

## ENTSO-E CIM Interoperability Tests and a Roadmap for implementation of the CIM/XML data exchange format for system operations and system studies exchanges

ENTSO-E CIM Interoperability Tests (IOP) are necessary to demonstrate and verify the correctness of proposed changes in the IEC CIM standards and of the implementation by vendors. These tests support ENTSO-E processes aimed at fulfilling ENTSO-E tasks given by the EU Third Energy Package and promoting CIM use. ENTSO-E agreed to organize two CIM Interoperability tests per year:

- ✓ The ENTSO-E IOP “CIM for System Development and Operations” that covers all needs of system development and operations such as operational to operational exchanges, operational to planning, short circuit data, planning, dynamics exchanges and the interface with distribution. Specific data collection and data processes can also be tested. The goal is to allow and facilitate any kind of study in TSOs’ scope: static analyses, dynamic studies, short circuit assessments, etc.;
- ✓ The ENTSO-E IOP “CIM for Energy Market” that covers needs of market exchanges. It contributes to the further development of the IEM (European Internal Energy Market) by actively supporting market harmonization and integration and plays a crucial role for demonstrating the correctness of European market CIM profile.

These tests are an own process independent from the ENTSO-E decision related to the implementation of the proposed changes. The schedule for ENTSO-E CIM IOPs is:

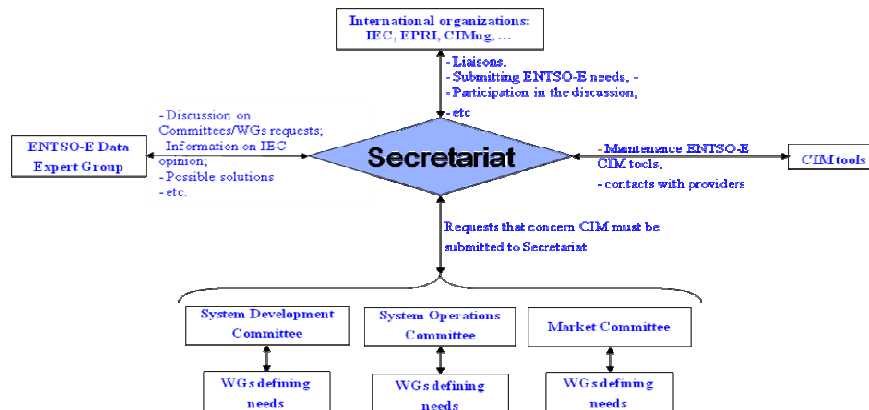
| Test name / Schedule                                       | 2010             | 2011 on     |
|--|------------------|-------------|
| 1. ENTSO-E IOP “CIM for System Development and Operations” | May-June         | March-April |
| 2. ENTSO-E IOP “CIM for Energy Market”                     | October-November | May-June    |

The following general conditions are applied for the above mentioned interoperability tests:

- The tests are sponsored and hosted by ENTSO-E. The tests are held in Europe in ENTSO-E premises or in the premises of a TSO member of ENTSO-E.
- The tests are not mandatory. They are performed if there is enough material to test.
- Co-sponsoring of the tests by international organizations is possible if they agree with ENTSO-E conditions.
- The tests follow the test procedure agreed among test participants taking into account ENTSO-E requirements on the framework of the specific test.
- The tests are open to all interested vendors.
- The test will last maximum five working days.
- ENTSO-E will issue an official report agreed among test participants. The report should be available on ENTSO-E web site one month after the test.
- The role of the *Test Witness* is to validate and score the test. Test Witnesses are experts from ENTSO-E TSOs. The number of Test Witnesses present during the test equals the number of registered vendors/tools. The role “Test Witness” will be further specified by ENTSO-E Secretariat.

- The role of the Test Director is to prepare the technical basis for the test and the report. The Test Director is responsible for the preparation of CIM profile to be tested and the test procedures.
- ENTSO-E will provide IEC with the results of the test and propose possible solution of encountered problems.
- Tests announcement and registration:
  - The tests are announced six months before the preliminary date;
  - The registration for the tests will be opened five months before the preliminary date test;
  - The definitive date and place of the test are announced as soon as possible after the registration is closed, but not later than three months before the date of the test.
- Other details and conditions will be further specified by ENTSO-E Secretariat which provides a service to ENTSO-E TSOs on CIM related issues and directs the ENTSO-E CIM Interoperability tests.

The process of future development of CIM/XML data exchange format involves responsible ENTSO-E Working groups and the Secretariat. All proposals are submitted to the Secretariat that provides service to TSOs on maintenance and support of CIM related issues as interface towards other international organizations.



#### ENTSO-E interfaces on CIM

The Roadmap for implementation of the CIM/XML data exchange format for system operations and system studies exchanges defines the process of implementation of future updates of the CIM/XML data exchange format which has been tested during the UCTE<sup>1</sup> IOP in March 2009 and finalized in May 2009.

The process of implementation of updates of the CIM/XML data exchange format defined in the Roadmap is based on the following rules:

<sup>1</sup> The former organization “The Union for the Co-ordination of Transmission of Electricity” (UCTE), that was been wound up on 30 June 2009.

- It is preferable that the decision on the implementation of the update of the format is taken after IEC issues the standard and/or ENTSO-E TSOs have implemented a previous release of the standard. An early decision can be taken if the expected update of the IEC Standard has a very high value for ENTSO-E and provided that ENTSO-E agrees that a short term implementation is needed.
- As a principle, the implementation process is foreseen every three years, if necessary. New releases of the IEC CIM standard will not be immediately implemented as new ENTSO-E data exchange format.
- An annual internal ENTSO-E process will lead to the decision to apply or not a specific update of the format. ENTSO-E will announce the decision, the “coming into force” date and notify all interested parties (TSOs, vendors, etc.). The “coming into force” date has to allow for a 1-year implementation period.
- The “Coming into force” date is mandatory for all ENTSO-E TSOs.
- The update of the format necessary to exchange dynamic data will not follow the implementation roadmap. This part of the update is a part of the migration process. It is expected that the implementation of the update will start in the second half of 2010.

It is planned that the **ENTSO-E IOP “CIM for System Development and Operations” in 2010** will test the following:

- Model Authority Sets (MAS) and file headers;
- Applying incremental exchange;
- Exchange of short-circuit data;
- Exchange of dynamic models (standard models, user-defined models, proprietary models);
- Exchange “operations to planning”.

Additional information on the schedule and registration process for the ENTSO-E IOP “**CIM for System Development and Operations**” in 2010 will be announced in January 2010.

***For further information or to express your willingness to participate (in advance of the registration process) in the ENTSO-E IOPs, please contact Chavdar Ivanov, Modelling Advisor, ENTSO-E Secretariat ([chavdar.ivanov@entsoe.eu](mailto:chavdar.ivanov@entsoe.eu)).***