Energy Web Applications and Interactive Maps Database
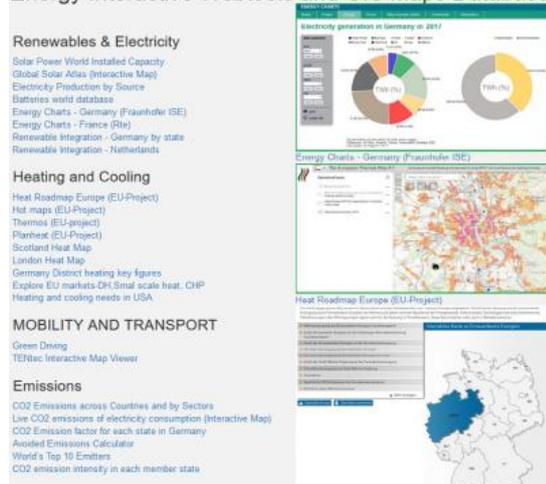
Some European funded projects finish their research by developing a **web application** or an **interactive map**. For some others, the development of a web application or an interactive map is the main aim (e.g. Heat Roadmap Europe, Thermos, PLANHEAT. International organizations such as ENREL or IRENA offer a these kind of internet based calculators. The main aim of public and private organizations is that the end-user (Local or Federal Governments, Research Centres, Students, private companies, public organization etc.) can calculate or visualized specific variables of interest (heat demand, CO_2 emissions caused by certain technology, solar irradiation at an specific city, etc) using these tools. Some of the Web-Apps do not calculate any variable, but offer a wide rage of data in a very easy way.

This database collects useful web applications and interactive maps for the study of sustainable Energy Systems from many organizations around the world. Most of the applications are from European countries. The database is categorized into four main categories:

- Renewables & electricity
- Heating and cooling
- Mobility & transport
- Emissions

The idea behind the database is to provide all tools available in the internet and thus saving great amount of time. The database will be updated frequently.

What is a web application?

A web application (web app) can be defined as a computer program which performs tasks over the internet. The way the web app operates can be summarized as follows: The user or client sends a request over the internet to a web server via the application's user interface. Then the web server forwards the request to the appropriated web application server, the latter performs the requested task and generates the results. The results come back following the same path again to the user.

A good example of a web a is the wastewater heating potential web app, which estimates the heating potential that can be supplied using large-scale wastewater heat pumps in district heating systems. The web app is based on real heat pump plants which recover heat from wastewater treatment plants and on other heat potential studies. The WWHP web app is based on an own website: towards100renewables. This, allows the web app to be accessed from anywhere without cost.

What is an interactive map?

An interactive map is a GIS based map on a website which main aim is to show a resource, technology, available in a certain location(e.g. city, region,country etc.). It allows the user to interact with the interface so that the user can decide to see one or other technology/resource available at a time or altogether. Each map offers different features, pop-up boxes for example are common features, which shows information about the selected region or city.

An example of this, is the Thermal Energy Storage Map. It shows the user all thermal energy projects within Europe. Or the Heat Road Map Europe, which main objective is to show the district heating potential in many European cities and the excess heat that can be integrated to the Cities' heating networks.