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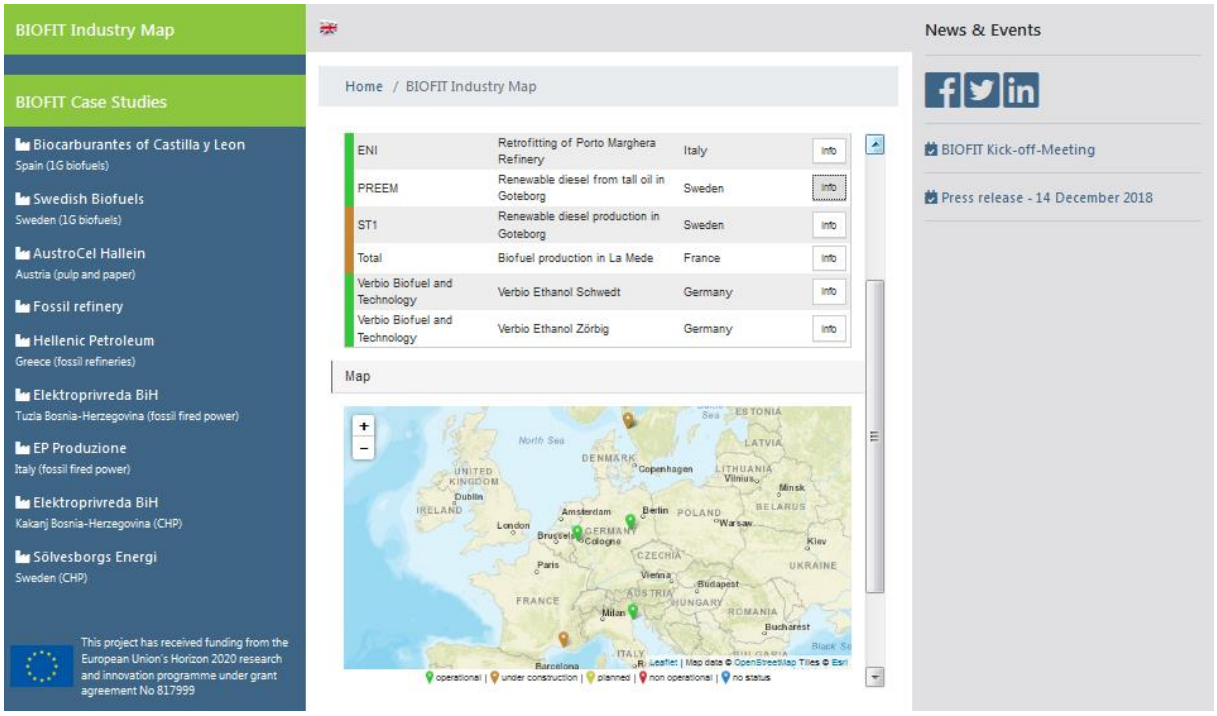
BIOFIT
Bioenergy Retrofits for Europe's Industry

EU Horizon 2020 no. 8178999
01/10/2018-31/09/2021
www.biofit-h2020.eu

Documentation of the BioFit online map on industry retrofitting with bioenergy

WP2: Options for Retrofitting Energy and Industrial Installations



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bioenergy2020+

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1 Summary

BIOFIT aims to facilitate bioenergy retrofitting in five industries: first-generation biofuels, pulp and paper, fossil refineries, fossil firing power and combined heat and power plants. To facilitate knowledge on existing bioenergy retrofits, an overview on already existing options for retrofitting energy and industrial installations is to be provided. This is the purpose of the online industry retrofitting map.

The online industry retrofitting map is based on data on retrofitted installations of the five industry sectors, which was made available by the BIOFIT project industry sector experts. These experts are CIEMAT and DBFZ for the 1st generation biofuels sector, VTT for the pulp and paper sector, BTG and TechnipFMC for fossil refineries, CERTH for the fossil power sector and ESS for the CHP sector. Data collated for each of the installations includes information on facility owner and location, industry sector, feedstocks and products before and after the retrofit, and retrofit technology pathway.

BIOENERGY 2020+ built an online database and uploaded the available mapping data into this database. The data are displayed via i-frame within the BIOFIT project website, under https://www.biofit-h2020.eu/biofit-industry-map/. This part of the website was launched to the public on 28 February 2019.

