

Solar History - Pricing & Ordering

Price information and ordering procedure for your solar product

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0 Introduction

0.1 Company

meteoblue is a Swiss specialist company producing high precision weather data for the entire world, using observation data, high-resolution Numerical Weather Predictions (NWP) and specialised data output methods adapted to the needs of different user groups. Based on these simulations, meteoblue produces solar radiation forecast and data validation services.

meteoblue produces weather data since 2007, and produces the largest daily available data volume of any private EU weather service. The available weather archives cover 30 years in maximum detail which is important for any verification purposes. Quality verification results are shown on:

<https://content.meteoblue.com/en/verified-quality/verification>.

0.2 Distribution

meteoblue offers products, services and project resources to clients worldwide.

For representation in certain countries or market segments, meteoblue works with selected distributors, who represent, sell and service meteoblue products, services and /or project resources.

meteoblue offers time series specifically designed for the needs of solar power generators, electricity traders, grid or building management.

Meteoblue offers a portfolio of products, that are especially adapted to the needs of the solar sector. Its time series, image and data feeds contain radiation and power forecast specifically for power and building management. Furthermore standard meteorological and special parameters are delivered in different products. More information is provided in the documents:

>>meteoblue_Solar_Technical_Specification_EN.pdf<<

>> meteoblue_Solar_Controlled_Quality_EN.pdf<<

1 Solar history

Our solar history products are based on the meteoblue archives, that provides hourly weather data since 1986 for any location in the world. The time series are complete, which means data availability is 100 %, with a spatial resolution of 3km-25km. All typical weather parameters are available and PV referenced parameters can be simulated in approved meteoblue quality. The archive parameters are consistent with the meteoblue forecast products, both in calibration and quality. In 2017 meteoblue introduced a new data calibration scheme, that was tuned on satellite derived observation. This reduced systematic errors of solar history data to less than 5% and is of equal quality of satellite derived observation data.

1.1 history+

The easiest way to access and analyse meteoblue solar history data is to buy history+ for the desired location. It enables analyses and unlimited downloads of 30 years hourly time series for 100€ only. history+ includes 12 weather variables like solar radiation, temperature, cloud cover, precipitation, snowfall, wind speed and some more. For more information visit: www.meteoblue.com/historyplus

1.2 Solar time series

From the archives any specified time range can be extracted, the parameter selection is based on packages, which are sets of parameters, that can be combined for your specific needs. The data can be accessed via mail or web download or for clients which use the data for web applications via API.

1.3 Typical Meteorological Years (TMY)

meteoblue offers TMYs that can be processed based on hourly time series on the last 10 or the last 30 years. The result is a one year time series with 12 typical months that represent the climate of the referred period.

1.4 Characteristic or extreme years

Furthermore characteristic or extreme years are offered. The 30 years of the reference climate period are sorted as their radiation sum (or heating degree days etc.). Then the extreme year (P01, P99) or other statistically significant confidence intervals can be chosen (P10, P90). This allows the exact assessment of frequency and amplitude of years with temperatures or radiation values, that are extremely high or low.

1.5 Aggregation

Solar TMYs and time series can be aggregated from hourly to daily or monthly sums (or means). The aggregation is always based on an hourly dataset and thus its values are consistent. Therefore the following temporal resolutions are available for all history products:

- Hourly
- Daily
- Monthly
- Yearly

1.6 Transmission

The data can be accessed via API which is for customers that need automatic integration in their web applications. For customers with single request we deliver the data via email or web download in meteoblue standard CSV format. Furthermore daily or monthly reports can be transmitted via Email or FTP.

1.7 Solar history premium services

The meteoblue Premium Services are always delivered with a specified solar report:

- **Solar report - climatology and variation:**
This report summarizes intraday, seasonal and multi-year yields and their variation for your specific site. It is available for GHI or PV reference yield.
- **Solar report - PV system layout:**
This report compares the seasonal distribution of monthly PV reference yield for your specific site for 20 different system layouts (PV panel inclination and orientation).
- **Statistical optimization (MOS):**
The best possible time series (up to 30 years) for your site assessment using 30 different parameters and best fit algorithms on your measurement data. This quality level can be achieved using on site measurements or satellite derived observation data.
- **Snow analyses:**
Based on temperature, precipitation and snow measurements within your region, we provide you with a downscaled and recalibrated dataset, which estimates snow fall and coverage for your specific sites. Available only where measurement data is accessible.

1.8 Solar custom services

- Animations, Maps, Reports, Images
- FTP-transmission
- Special data formatting (e.g. CSV, JSON, XML, XLSS; Daylight Saving Time correction)
- Minute synthesis - simulates the minute variability of radiation based on the cloud pattern

2 Prices

2.1 Pricing principle

The cost for solar Services are 100 € per year for each SITE. The general fee structure is shown in Table 2.1:

Table 2.1: Pricing principle of solar services

Type	Description	Description
ACCESS	Support level, data license, disposability of data interface	Yearly
SITE	Maintenance and data price of the data feeds by site	Yearly
CUSTOM	Services tailored for special customers	Once / Yearly

2.2 Pricing of Email service (single request)

The Standard Service allows only email delivery for customers with less than 50 request per year. It has no ACCESS cost, but SITE fees are higher than for API service. A test dataset can be provided on request. Table 2.2 gives an overview of all products and their prices:

Table 2.2: Pricing of solar history email Services.

