

Topic 10. Update of the CGMES Library



References to IEC standards on the CGMES Library

What is wrong?

The **IEC modified** their webstore and many links on the ENTSO-E website are **broken**.

Common Information Model (CIM) and CIM based documents

▼ IEC 61970-301 Common information model (CIM) base

International Standard Ed6 since 2016.

Document [Common information model \(CIM\) base](#)

▶ IEC 61970-302 Common information model (CIM) dynamics

▶ IEC 61970-452 CIM static transmission network model profiles

▶ IEC 61970-453 Diagram layout profile

▶ IEC 61970-456 Solved power system state profiles

▶ IEC 61970-457 Common Information Model (CIM) for Dynamics Profile

▶ IEC 61970-552 CIMXML Model exchange format



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References to IEC standards on the CGMES Library

What is the proposal?



For the matter of exchanging grid model, TSOs are interested in the CGMES set of standards.

There are two versions of CGMES currently: CGMES 2.4 and CGMES 3.0.



Thus, there will only be **two*** sections on the CGMES Library explaining what CGMES is understood as and what dependent/relevant IEC standards to refer to.



To **avoid redundancy**, implementation projects (such as **TYNDP** for system development or **CGM Building Process** for operational planning) can **refer** to such section

Update of the CGMES Library

How would it look like?

▼ CGMES 2.4

Update September 2024

The following standards can be purchased on the International Electrotechnical Committee (IEC) webstore. ENTSO-E cannot facilitate them.

Please, note that the International Electrotechnical Commission (IEC) withdrew the *technical specifications* (TS) known as *CGMES 2.4* as they have been superseded by IEC 61970-600-1:2021 and IEC 61970-600-2:2021 known as *CGMES 3.0*. This means that the technical specifications are no longer available for downloading on the IEC webstore.

Main IEC standards

IEC TS 61970-600-1:2016 (withdrawn, no longer available)

IEC TS 61970-600-2:2016 (withdrawn, no longer available)

Other IEC dependent standards

IEC 61970-552:2016

IEC 61970-301:2016

IEC 61970-302:2018

Other IEC relevant standards

IEC 61970-301:2016

IEC 61970-452:2017

IEC 61970-453:2014+AMD1:2018 CSV

IEC 61970-456:2018

IEC 61970-552:2016

▼ CGMES 3.0

Update September 2024

The following standards can be purchased on the International Electrotechnical Committee (IEC) webstore. ENTSO-E cannot facilitate them.

Main IEC standards.

IEC 61970-600-1:2021

IEC 61970-600-2:2021

Other IEC dependent standards

IEC 61970-552:2016

IEC 61970-301:2020+AMD1:2022

IEC 61970-302:2018

Other IEC related standards

IEC 61970-457:2021

IEC 61970-452:2021

IEC 61970-453:2014+AMD1:2018 CSV

IEC 61970-456:2021

IEC 61970-552:2016

Update of the CGMES Library

How would it look like?

Changes from...

▼ Common Grid Model Building Process

CGMES 2.4.15. Note: version for CGM programme go-live in 2021.

The CGMES 2.4.15 components' issues from 2016 are fixed in the subsequent CGMES versions.

~~Technical Specification TS Common Grid Model Exchange Specification (CGMES) - Structure and rules
TS Common Grid Model Exchange Specification (CGMES) - Exchange profiles specification~~

Document Quality of CGMES datasets and calculations v4.0

Document CGM Building Process Implementation Guide v2.0

Components 2016 HTML Documents HTML, Enterprise Architect Export RDFS of the CGMES Profiles
XML of the CGMES OCL Documentation of the CGMES

Components 2020 RDFS and UML CGMES 2.4.15

Other European Merging Function Requirements Specification v3

CGMES issue list and change log (09/08/2017) Test Models QoCDC Reference Data v1.0

Archive Quality of CGMES datasets and calculations (18/11/2016)

Quality of CGMES datasets and calculations v3.2.1 Quality of CGMES datasets and calculations v3.3

Quality of CGMES datasets and calculations v3.3.1

To...

▼ Common Grid Model Building Process

Update September 2024

CGMES 2.4.15. Note: version for CGM programme go-live in 2021.

The CGMES 2.4.15 components' issues from 2016 are fixed in the subsequent CGMES versions.

Technical specification Refer to the CGMES 2.4 tab in the current CGMES Library webpage.

Document Quality of CGMES datasets and calculations v4.0

Document CGM Building Process Implementation Guide v2.0

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How would it look like?

Changes from...

System Development TYNDP

ENTSO-E publication

~~Technical Specification [TS Common Grid Model Exchange Specification \(CGMES\) - Structure and rules](#)~~

~~[TS Common Grid Model Exchange Specification \(CGMES\) - Exchange profiles specification](#)~~

Document [Model specification](#)

Document [Input grid datasets for the preparation of the TYNDP](#)

To...

System Development TYNDP

Technical specification [Refer to the CGMES 2.4 tab in the current CGMES Library webpage.](#)

Document [Model specification](#)

Document [Input grid datasets for the preparation of the TYNDP](#)

Update of the CGMES Library

How would it look like?

▼ Dynamics: IEC 61970-302 and IEC 61970-457

Update September 2024

In 2024, the International Electrotechnical Commission (IEC) published new versions of the documents supporting the information exchange of models between software applications that perform analysis of the steady-state stability (small-signal stability) or transient stability of a power system.

Both the Dynamics profile and the specification document were updated in the IEC 61970-457:2024 and IEC 61970-302:2024 respectively.

Such update is not yet included as part of the CGMES series of standards.

Find more information on the relevant IEC standards for CGMES down below.

IEC 61970-302:2024

IEC 61970-457:2024

- There will be a third section, as the latest update on the IEC 61970-302 and 61970-457 do not apply nor to CGMES 2.4 or CGMES 3.0.

- Decision proposal

The CIM WG:

- **Agrees** to update the CGMES Library to reflect changes in the IEC webstore.
- **Acknowledges** that there will be three main sections where users will find all relevant information related to CGMES 2.4, CGMES 3.0 and the 2024 updates on the Dynamics package.
- **Acknowledges** the changes in the CGM Building Processes and TYNDP packages that will now refer to the technical CGMES 2.4 and CGMES 3.0 packages to avoid overlapping information.

INTERNAL IMPLEMENTING ACTIONS FOR THE DECISIONS AND ACTION TRACKER