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## Appendix

### Symbology

| Parameter  | Unit of measure    | Description            | Symbols                                |          |
|------------|--------------------|------------------------|--|----------|
| $\epsilon$ | Degrees<br>(°)     | Solar elevation angle  |  |          |
| $\alpha$   |                    | Solar azimuth angle    |  |          |
| $\theta$   |                    | Surface tilt angle     |  |          |
| $\gamma$   |                    | Surface azimuth angle  |  |          |
| $\beta$    |                    | Normal incidence angle |  |          |
| R          | kWh/m <sup>2</sup> | Solar irradiation      | o: Global on horizontal plane          |          |
|            |                    |                        | s: Global on tilted and oriented plane |          |
|            |                    |                        | n: Normal on tilted and oriented plane | A: Arpa  |
|            |                    |                        |  | P: PVGIS |
| E          |                    |                        | R: Actual                              |          |
|            | kWh                | Electric energy        | R, C: Actual daily cumulative          |          |
|            |                    |                        | S: Estimated                           | A: Arpa  |
|            |                    |                        |  | P: PVGIS |
| P          | kW                 | Electric power         | R: Actual instantaneous                |          |
|            |                    |                        | $\bar{R}$ : Actual hourly average      |          |
| A          | m <sup>2</sup>     | Collection area        |  |          |

|                           |                  |  |   |                 |
|---------------------------|------------------|--|---|-----------------|
|                           |                  |  | p: PV panel                                 | N:<br>Nominal   |
|                           |                  |  |   | S:<br>Estimated |
|                           |                  |  | BOS: DC/AC<br>system                        | S:<br>Estimated |
| $\eta$                    | -                | Conversion yield   | v: PV system technical<br>obsolescence      |                 |
|                           |                  |  | t: Voltage transformer                      |                 |
|                           |                  |  | c: Losses in wiring, cables,<br><i>etc.</i> |                 |
|                           |                  |  | i: Inverter                                 |                 |
| $\text{eff}_{\text{rel}}$ | -                | PV panel relative efficiency   |   |                 |
| $R'_n$                    | $\text{Wh/m}^2$  | Normal irradiation on a tilted and<br>oriented plane compared to STC<br>( $1000 \text{ W/m}^2$ with AM 1.5 and T<br>$25^\circ\text{C}$ ) |   |                 |
| v                         | m/s              | Wind speed   |   |                 |
| T                         | $^\circ\text{C}$ | Temperature  | p: PV panel                                 |                 |
| $\Delta T$                |                  | Difference between the PV panel<br>operating temperature and the STC<br>temperature  | STC: Standard Test<br>Conditions            |                 |
| $\lambda$                 | -                | Deviation between the actual and<br>the estimated electric production  | a: Air                                      |                 |