The data displayed in the online map can be viewed as a list of facilities or as pins on a map. Filters for industry sector, retrofit technology, feedstocks or products can be applied to shorten the list or reduce the number of pins displayed respectively. By clicking on a pin or on a box titled “Info”, all details of the chosen facility are displayed.

Currently, the online map consists of only 6 entries from the sectors 1st generation biofuels (2 entries), and refineries (4 entries). Another 30 from the pulp and paper industry sector will be uploaded early March, and more data in the coming weeks. After that, data will be added or refined whenever new information becomes available. In total we expect around 100 entries from all five industry sectors, with a vast majority stemming from the sectors fossil power and CHP, as conversion from fossil fuels to biomass has become commercially viable, at least under favourable national regulations.

2 Data collation

The online industry retrofitting map is based on data on retrofitted installations of the five industry sectors, which was made available by the industry sector experts. These are CIEMAT and DBFZ for the 1st generation biofuels sector, VTT for the pulp and paper sector, BTG and TechnipFMC for fossil refineries, CERTH for the fossil power sector and ESS for the CHP sector. Data collated for each of the installations includes information on facility owner and location, industry sector, feedstocks and products before and after the retrofit, and retrofit technology pathway.

3 List of facilities

The facilities are displayed as a list as can be seen below. Currently there are only 6 facilities from the 1st generation biofuels and the refinery sector in the database, but another 30 from the pulp and paper industry will be uploaded early March, and more in the next few weeks. We expect a total of 100 facilities, with the majority of these stemming from the fossil power and CHP industry sectors.

