

Title (en)

WIND FARM COMPRISING A POWER FLOW UNIT, AND SUCH A POWER FLOW UNIT

Title (de)

WINDPARK MIT EINER LEISTUNGSFLUSSEINHEIT SOWIE EINE SOLCHE LEISTUNGSFLUSSEINHEIT

Title (fr)

PARC ÉOLIEN DOTÉ D'UNE UNITÉ DE FLUX DE PUISSANCE ET UNITÉ DE FLUX DE PUISSANCE DE CE TYPE

Publication

EP 3850721 A1 20210721 (DE)

Application

EP 19758400 A 20190822

Priority

- DE 102018122587 A 20180914
- EP 2019072482 W 20190822

Abstract (en)

[origin: WO2020052936A1] The invention relates to a wind farm (1000) for supplying electric power to an electric supply grid (2000), having a supply grid voltage (U_{Netz}), a supply grid nominal voltage ($U_{\text{Netz_Nenn}}$), a supply grid frequency (f_{Netz}), and a supply grid nominal frequency ($f_{\text{Netz_Nenn}}$). The wind farm comprises: a plurality of wind turbines (1100), an electric wind farm grid (1200) which connects the plurality of wind turbines (1100) and has a wind farm voltage (U_{Park}), a wind farm nominal voltage ($U_{\text{Park_Nenn}}$), a wind farm frequency (f_{Park}), and a wind farm nominal frequency ($f_{\text{Park_Nenn}}$), and a power flow unit (1300), which is designed to connect the electric wind farm grid (1200) and the electric supply grid (2000) together such that an electric power (P_{WEA}) generated by the plurality of wind turbines (1100) can be supplied to the electric supply grid (2000), wherein the power flow unit (1300) has at least: a DC intermediate circuit (1340) which is designed to conduct at least the electric power (P_{WEA}) generated by the plurality of wind turbines (1100), an electric energy store (1370) which is connected to the DC intermediate circuit (1340), an inverter (1350) which is connected to the DC intermediate circuit (1340) and is designed to supply at least the electric power (P_{WEA}) generated by the plurality of wind turbines (1100) to the electric supply grid (2000), and a control unit (1390) which is designed to actuate at least the inverter (1350) such that statically and dynamically, the wind farm (1000) appears as an electromechanical synchronous machine on the electronic supply grid (2000).

IPC 8 full level

H02J 3/32 (2006.01); **H02J 3/16** (2006.01); **H02J 3/38** (2006.01)

CPC (source: EP US)

H02J 3/16 (2013.01 - EP); **H02J 3/24** (2013.01 - US); **H02J 3/32** (2013.01 - EP US); **H02J 3/381** (2013.01 - EP US); **H02J 3/46** (2013.01 - EP);
H02J 3/50 (2013.01 - EP); **H02J 2300/28** (2020.01 - EP US); **H02J 2310/18** (2020.01 - EP); **Y02E 10/72** (2013.01 - EP);
Y02E 10/76 (2013.01 - EP); **Y02E 40/30** (2013.01 - EP)

Citation (search report)

See references of WO 2020052936A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020052936 A1 20200319; CA 3107196 A1 20200319; CA 3107196 C 20231212; CN 112703652 A 20210423;
DE 102018122587 A1 20200319; EP 3850721 A1 20210721; US 11646583 B2 20230509; US 2022045516 A1 20220210

DOCDB simple family (application)

EP 2019072482 W 20190822; CA 3107196 A 20190822; CN 201980060203 A 20190822; DE 102018122587 A 20180914;
EP 19758400 A 20190822; US 201917276053 A 20190822