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Document Version: 2.3 – 2026-05-05

SAP Distributed Energy Resources

Feature Scope Description

Content

1 Introduction

SAP Distributed Energy Resources aims to streamline and standardize the handling of technical and business master data in SAP's solutions and connected third-party solutions for utilities. The measurement concept management of SAP Distributed Energy Resources serves as the single source of truth for setting up all measurement concept model and instance data concepts. The definition and maintenance of consistent and coherent measurement concept models enables a smooth billing execution based on correct data sets.

Based on a measurement concept model, which describes the concept in a generic way, real instances of the measurement concept can be rolled out to corresponding target systems. This rollout consists of a blueprint for the master data and of a process that includes the necessary steps so that the master data can be set up.

The time series management component of SAP Distributed Energy Resources offers capabilities for time series, energy, and water data management in the cloud.

2 Document History

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>
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>
> https://help.sap.com/docs/SAP_Distributed_Energy_Resources?version=Cloud

Version	Date	Description
2.3	2026-04-06	Product name changed to SAP Distributed Energy Resources
2.2	2026-01-28	New section for time series management added
2.1	2025-02-19	Minor change: Product name and document version added to the title page
2.0	2025-02-17	Product name changed to SAP Utilities Core foundation and formal changes

3 About This Document

This document defines the functional scope of SAP Distributed Energy Resources.

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4 Measurement Concept Management (MCM)

The following table explains the available measurement concept management (MCM) key features:

Key Features

Key Feature	Use
Manage the physical location structure of installations for a measurement concept	Define the overall hierarchical structure of metering locations and actors, such as generators, storage, and consumer units, in a *Technical Model*. A network graph displays how these components relate to each other. Metering tasks are configurable. You can also export measurement concept classes and import them for use in other tenants.
Manage the commercial structures of measurement concepts	Maintain market locations, their corresponding calculation formulas, metering location purposes for specific metering location types, usage codes, and billing and settlement procedures in a *Commercial Model*. Predefined validations help you create consistent measurement concept models. A circuit plan graphically displays the various components of the referenced measurement concept class. Calculation formulas are configurable. You can also export measurement concept models and import them for use in other tenants.
Manage the representation of real-life installations	Manage *Instance*s that represent real-life installations based on predefined measurement concept classes and models. Check instance creation against consistent measurement concept models. The application provides an overview of existing models and helps you choose the right one for your business situation.
Migrate measurement concept instances	Migrate measurement concept instances from other systems to the measurement concept management via API. Monitor the migration using an app.
APIs	The application provides APIs to read measurement concept models and classes, and to invoke and drive the process for creating, changing, shutting down, and migrating measurement concept instances.

Key Feature	Use
Integration with other systems	Roll out measurement concept instances to other systems, such as SAP S/4HANA Utilities. The rollout interacts with these systems through events that inform them about changes in the life cycle of measurement concept instances. Interfaces allow these systems to read and update data in the measurement concept management.
Customer-specific extensions	To transfer additional properties between the caller of the *Instance* API, who creates or changes an instance, and the downstream system which consumes process data of the instance, it is possible to extend the solution.

5 Time Series Management

The following table explains the available time series management key features:

Key Feature	Use
Store and manage measurement data in the cloud	Store large volumes of measurement data (time series data/ profiles) in a central cloud repository.
Manage and access time series data	• Upload Parquet files, which are used to transfer and process large volumes of time series data. Uploaded time series data is processed and persisted in a central database and enables applications to manage and access measurement data for their business processes. • Validate incoming measurement data and interpolate missing profile data. Versioning provides full transparency on changes over time. • Configure time series types, including interval length, unit of measurement, and measurement type. • Upload not only measured data but also price curves and other equidistant information.
Calculate billing determinants	• Enable standard billing of various energy rates and charges using a billing determinant service. • Aggregate validated time series measurement data into specified time-of-use periods of a billing period.
Process smart meter and device events	• Ingest, process, and review smart meter and device events and alerts. Events and alerts have a timestamp, severity, and type. • Use built-in analytical UI to understand device-level situations and drill down from a high level into details.

Key Feature	Use

Integrate with SAP S/4HANA Utilities	• Connect your SAP S/4HANA Utilities system to SAP Distributed Energy Resources to enable the replication of meter master data (“devices”) from the SAP S/4HANA Utilities system to SAP Distributed Energy Resources. If SAP S/4HANA Utilities is integrated and supports the listed features, SAP Distributed Energy Resources allows you to use the following processes in your SAP S/4HANA Utilities system:
	  • Execute time-of-use billing in your SAP S/4HANA Utilities system based on measurement data stored in SAP Distributed Energy Resources. To enable this process, you replicate profile header data from the SAP S/4HANA Utilities system to SAP Distributed Energy Resources, and request and receive billing determinants from SAP Distributed Energy Resources.
	  • Manage meter reading time series with SAP Distributed Energy Resources and use this data as a basis for billing to enable classical time-of-use billing in the SAP S/4HANA Utilities system. Request readings from using existing enterprise services for such an integration scenario.

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