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Solar energy — Vocabulary

Énergie solaire — Vocabulaire

Sonnenenergie — Vokabular



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 180, *Solar energy*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 312, *Thermal solar systems and components*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9488:1999), which has been technically revised.

The main changes compared to the previous edition are as follows:

- update of definitions;
- addition of several new terms, according to the development of new standards for solar thermal technology in the past two decades.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Solar energy — Vocabulary

1 Scope

This document defines basic terms relating to the work of ISO/TC 180. The committee covers standardization in the field of the measurement of solar radiation and solar energy utilization in space and water heating, cooling, industrial process heating and air conditioning. Consequently, the vocabulary within this document is focussed on definitions relating to those measurement and utilisation technologies.

Since the 1999 version of this document there has been considerable development in solar photovoltaic technologies and high temperature solar thermal technologies that use heat to produce electricity or to provide high temperatures for processes that require elevated temperatures. This standard has some definitions that are useful also for those technologies; however, there are other documents that cover vocabulary for these technologies in more detail.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Terms for solar geometry

3.1.1

aphelion

<of Earth> point in the Earth's orbit at which it is furthest from the Sun

Note 1 to entry: At the aphelion, the Earth is approximately 152×10^6 km from the Sun.

3.1.2

perihelion

<of Earth> point in the Earth's orbit at which it is closest to the Sun

Note 1 to entry: At the perihelion, the Earth is approximately 147×10^6 km from the Sun.

3.1.3

solar declination

δ

angle subtended between the Earth-sun line and the plane of the equator (north positive)

Note 1 to entry: The solar declination is zero on equinox dates, varying between $+23,45^\circ$ (June 22) and $-23,45^\circ$ (December 22).