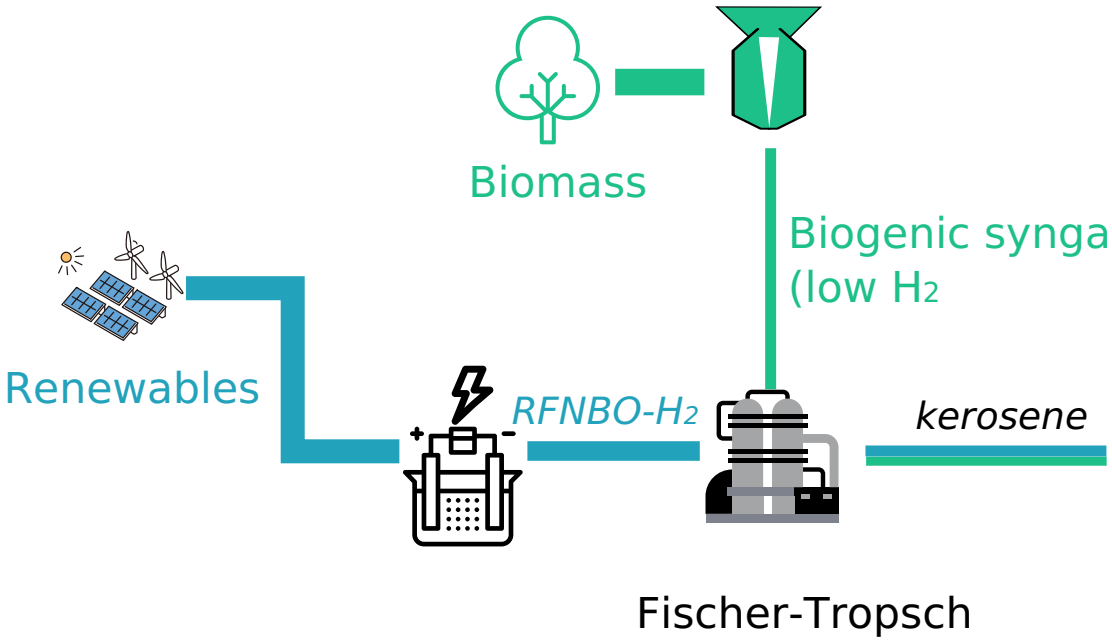
5: Biogenic syngas with surplus CO and RFNBO hydrogen

How to split biogenic and RFNBO-parts



Instead of using a shift reaction to increase the H_2/CO ratio in biogenic syngas, RFNBO hydrogen is added to the Fischer-Tropsch process. According to the “co-processing exception” in Annex A point 1, a distinction on a proportional basis of the energetic value of inputs shall be made.

Assumptions

Parameter	Symbol	Example value
Energy ratio of syngas to hydrogen	\(r_{sh}\)	\(4\ \color{grey}{\left.MJ_{syngas} \middle/ MJ_{hydrogen}\right.}\)
Efficiency of the FT reaction	\(\eta_{FT}\)	\(70\color{grey}{\%}\)
Fully renewable electricity carbon intensity	\(ci_{ren}\)	\(0\ \color{grey}{\left.g\,CO_2\,eq\middle/ kWh_{el}\right.}\)