

# Scope of O&M services for ground-mounted PV systems

We present our basic and premium packages as well as other additional services. Choose one of the packages or put together your own customised range of services.

	Included in the basic package	Included in the Premium package	Choose your individual service package
<b>Monitoring</b>			
Monitoring Portal Costs	☑	☑	
Monitoring Portal Account Management	☑	☑	
Monitoring on workdays	☑	☑	
Monitoring 365 days (including error detection & analysis)	☑	☑	
Onboarding Costs of new Sites	☑	☑	
<b>Asset Management</b>			
Technical Management support PV	☑	☑	
Site responsibility according to authorities	☑	☑	
Reporting according to standard templates		☑	
Customer-specific evaluations		☑	
Troubleshooting / Coordination of site interventions	☑	☑	
Management of Warranties		☑	
Claim Management		☑	
Contract Management			
<b>Health und Safety</b>			
Visual inspection of the safety guideline and risk assessment	☑	☑	
Visual inspection of the emergency plan	☑	☑	
Visual inspection of the logbook (if applicable)	☑	☑	
Visual inspection HV switching logbook	☑	☑	
Visual inspection of warning signs	☑	☑	
Visual inspection of first aid equipment (first aid kit)	☑	☑	
Visual inspection of passive safety installations	☑	☑	
Visual inspection of fire extinguishers	☑	☑	
Functional test of emergency lighting	☑	☑	

	Included in the basic package	Included in the Premium package	Choose your individual service package
Visual inspection of 20kV protective equipment (if necessary)	☑	☑	
Inspection of the site	☑	☑	
Visual inspection of escape ways (etc.)	☑	☑	
Functional test of escape doors (if possible without alarm)	☑	☑	
<b>General site condition</b>			
Park inspection and general visual inspection	☑	☑	
Visual inspection of the perimeter / fence (if available)	☑	☑	
Checking the functionality of the security system	☑	☑	
Visual inspection of internal and external roads	☑	☑	
Visual inspection of technical buildings	☑	☑	
Visual inspection of site vegetation (if available)	☑	☑	
Visual inspection of drainage systems	☑	☑	
Visual inspection for shading	☑	☑	
Spare parts management	☑	☑	
<b>Substructure and steel construction</b>			
Visual inspection if damages are present	☑	☑	
Visual inspection of corrosion protection	☑	☑	
Check for stability	☑	☑	
Random check of nuts and bolts	☑	☑	
Visual inspection of the labeling of the rows / table	☑	☑	
<b>Modules</b>			
General condition (soiling, state of module frame, etc.)	☑	☑	
Damage (broken glass, discoloration, hot spots, etc.)	☑	☑	
Visual inspection for shading	☑	☑	
Visual inspection of cabling (edge protection, bending radius, etc.)	☑	☑	
Visual inspection of DC connectors	☑	☑	
Visual inspection of type labels	☑	☑	
Visual inspection for module grounding (if available)	☑	☑	
Tightness control of clamps, etc - random sample	☑	☑	
<b>DC combiner boxes (if applicable)</b>			
Visual inspection of IP standards	☑	☑	
Visual Inspection labeling	☑	☑	

	Included in the basic package	Included in the Premium package	Choose your individual service package
Visual inspection of animal protection (sheep) (if available)	☑	☑	
Visual inspection of documentation	☑	☑	
Visual inspection of locks and sealing	☑	☑	
Visual inspection of warning signs	☑	☑	
Visual inspection of earthing	☑	☑	
Visual inspection of protection of live parts	☑	☑	
Visual inspection of interior (water ingress, insects, etc.)	☑	☑	
Visual inspection of the strain relief and cable entry	☑	☑	
Visual inspection of the fuse holders (if applicable)	☑	☑	
Checking the fuses (continuity test for fuses)	☑	☑	
Visual inspection of internal cabling	☑	☑	
Visual inspection of the busbar (corrosion, discoloration)	☑	☑	
Visual inspection of overcurrent protection/overvoltage devices	☑	☑	
Visual inspection of emergency switches (if available)	☑	☑	
Visual inspection of monitoring equipment (if available)	☑	☑	

## Cabling

Visual inspection for damage (e.g. rodent bite)	☑	☑	
Visual inspection of the type of installation (cable ducts etc)	☑	☑	
Visual inspection of cable types	☑	☑	
Visual inspection of the strain relief (if possible)	☑	☑	
Visual inspection of cabling ducts sealing	☑	☑	
Visual inspection of cable labels	☑	☑	
Tightness of connection elements - random sample	☑	☑	

