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FA BS – Resolution on the
Technical Guideline
TG 10 Rev. 3

Berlin, 28.06.2024

FGW Expert Commitee FA BS - Resolution of 28.06.2024

The Expert Committee Operating Data & Site Yield (FA BS) has decided to supplement Revision 3 of Technical Guideline Part 10 (TG 10) "Determination of site quality after commissioning".

Section 4.1.1 is added to Chapter 4.1. The page with the modification is attached to this letter.

The supplement is valid immediately. Until 01.01.2025, it is also possible to proceed without applying section 4.1.1 (transition period).

On behalf of FA BS

Bente Klose

4 Data processing

The 10-minute data are synchronised and aligned to a regular time grid (Chapter 4.1). The event/status log files are incorporated into the 10-minute data (Chapter 4.4). The respective EEG categories of each 10-minute interval are determined via the event/status log files.

4.1 PREPARATION OF THE 10-MINUTE TIME SERIES

For calculating the energy quantities (Chapter 5), the time series of the SCADA data must be prepared. It must be ensured that only regular 10-minute intervals occur, that no 10-minute intervals are missing and that exactly one EEG category is assigned to each of these 10-minute intervals. Data gaps must be filled with information from Category 2 (see Chapter 3.3 **Data gaps**). If a time data source (reference time) is available in addition to the time stamps of the WT data, which can be assumed to be more precise than the WT time , the time stamps of the time series must be corrected to the next time stamp of the reference time which is rounded accordingly to the time interval of the time series, as long as the deviation of the WT time stamp to the reference time exceeds 5 minutes. In this case the time stamps of the status data must also be corrected by the exact time offset to the reference time. Time steps that deviate from the exact 10-minute interval must be corrected to the corresponding interval if no other value is on the corresponding time step. Time steps that fall between two regular 10-minute time steps are summarised according to their time portion, provided that the data sets including irregular time steps do not need to be considered to be implausible based on the criteria defined in 4.4 and therefore have to be rejected. Should data sets with the same time information exist that remain valid after applying the criteria from the plausibility test (Chapter 4.5), it must be checked whether it is possible to create the chronology, for instance using turbine-internal meter values. Should this not be possible, the last data set with an identical time information is used line-by-line. In general, it must be considered whether the time stamp of the 10-minute data represents the start or end of the time interval. The 10-minute data is processed based on local time (incl. summer/winter time), since this time zone is relevant for setting day/night periods and month limits.

The time periods set out here should be recalculated accordingly for time steps which deviate from 10 minutes.

4.1.1 PRE-FILTERING

For each time step of the 10-minute time series, a comparison is made between the power value $P_{Target,WEAi}$, which results from the application of the wind speed of the nacelle anemometer corrected for air density in accordance with chapter 6.3 to the reference yield power curve at daytime or to the approved night operation power curve at nighttime, and the power value of the 10-minute time step $P_{10min,WTi}$. The power value $P_{Target,WEAi}$ is interpolated according to wind speed. If the difference is

1. $P_{10min,WTi} - P_{Target,WEAi} \geq$ -30 kW in the cut in range $v < (v_{in} + 2,0$ m/s$)$

2. $P_{10min,WTi} - P_{Target,WEAi} \geq$ -50 kW in the rated power range $v \geq v_{Rated}$

3. $\left(\dfrac{P_{10min,WTi}}{P_{Target,WEAi}} - 1 \right) \geq$ -10% in the remaining partial load range

EEG category 0 is assigned to the 10-minute time step, or EEG category 1 in the case of power-reduced approved night operation. v_{in} and v_{Rated} denote the cut-in wind speed or rated wind speed as documented in the WT specification.

The assignment of the pre-filtered time steps to category 0 or 1 is not changed by section 4.4.