

Title (en)  
SUPPORT OF A SUSTAINABLE ENERGY SUPPLY HAVING A CARBON CYCLE USING REGENERATIVELY GENERATED HYDROGEN

Title (de)  
UNTERSTUETZUNG EINER NACHHALTIGEN ENERGIEVERSORGUNG MIT EINEM KOHLENSTOFF-KREISLAUF UNTER EINSATZ VON REGENERATIV ERZEUGTEM WASSERSTOFF

Title (fr)  
ASSISTANCE A UNE ALIMENTATION DURABLE EN ENERGIE, DOTEE D'UN CIRCUIT DE CARBONE ET RECOURANT A DE L'HYDROGENE FORME PAR REGENERATION

Publication  
**EP 2181491 A2 20100505 (DE)**

Application  
**EP 08786507 A 20080728**

Priority

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- DE 102007037672 A 20070809
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- DE 102007042937 A 20070908

Abstract (en)  
[origin: WO2009019159A2] The invention relates to ways that allow harmonization of the seasonal and meteorological influences of regenerative energy with human consumption patterns from the energy grid, and implementation of said harmonization by the intermediate storage and use of CO<sub>2</sub> recovery in a long-term sustainable energy supply providing continued stability to existing grids as well. According to the invention, an energy distribution method is proposed, in which a power grid (20) distributing current or loads supplies a plurality of load sites (21). Regeneratively generated energy (30, 31) from wind power or solar cells is not entirely fed into the grid (20), but rather is used at least in substantial portions to generate hydrogen (40). The hydrogen is hydrated in at least one hydration plant (10) together with carbon dioxide from other power plants (81, 82) or in a final storage facility (83), at least one gaseous, combustible hydrocarbon (11) being generated. The combustible hydrocarbon is again utilized in a power plant (81, 82) for generating electrical current, carbon moving in a cycle (100) having regeneratively generated energy (30, 31, 35) supplied and combustible hydrocarbon being given off.

IPC 8 full level  
**H02J 3/28** (2006.01)

CPC (source: EP US)  
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Citation (search report)  
See references of WO 2009019159A2

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