US 20240178790A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0178790 A1

AMHAL et al. (43) Pub. Date: May 30, 2024

(54) **ADJUSTING AND MEASURING METHOD AND SYSTEM FOR A PHOTOVOLTAIC POWER PLANT**

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(21) Appl. No.: **18/520,429**

(22) Filed: **Nov. 27, 2023**

(30) **Foreign Application Priority Data**

Nov. 29, 2022 (FR) 2212518

Publication Classification

(51) **Int. Cl.**
H02S 50/10 (2006.01)

(52) **U.S. Cl.**
CPC ***H02S 50/10*** (2014.12)

(57) **ABSTRACT**

Adjusting and measuring method for a photovoltaic power plant comprising at least one photovoltaic string comprising solar panels connected in series and comprising at least one inverter configured to convert a DC voltage generated by the photovoltaic string into an AC voltage, the at least one inverter having a plurality of DC-voltage inputs, the method comprising the following steps:

A. measuring a frequency f of an AC voltage generated by the photovoltaic power plant and computing a frequency variation Δf of the AC voltage with respect to a predetermined reference frequency f_{ref} such that: $\Delta f = f - f_{ref}$ and computing a power variation ΔP to be applied by the photovoltaic power plant based on the frequency variation,

B. selecting a DC-voltage input from the plurality of DC-voltage inputs, this input being referred to as the i-th input with i an integer ≥ 1, in order to start or resume a measurement of a curve of "current as a function of voltage" of the i-th input, the i-th input having what is referred to as an initial DC voltage V_{ini}, then

C. computing what is referred to as a residual power variation $\Delta P'$ to be applied by the photovoltaic power plant such that $\Delta P' = \Delta P - P_i$,

D. if $\Delta P' \neq 0$: distributing the residual power variation $\Delta P'$ over inputs different from the i-th input,

E. repeating the preceding steps a plurality of times so as to create a plurality of different points of the measured curve of "current as a function of voltage".