## Inverter

Visual inspection of IP standards	☑	☑	
Visual inspection labeling	☑	☑	
Visual inspection of animal protections (if available)	☑	☑	
Visual inspection of documentation (central inverter)	☑	☑	
Visual inspection of locks and sealings	☑	☑	
Visual inspection of warning signs	☑	☑	
Inspection according to manufacturer's instruction	☑	☑	
Visual inspection of surge protection devices	☑	☑	

	Included in the basic package	Included in the Premium package	Choose your individual service package
<b>AC combiner boxes</b>			
Visual inspection of IP standards		☑	
Visual inspection of accessibility (light, obstacles, etc.)		☑	
Visual inspection labeling		☑	
Visual inspection of animal protection (sheep) (if available)		☑	
Visual inspection of documentation		☑	
Visual inspection of locks and sealings		☑	
Visual inspection of warning signs		☑	
Visual inspection of earthing		☑	
Visual inspection of protection of live parts		☑	
Visual inspection of interior (water ingress, insects, etc.)		☑	
Visual inspection of the strain relief and cable entry		☑	
Visual inspection of the fuse holders		☑	
Checking the fuses (continuity test for fuses)		☑	
Visual inspection of internal cabling		☑	
Visual inspection of the busbar (corrosion, discoloration)		☑	
Visual inspection of surge protection devices		☑	
Visual inspection of emergency switches (if available)		☑	
Visual inspection of monitoring equipment (if available)		☑	
Visual inspection of additional equipment (if available)		☑	
<b>Medium voltage distributions</b>			
Visual inspection of accessibility (light, obstacles, etc.)		☑	
Visual inspection labeling		☑	
Visual inspection of animal protection (sheep) (if available)		☑	
Visual inspection of documentation		☑	
Visual inspection of isolation gas (if available)		☑	
Visual inspection of the locking system		☑	
Visual inspection of switching and safety equipment		☑	
Visual inspection of locks and sealings		☑	
Visual inspection of warning signs		☑	
Visual inspection of earthing		☑	
Visual inspection of protection of live parts		☑	
Visual inspection of interior (water ingress, insects, etc.)		☑	

	Included in the basic package	Included in the Premium package	Choose your individual service package
Visual inspection of the strain relief and cable entry		☑	
Visual inspection of internal cabling		☑	
Visual inspection of surge protection devices		☑	
Visual inspection of monitoring equipment (if available)		☑	
Visual inspection of additional equipment (if available)		☑	
Cleaning the transformer / transformer room		☑	
<b>Measurement sensors</b>			
Visual inspection for damage	☑	☑	
Visual inspection of soiling	☑	☑	
Control of alignment and attachment	☑	☑	
Cleaning of irradiation measurement device	☑	☑	
Verification and implementation of updates for data loggers	☑	☑	
Plausibility check of recording data	☑	☑	
<b>Measurements</b>			
String measurements Isc, Uoc, Riso	☑	☑	
Evaluation and Analysis (string measurements)	☑	☑	
UI characteristic measurement		☑	
Evaluation and analysis (UI characteristic measurement)		☑	
Grid analysis			
Grid analysis evaluation			
Thermographic examination – transformers and electrical switchgears (if accessible)			
Thermographic examination – electrical sub-distributions and busbars (if accessible)			
Thermographic examination – inverters (if accessible)			
Thermographic examination – DC-Combinerboxes (if accessible)			
Thermographic examination – pv-modules			
Evaluation and Analysis (thermographic examination)			
E-Check / DGUV V3			
Initial commissioning test based on VDE 0100 - 600			
Repeat test based on VDE 0105 - 100			
Evaluation and Analysis (E-Check / DGUV V3)			
Affixing test seals			

	Included in the basic package	Included in the Premium package	Choose your individual service package
<b>Extra services</b>			
Green cuttings			
Module cleaning			
Calibration of measurement sensors			
Measured value purchase, e.g. satellite data			
Thermographical inspection via „Solartektor“			

- I have customised my service package.
- I choose the complete basic package.
- I choose the complete premium package.

Space for your message

# Checklist for planning

## Contact information

Salutation      Mr      Ms      Not specified

First name\*

Surname\*

E-mail\*

Phone

Company\*

\*Mandatory field

## The solar park

Location of the solar park

Area of the solar park (in hectares)

Size in MWp (min. 1 MWp)

Installation      Fixed mounting      Tracking system

Voltage      1000 Volt      1500 Volt

Commissioning date

## The components

Inverter manufacturer

Inverter type

Number of inverters

Module manufacturer

Module type

Number of PV modules

Transformer type

Number of transformers

Monitoring system currently in use

Have you selected your desired service package? Then send it to us directly here by e-mail. We will get in touch with you as soon as possible!