

Annual summary – 10 years

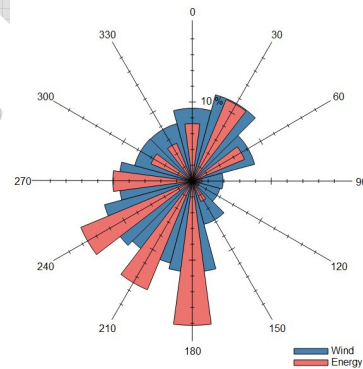
Long term reference period: 2011-2020

Region: Côte d'Or
 ID: FR12
 Country: France
 Issued in: May 2021
 Issued for: Company
 Contact: client@company.com

Annual energy indexes

Year	Energy index	Range
2011	84.0 %	82.5% - 85.5%
2012	113.0 %	111.5% - 114.5%
2013	100.5 %	100.5% - 100.5%
2014	95.0 %	94.5% - 95.5%
2015	98.5 %	98.0% - 98.5%
2016	90.0 %	89.0% - 91.0%
2017	90.5 %	89.5% - 91.5%
2018	102.0 %	102.0% - 102.5%
2019	114.5 %	113.0% - 116.0%
2020	112.0 %	111.0% - 113.5%
2011-	100.0 %	100.0% - 100.0%

Long-term wind and energy roses

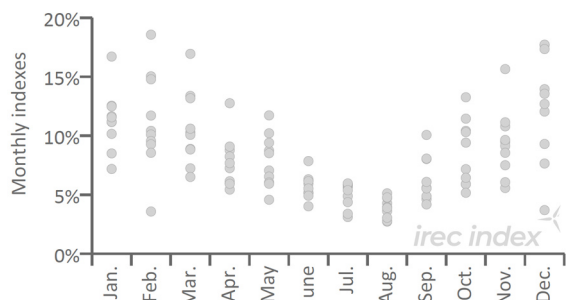


Extreme annual values

Annual energy indexes 2011-2020	
Minimum 12-consecutive-month	77.0 %
1 st decile 12-consecutive-month	85.0 %
Average 12-consecutive-month	101.0 %
9 th decile 12-consecutive-month	114.5 %
Maximum 12-consecutive-month	126.0 %

Distribution of monthly indexes

Distribution of monthly energy indexes 2011-2020



Before using IREC Index, did you make sure of the following?

- ✓ **Is your wind farm inside the predefined region?**
Use the dedicated tool on IREC Index website to make sure and ask for a customized index if not.
- ✓ **Are your production data adjusted to 100% availability (Ideal production)?**
Wind energy indexes reflect the wind resource that can be harnessed by a wind farm with no availability issues. That is why the production output should be corrected from production losses encountered by the wind farm before being compared to indexes. All causes of downtimes, except for lack of wind should be taken into account. Curtailment losses should also be accounted for.
- ✓ **Is your target reflecting the actual production capacity of your wind farm?**
An operational P50 established post-construction should be considered as the target. A budget based on the pre-construction P50 (theoretical assessment) might not be representative of the actual production capacity of the wind farm.

How to interpret annual indexes?

Annual indexes provide the ratio between the wind energy exploitable over the year compared to the one over the long-term. For example, in the region considered:

- ✓ An annual index of 100% means that the production should be similar to what can be expected on a long-term average (operational P50), once availability issues are corrected.
- ✓ An annual index of 95% means that the production expected for the wind farm should be 5% below what can be expected on a long-term average.

Why is a range provided for annual indexes?

Within a region considered homogeneous in terms of wind regime, the amplitude of variation of production can differ from one farm to another due to its specific characteristics (turbine type, exposure level...).

Providing a range allows to cover the indexes that can be associated to different types of wind farms within each region.

Considerations on the long-term reference period

Indexes are provided using a fixed long term reference period (2011-2020) in order to ensure the continuity of the database from one year to another. An adjustment of the values to consider another reference period can be done as follows:

$$\text{Index Year 2020}_{\text{new ref period}} = \text{Index Year 2020}_{\text{ref 2011-2020}} \times \text{Ratio (Energy Index 2011-2020/Energy Index new ref period)}$$

Learn more about how to make the best use of indexes by attending [Windex training sessions](#)

More information about Windex at: <https://www.eoltech.fr/en/trainings>