on the globe with the left mouse button. This will ask the online server for the nearest NCAR data which will be presented on the globe with black dots as shown in

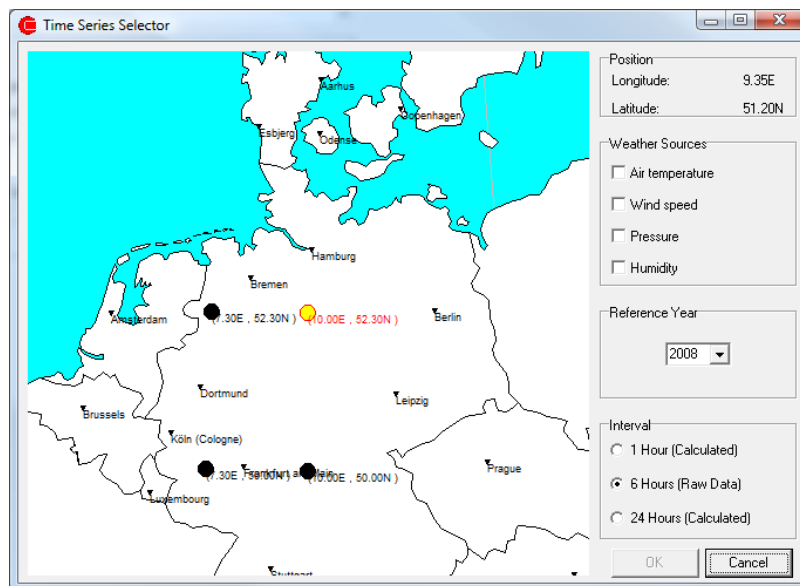


Figure 3: Shows the globe view after the nearest NCAR data points have been fetched

Once the nearest data sources are shown you select one of them by clicking on it with the left mouse button.

The next step is to select which climate data you are interested in which is done by clicking the checkboxes in the Weather sources group. For each checked weather source a time series will be created.

Before the time series can be fetched from the online server and created in energyPRO you need to select a reference year for the data. In the drop down box you simply select the reference year.

After selecting the reference year you can go ahead and click Ok to create the time series. However, if you want the time series to be created in different intervals than the standard 4 times daily you can choose a different interval in the Interval group box. Please refer to the section on NCAR Data earlier in this chapter to find details on how the conversion is done.

Once you click the Ok button energyPRO will contact the online data server provided by EMD international to fetch the selected climate data. For each weather source that was selected it will

create a new time series with default names and symbols. You can rename the time series and symbols as you want.