

# TECHNICAL SPECIFICATION



## AMENDMENT 1

**Microgrids –  
Part 3-1: Technical requirements - Protection and dynamic control**

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## MICROGRIDS –

Part 3-1: Technical requirements –  
Protection and dynamic control

## AMENDMENT 1

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Amendment 1 to IEC 62898-3-1:2020 has been prepared subcommittee 8B: Decentralized electrical energy systems, of IEC technical committee 8: System aspects of electrical energy supply.

The text of this Amendment is based on the following documents:

Draft	Report on voting
8B/174/DTS	8B/199/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications/](http://www.iec.ch/publications/).

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### 3 Terms and definitions

*Add, after 3.4, the following new Definition 3.4.1:*

#### 3.4.1 renewable energy sources

##### RES

distributed energy resources whose primary energy source is constantly replenished and will not become depleted

Note 1 to entry: Examples of renewable energy are: wind, solar, geothermal, hydropower.

Note 2 to entry: Fossil fuels are non-renewable.

## 6 Dynamic stability and control

### 6.2.3.2 Frequency stability

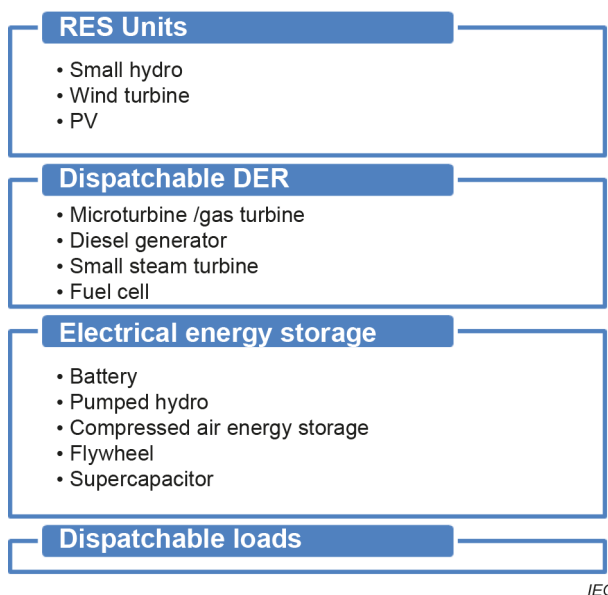
*Replace, in the fourth sentence, "primary" with "local".*

#### 6.3.3.1 Major control elements in microgrid

*Replace the existing second paragraph with the following:*

Microgrids may include, but are not limited to, the following elements that can be involved in the dynamic control of the microgrids (see Figure 2).

Replace the existing Figure 2 with the following:



### 6.3.3.2 Intermittent RES units

Add, in the first sentence, "are" between "cases" and "the dominant sources".

Replace, in the penultimate sentence, "source inverters" with "source converters".

### 6.3.3.4 Energy storage systems

Add, in the title and in the three occurrences in the paragraph, "electrical" before "energy storage systems".

### 6.3.3.5 Dispatchable loads

Delete Footnote 1.

### 6.3.4.1 Control system hierarchy

Replace the first sentence with the following:

Control of a microgrid can be divided into three layers as shown in the functional mapping for operation and control of microgrids (Figure 3).

Replace the existing Figure 3 and its title with the following: