CO₂ neutrality in methanation process

RED II mentions: « renewable energy means energy from renewable non-fossil sources »

In methanation process, a source of renewable H₂ allows to produce renewable CH₄

Principle of avoidance of double counting of CO₂ emission reduction

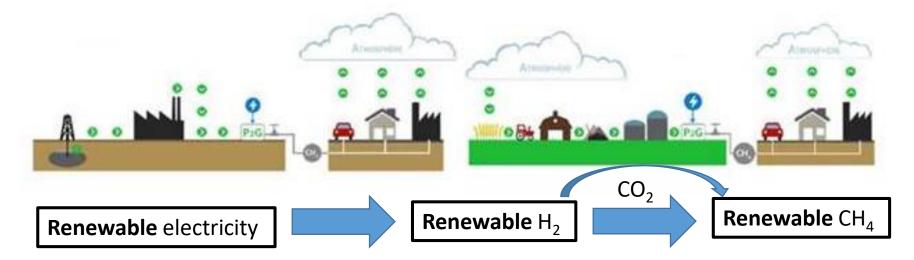
Released CO₂ during the combustion had been already captured during the methanation



Methanation: $4H_2 + CO_2 \rightarrow CH_4 + 2H_2O$

Combustion: $CH_4 + 2O_2 \rightarrow 2H_2O + CO_2$

Need of allocation rules regarding benefit of CO₂ emission reduction.



Recommendations

Synthetic methane produced from renewable hydrogen is renewable:

Based on RED II, particularly the definitions set in Article 2, any energy deriving from renewable sources is a renewable energy: a source of renewable electricity allows to produce renewable synthetic methane through methanation.

More clarification is welcomed for the allocation of emission reduction benefits of synthetic methane in order to avoid any double counting.