



Energy - Wind - 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). Wind energy product including air density, wind speed, and direction at a requested height AGL. Hourly forecast starts 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](#), [height](#), [apiKey=yourApiKey](#) | **Optional Parameters:** [elevation](#)
<https://api.weather.com/v3/wx/forecast/hourly/energywind/15day?geocode=33.74,-84.39&format=json&units=e&height=60.5&apiKey=yourApiKey>

<https://api.weather.com/v3/wx/forecast/hourly/energywind/15day?geocode=33.74,-84.39&format=json&units=e&height=60.5&apiKey=yourApiKey>

Parameter Definitions

Parameter Name	Valid Parameter Value	Description	Required / Optional
height	single value numerical data	Single value representing the height AGL being requested, in units consistent with the request. Format in decimal up to 1 unit of decimal precision. Units (e,m) - Range (English): >=33 and <= 853 feet - Range (Metric): >= 10 meters and <= 260 meters	Required
units	(e,m)	Note:(e,m) the only units valid for this API	Required
elevation	101.7	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

Data Elements & Definitions

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	Surface level elevation MSL.	decimal	(English): -1,500 to 30,000 feet (Metric): -500 to 9,000 meters	838.3	No
height	Target height AGL provided by the request in units consistent with the request.	decimal	(English): <= 853 feet (Metric): <= 260 meters	100.5	No
validTimeUtc	Time at which the forecast is valid in UNIX seconds.	[epoch]	-	1369252800	No
windSpeed	The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts"; and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. Facing North, North wind the wind is at your face. Face southward, North wind is at your back.	[decimal]	-User specifies the height data is desired for	10.74	No
windDirection	The direction from which the wind blows expressed in degrees. The magnetic direction varies from 0 to 359 degrees, where 0° indicates the North, 90° the East, 180° the South, 270° the West, and so forth.	[decimal]	-User specifies the height data is desired for	62	No
airDensity	Moist air density in units consistent with the request. Format in decimal up to 3 units of decimal precision.	[decimal]	-User specifies the height data is desired for	1.2249	No

JSON Sample

```
// Response Collapsed for Presentation Purposes
{
  metadata:
  {
    procTime: 1495199683,
    units: "m",
    serviceTime: 0.00763803,
    latitude: 45,
    longitude: 280,
    initTime: 1495198800,
    elevation: 176.48,
    landuse: 1,
    resource: "energy-wind",
    version: "v1",
    requestId: 1177470000000001,
    height: 90
  },
  forecasts1Hour:
  {
    validTimeUtc:
    [1495198800],
```

```
windSpeed:  
[6.96],  
windDir:  
[0],  
density:  
[1.2153]  
}
```

Units for Metric and English Request and Response

Metric Units (m):	English Units (e):
IN:	IN:
height: meters	height: feet
elevation: meters	elevation: feet
OUT:	OUT:
windSpeed: meters per second	windSpeed: miles / hour
airDensity: kilograms / meter ³	airDensity: pounds / feet ³