

The device comprises: - a gasifier (102) for producing a gaseous compound from a biomass, comprising inlets (104, 106) for the biomass and for an oxidising agent and an outlet (108) for the gaseous compound comprising carbon monoxide; - a means (110) for methanating the carbon monoxide to produce substitute natural gas exiting the gasifier, comprising at least one inlet (112) for water and one inlet for the gaseous compound from the gasifier, - a means (114) for methanating carbon dioxide to produce substitute natural gas comprising at least one inlet (116) for water and one inlet for the carbon dioxide, - a means (118) for producing dihydrogen from water and electric current comprising: - a power supply, - an inlet (120) for water and-an outlet (122) for dihydrogen supplying the means (114) for methanating carbon dioxide.