

Smart Grid will be a great and complex system of systems interacting together; a Semantic Interoperability strategy is an essential component for power grid modernization.

Implementing a Semantic Interoperability strategy in a utility, new advanced functions will be available to develop in a near future, such as demand side response, real time pricing and demand peak shaving, among others.

Acknowledgements

From IIE:

- Alejandro Villavicencio, Nestor Aleman and Jurgen Cruz.

From CFE:

- Jose Luis Garcia, Hector Hernandez, Raul Usla, Miguel Mendoza and Elizabeth Serna.

From SISCO:

- Margaret Goodrich.

References:

- [1] Espinosa-Reza A., Calleros-Torres T.M., Torres-Espindola M.L., Aleman-Cruz N.A. and Garcia-Mendoza R., "Semantic Interoperability for Smart Grid, CIM Adoption Process", INSTICC SMARTGREENS 2014, 3rd International Conference on Smart Grids and Green IT Systems, Barcelona, Spain, 3-4 April, 2014, ISBN: 978-989-758-025-3, pp. 90-95.
- [2] SGIP 2.0, "Implementing the CIM at DTE. An Implementation Methods Committee Case Study", January 27, 2014.
- [3] EPRI, "IntelliGrid Common Information Model Primer, Second Edition", October 2013, Technical Report.
- [4] NIST, NIST Special Publication 1108R2, "NIST Framework and Roadmap for Smart Grid Interoperability Standards, Release 2.0", February 2012.
- [5] Parra I., Espinosa A., Arroyo G., Gonzalez S., "Innovative Architecture for Information Systems for a Mexican Electricity Utility", CIGRE 2012 General Meeting, Paris, France, September 2012.
- [6] Espinosa-Reza A., Garcia-Mendoza R, Sierra-Rodriguez B., "Semantic Interoperability Architecture for the Distribution Smart Grid in Mexico", The 11th WSEAS International Conference on Applied Informatics and Communications AIC'11, WSEAS and IAASAT, Florence, Italy, August 23-25, 2011, pp. 204-209. ISBN 978-1-61804-028-2.
- [7] Espinosa-Reza A. and Sierra-Rodriguez B., "Towards Distribution Smart Grid in Mexico",

UCAIug 2011 Summit - CIM Users Group Meeting - Austin 2011, Austin, Texas, USA, November 15 – 18 2011. (<http://www.ucaiug.org/Meetings/Austin2011/>)

- [8] GWAC, GridWise Architecture Council, "GridWise Interoperability Context-Setting Framework", March 2008 (<http://www.gridwiseac.org>).
- [9] CIMtool (<http://www.cimtool.org>), February 2015.
- [10] W3C, The World Wide Web Consortium (<http://www.w3.org/>), February 2015.
- [11] OMG, Object Management Group (www.omg.org), February 2015.
- [12] IEC/PAS 62559, "IntelliGrid Methodology for Developing Requirements for Energy Systems, Publicly Available Specification", Edition 1.0, 2008-01.