



## 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

<b>Atomic Request by Geocode:</b> <b>Required Parameters:</b> <a href="#">geocode</a> , <a href="#">format</a> , <a href="#">units</a> , <a href="#">height</a> , <a href="#">apiKey=yourApiKey</a>   <b>Optional Parameters:</b> <a href="#">elevation</a> <a href="https://api.weather.com/v3/wx/forecast/hourly/energywind/15day?geocode=33.74,-84.39&amp;format=json&amp;units=e&amp;height=60.5&amp;apiKey=yourApiKey">https://api.weather.com/v3/wx/forecast/hourly/energywind/15day?geocode=33.74,-84.39&amp;format=json&amp;units=e&amp;height=60.5&amp;apiKey=yourApiKey</a>	
<a href="https://api.weather.com/v3/wx/forecast/hourly/energywind/15day?geocode=33.74,-84.39&amp;format=json&amp;units=e&amp;height=60.5&amp;apiKey=yourApiKey">https://api.weather.com/v3/wx/forecast/hourly/energywind/15day?geocode=33.74,-84.39&amp;format=json&amp;units=e&amp;height=60.5&amp;apiKey=yourApiKey</a>	

### 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 / meter³	airDensity: pounds / feet³