#	Type	Name	Time Range	Price	Description
1	ACCESS	Access MAIL		free	>> Email support within 7 days >>Standard quality level (2 requests/day) License: No resale of data or images
2a	SITE		1 year	25 €	12 months of data for one specified year
2b	SITE	MONTHLY solar / pvpro	1 TMY	50 €	12 months of data for one typical specified year
2c	SITE		30 years	100 €	30x 12 months of data for one specified year
3a	SITE	DAILY solar / pvpro	1 year	50 €	365 days of data for one specified year
3b	SITE		1 TMY	100 €	365 days of data for one typical specified year
3c	SITE		30 years	200 €	30 x 365 days of data for one specified year
4a	SITE	HOURLY solar / pvpro	1 year	100 €	8760 hours of data for one specified year
4b	SITE		1 TMY	200 €	8760 hours of data for one typical specified year
4c	SITE		30 years	400 €	30 x 8760 hours of data for one specified year

2.3 Pricing of API Services (multi request)

API Services allows multiple requests each day and has 2400 € yearly ACCESS cost. Worldwide monthly aggregated data can be accessed for free. The cost per SITE is lower than for MAIL service customers. A test API can be provided on request. Table 2.3 gives an overview of all products and their prices:

Table 2.3: Pricing of solar history API Services:

#	Type	Name	Time Range	Price	Description
1	ACCESS	API Access		2400 €	>> Email support within 7 days >>Standard quality level (2 requests/day) License: No resale of data or images
2a	SITE		1 year	free	12 months of data for one specified year
2b	SITE	MONTHLY solar / pvpro	1 TMY	free	12 months of data for one typical specified year
2c	SITE		30 years	free	30x 12 months of data for one specified year
3a	SITE	DAILY solar / pvpro	1 year	25 €	365 days of data for one specified year
3b	SITE		1 TMY	50 €	365 days of data for one typical specified year
3c	SITE		30 years	100 €	30 x 365 days of data for one specified year
4a	SITE	HOURLY solar / pvpro	1 year	50 €	8760 hours of data for one specified year
4b	SITE		1 TMY	100 €	8760 hours of data for one typical specified year
4c	SITE		30 years	200 €	30 x 8760 hours of data for one specified year

2.4 Pricing for Software Integration and High Volume Requests

For License based usage of our solar history API, we offer a decreasing shared revenue model for revenues of more than 20'000 € per year. For high volume requests rebates can be negotiated. For more information please contact us.

2.5 Pricing of Solar History Premium Services

An overview of the prices of solar history premium services is given in Table 2.4

Table 2.4: Pricing of solar history premium services:

#	Type	Product	Price	Description
1	CUSTOM	Solar report	200 €	Fee for each Report (climate variation or PV system layout)
2	CUSTOM	MOS setup	800 €	Fee for each statistical optimization with on-site or satellite observation data
3	CUSTOM	Snow analyses	800 €	Fee for downscaled snow data

2.6 Pricing of Custom Services

For customized services we submit specific offers on request. Please tell us your specific needs.

3 Ordering procedure

3.1 Your personal offer

We will calculate the price for your personal offer within maximum 5 business days, if you send us the information required in Table 3.1:

Table 3.1: solar service order: required information.

#	Topic	Item	Information required	Please fill in here
1	Customer	Responsible	Name & Email	
2	Customer	Institution	Company or Society Name	
3	Customer	Address	Postal address	
4	Customer	Address	Country	
5	Service	Type	solar archive	
6	Service	Duration	Start date – end date	
7	Service	Aggregation	Hourly/daily/monthly/yearly	
8	Service	Places	Number of installations	
9	Service	Places	File with list of locations	
10	Service	Data	Required parameters	

If only radiation parameters are needed (solar package) the standard location list must contain only the "Necessary" parameters listed in Table 3.2. It must be provided as a single file in .csv or .txt format (we can provide sample files on request). The coordinates must be in WGS84 format (see <https://content.meteoblue.com/de/hilfe/standards/position>). Information quoted as "Only for pvpro" are obligatory for all orders concerning pvpro parameters.

Table 3.2 Solar standard location list with necessary and optional information.

#	Necessary						Only for pvpro			
	Station Name	Short Name	State	Latitude ¹	Longitude ¹	Altitude ²	kWp ³	Inclination ⁴	Orientation ⁵	PR ⁶
1.	Basel-Messe	BS_02	Switzerland	47.34	7.58	233	352	25	170	83%
2.	Milano	M_03	Italy	45.46	9.19	122	78	20	200	73%

Note: 1 in WGS84: Western WGS84 decimal longitudes are NEGATIVE (-0.0001 to -179.9999); Southern WGS84 decimal latitudes are NEGATIVE (-0.0001 to -90). 2 in meter above sea level. 3KiloWatt Peak Power of the installation. 4Inclination in degrees from horizontal: 0° is horizontal; 90° is vertical. 5Orientation in degrees clockwise from 0° is facing North; 90° is facing East, 180° is facing South and 270° is facing West. 6PR= mean performance ratio: percentage of measured and theoretically possible energy output.

We are looking forward to give you more predictable power with our solar weather services.

Your meteoblue team
Weather ☀ close to you

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