



Energy - Solar - 15 Day - v3

Domain Portfolio: Forecast | Domain: Hourly | Usage Classification: **Limited Availability**

Geography: Global

Attribution Required: NO

Attribution Requirements: N/A

Overview

The TWC Renewable Energy APIs provide a variety of business-ready forecast content for the energy markets, by generating it on-the-fly using proprietary wxmix technology from The Weather Company | An IBM Business (TWC). Solar energy product including an hourly irradiance forecast starting at top of current hour and extends through the entire length of available forecast output (currently 15 days, including the current day).

HTTP Headers and Data Lifetime - Caching and Expiration

For details on appropriate header values as well as caching and expiration definitions, please see [The Weather Company Data | API Common Usage Guide](#).

URL Construction

| |
|--|
| Atomic Request by Geocode: Required Parameters: geocode, format, units, apiKey= yourApiKey Optional Parameters: elevation, landuse https://api.weather.com/v3/wx/forecast/hourly/energysolar/15day?geocode=33.74,-84.39&format=json&units=e&apiKey= yourApiKey |
| https://api.weather.com/v3/wx/forecast/hourly/energysolar/15day?geocode=33.74,-84.39&format=json&units=e&apiKey= yourApiKey |

Parameter Definitions

| Parameter Name | Valid Parameter Value | Description | Required / Optional |
|----------------|-----------------------|--|---------------------|
| units | (e,m) | Note:(e,m) the only units valid for this API | Required |
| elevation | 101.75 | Optional parameter, value interpretation is dependent on the 'units' parameter. - Range (English): English units range from -1,500 feet to 30,000 feet, inclusive. - Range (Metric): Metric units range from -500 meters to 9,000 meters, inclusive. Allow for one decimal place in any units. | Optional |
| landuse | 1 | Landuse of the target point where land=1, water=0 | Optional |

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

| Field Name | Description | Type | Range | Sample | Nulls Allowed |
|----------------------------|---|-----------|---|------------|---------------|
| latitude | Latitude of a location where measurement occurs. | decimal | - | 42.7169 | No |
| longitude | Longitude of a location where measurement occurs. | decimal | - | -71.1217 | No |
| initTimeUtc | Start date and time of forecast, rounded back to the top of the current hour. | epoch | - | 1369252800 | No |
| elevation | Elevation of the surface level MSL . | decimal | (English): -1,500 to 30,000 feet (Metric): -500 to 9,000 meters | 838.25 | No |
| procTime | Time forecast was created | epoch | - | 1369250858 | No |
| validTimeUtc | Time at which the forecast is valid in UNIX seconds. | [epoch] | - | 1369252800 | No |
| irradianceGlobalHorizontal | Global Horizontal Irradiance, recorded in units consistent with the request, representing the predicted average power over the preceding hour | [decimal] | - | 360.2 | No |
| irradianceDirectNormal | Direct Normal Irradiance, recorded in units consistent with the request, representing the predicted average power over the preceding hour | [decimal] | Data available for the first 9 forecast days. | 262.5 | Yes |

JSON Sample

```
// Response Collapsed for Presentation Purposes
{
  "metadata": {
    "procTime": 1511986660,
    "units": "e",
    "serviceTime": 0.00995822,
    "latitude": 39.6300,
    "longitude": -105.0100,
    "initTimeUtc": 1511985600,
    "elevation": 5607.50,
    "resource": "energy-solar",
    "version": "v1",
    "requestId": 749100000011296
  },
  "forecasts1Hour": {
    "validTimeUtc": [1511985600,1511989200,...],
    "irradianceGlobalHorizontal": [411.3,340.3,...],
    "irradianceDirectNormal": [526.2,484.3,...],
  }
}
```

Units for Metric and English Request and Response

| Metric Units (m): | English Units (e): |
|--|--|
| IN: | IN: |
| elevation: meters | elevation: feet |
| | |
| OUT: | OUT: |
| irradianceGlobalHorizontal: watts / meter ² | irradianceGlobalHorizontal: watts / meter ² |
| irradianceDirectNormal: watts / meter ² | irradianceDirectNormal: watts / meter ² |