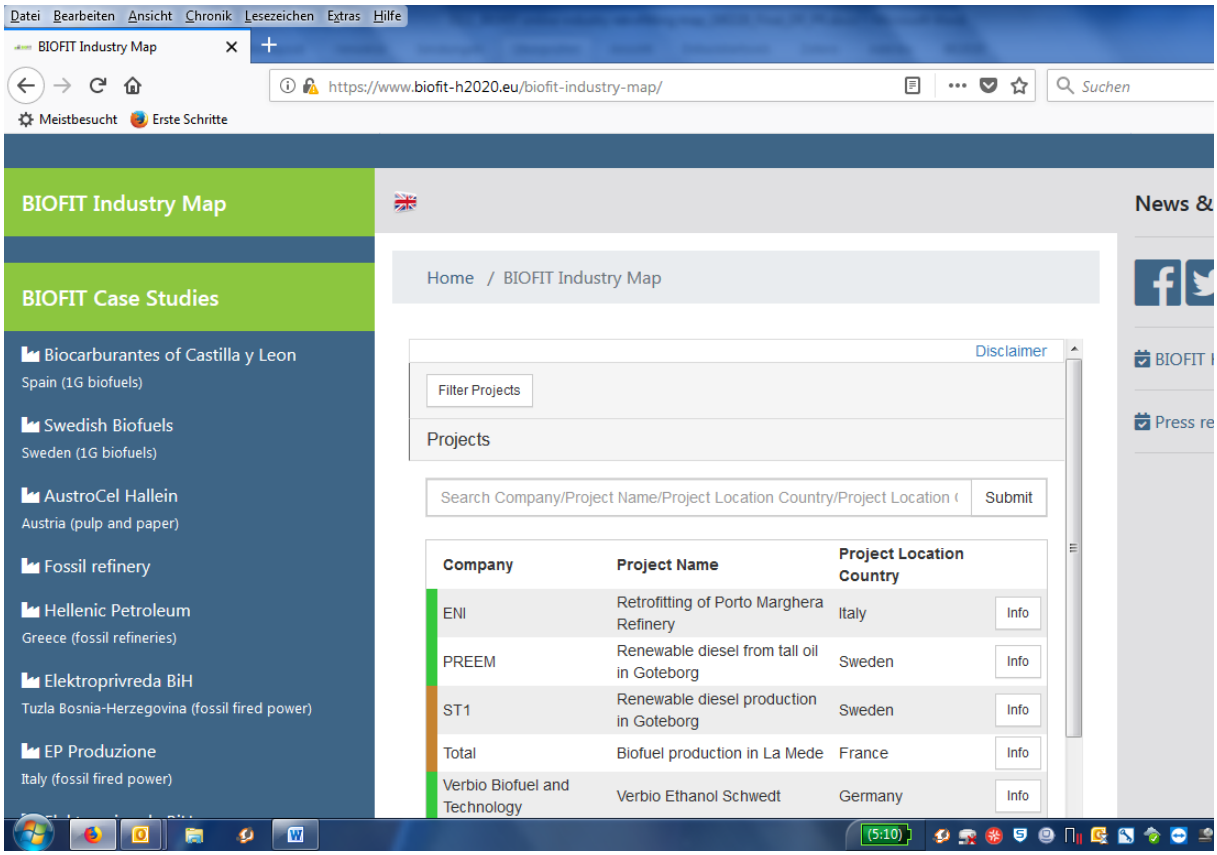

Figure 1: Screenshot of the list of facilities for the BioFit online map

4 Map

The same facilities are also displayed as pins on a map as is shown below.

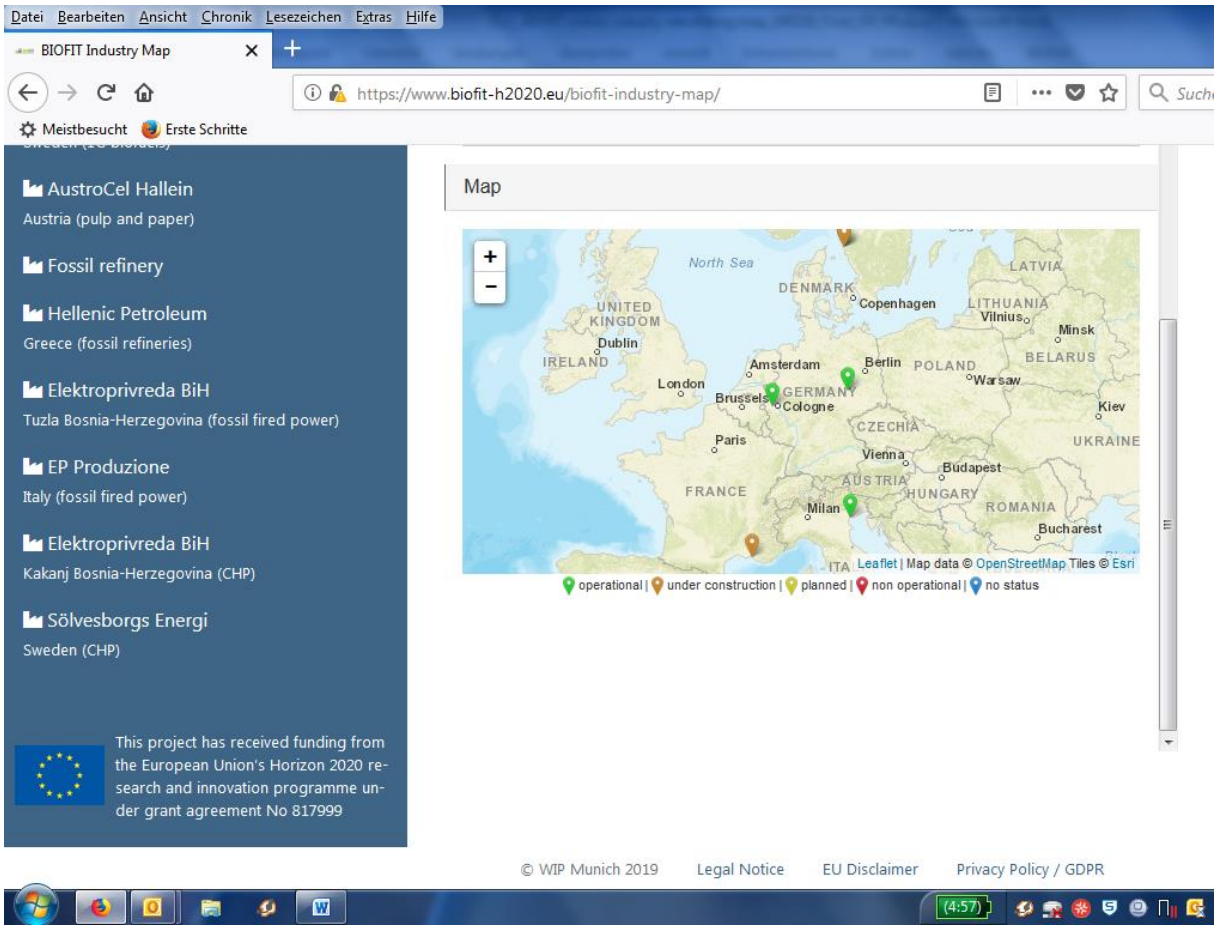

Figure 2: Screenshot of the BioFit online industry retrofitting map

5 Filters

By applying filters, the list of facilities can be shortened and the pins on the map are reduced accordingly. It is possible to filter by industry sector, retrofit pathway, technology readiness level of the retrofit pathway, status of the facility, feedstocks and products, as shown below.

