



TECHNICAL REPORT



Microgrids – Part 4: Use cases

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MICROGRIDS –

Part 4: Use cases

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IEC TR 62898-4 has been prepared by subcommittee SC 8B: Decentralized electrical energy systems, of IEC technical committee 8: System aspects of electrical energy supply. It is a Technical Report.

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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 Technical Report is English.

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A list of all parts in the IEC 62898 series, published under the general title *Microgrids*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

This document provides a set of use cases related to microgrids, as a form of "decentralized energy system". Decentralized energy systems are small energy systems containing loads and distributed energy resources (generation, storage) with decentralized management for energy supply. This document completes the SC 8B roadmap for decentralized electrical energy systems. The goal is to explain the methodology retained on the microgrid sub-domain, which is a kind of decentralized system. This methodology, based on IEC 62913-1, describes high-level use cases (business use cases) covering the main typical usage of microgrids, and details some of them through system use cases. The proposed list of use cases is a first version, proposed for review; the goal is to cover all use cases with the same level of depth.

MICROGRIDS –

Part 4: Use cases

1 Scope

In line with the methodology specified in IEC SRD 62913-1, this document describes business use cases (high-level use cases covering the main typical usage of microgrids) and details some of them. System use cases linked to those business use cases are listed and briefly described for contextualizing the main functions to be performed for managing microgrids. Ultimately, the goal of this document is to provide a consistent level of detail for all business use cases. The document details the methodology retained to develop system use cases from the business use cases.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC SRD 62913-1, *Generic smart grid requirements – Part 1: Specific application of the Use case methodology for defining generic smart grid requirements according to the IEC systems approach*