

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Energy management system application program interface (EMS-API) –
Part 301: Common information model (CIM) base**

**Interface de programmation d'application pour système de gestion d'énergie
(EMS-API) –
Partie 301: Base de modèle d'information commun (CIM)**



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International Standard IEC 61970-301 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

This third edition cancels and replaces the second edition, published in 2009. This third edition constitutes a technical revision.

Major changes from the second edition include the following:

- regulation control models were added with a new RegulatingControl class which provides the capability to model multiple equipments participating in a regulation scheme;
- new "OperationalLimits" package for equipment ratings;
- partial ownership specification added;
- LoadResponseCharacteristic class was enhanced to better model the characteristic response of the load demand due to changes in system conditions such as voltage and frequency;

- new ControlArea package added with load forecast and area interchange specifications;
- EPRI CIM for Planning project proposals to support the exchange of planning models were incorporated;
- branch group “interface” monitoring specification was added;
- composite switch model was changed to better model distribution use cases;
- extensions were added to support powerflow “case input” so that profiles are not required to use time based schedules and detailed connectivity (via new bus-branch model);
- new Equivalents package added to model equivalent networks;
- new Contingency package added to handle contingencies;
- various editorial changes to cleanup UML model;
- non-SI units have been changed to SI units.

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

FDIS	Report on voting
57/1136/FDIS	57/1167/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61970 series, under the general title: *Energy management system application program interface (EMS-API)*, can be found on the IEC website.

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

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

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