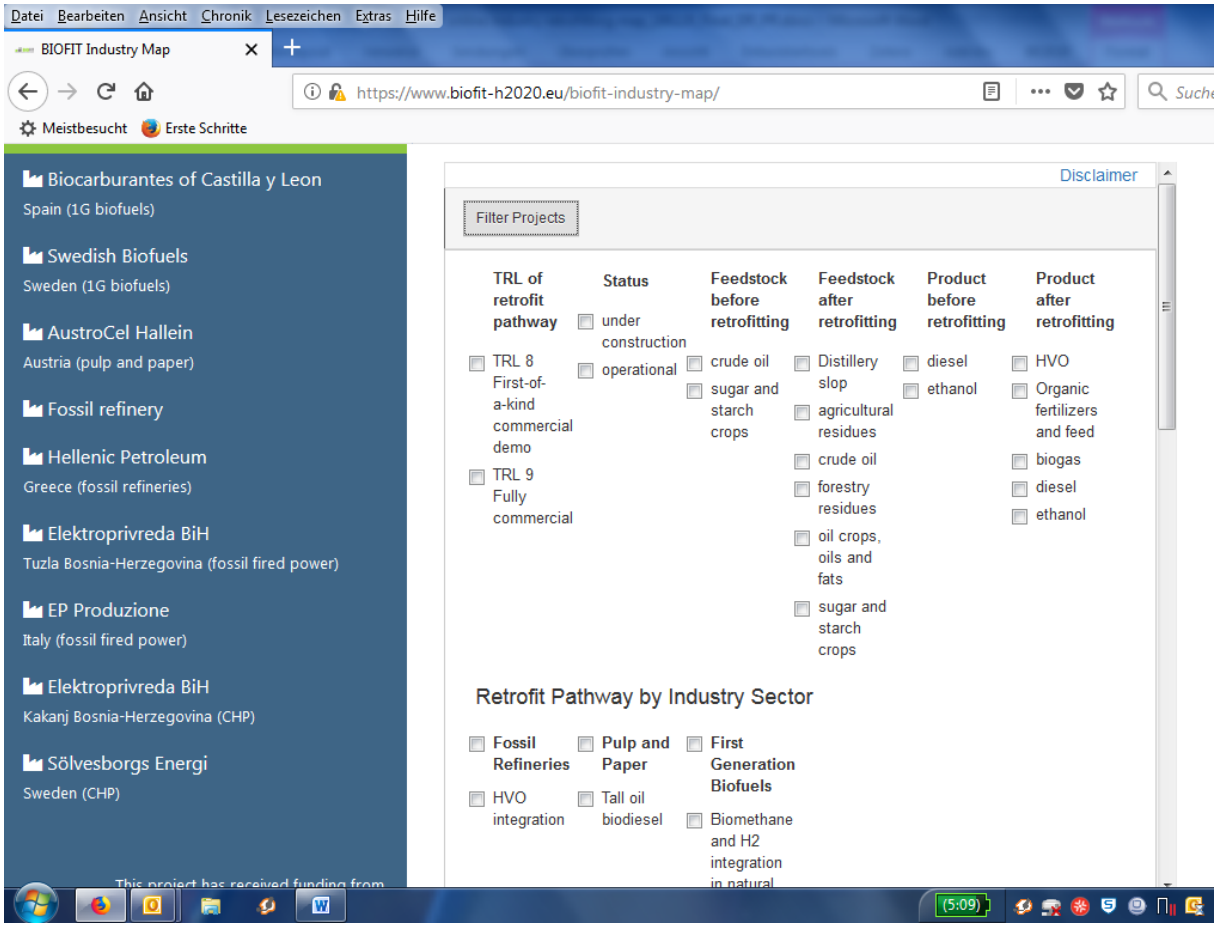

Figure 3: Project filters of the BioFit online map

6 Detailed info

By clicking on the button “Info” or on the pin in the map, detailed information on the chosen facility is displayed, as shown below.

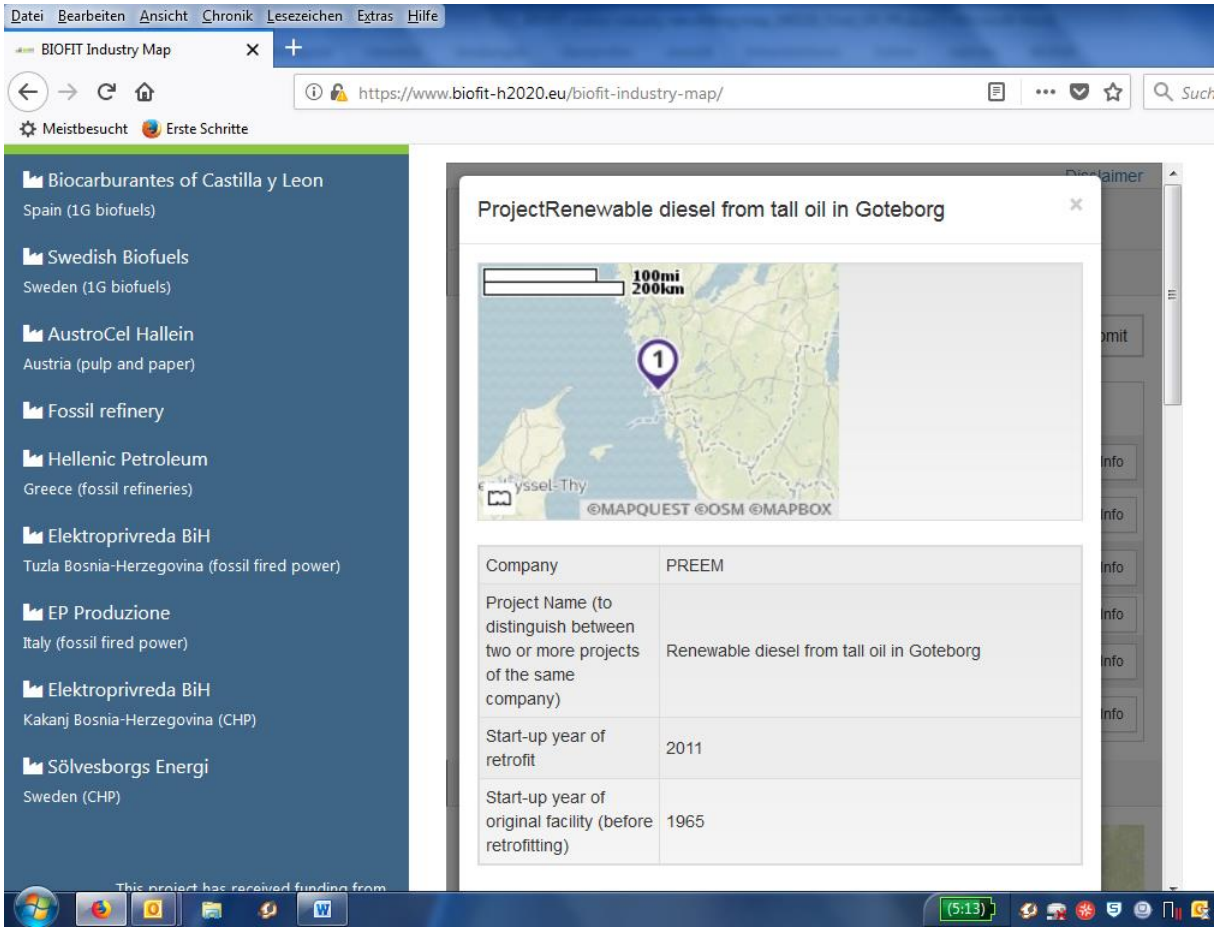

Figure 4: Detailed information on the BioFit online map

7 Use in other BIOFIT activities

The BIOFIT online map will serve as a basis for other BIOFIT dissemination activities, as it is an easy to use and transparent showcase of succesfull bioenergy retrofits.

Citation, Acknowledgement and Disclaimer

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www.biofit-h2020.eu

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