



ENCOURAGE

Embedded iNtelligent COntrols for bUildings with Renewable generATIOn and storaGE

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D8.5 – Standardisation and project liaison plans

Luís Miguel Pinho, Luis Ferreira, Amine Al-Asadi

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Executive Summary

This document relates to the activities within task 8.2 of the ENCOURAGE project, and presents the plan and report of the ENCOURAGE liaisons with relevant standardization bodies, and with other R&D projects in related topics.



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1. Introduction

The liaison activities of the project are part of task 8.2 (Standardisation, dissemination and liaison activities). The main objective of WP8 is to make relevant stakeholders aware of project results and guide the exploitation strategy of the project, being the detailed objectives:

- a) Assess the market for new product and service offerings enabled by ENCOURAGE technologies, focusing primarily on energy management, distributed generation, and electricity distribution.
- b) Specify the exploitation plans of the project as a whole and for each partner individually.
- c) Promote and disseminate the results of the project as they become available.
- d) Actively participate in exhibitions and/or organise events (workshops, special issues in magazines / journals) to disseminate the evolving project results.
- e) Contribute to relevant standardisation forums and emerging initiatives.

This document relates to objectives c) and e) above.

The standardization and project liaison activities are important activities of the project, as they allow raising awareness of the project results in the community of stakeholders, increasing the impact of the work performed, and the potential exploitation of results.

It is important to interact with standardization, policy and regulatory organizations, as well as other national or international initiatives in this area. The objective is to provide inputs towards common activities and receiving feedback, contributing to area and portfolio analyses, offering advice, guidance and receiving information.

In the course of the first year of the project, the most relevant standard initiatives and related projects were identified, and the necessary steps were performed to start the interactions. It will be the goal of the second year to consolidate these interactions, in order to create stable participation and collaboration activities. This document presents the identified standard initiatives and related projects, as well as the report on the performed interactions.



2. Liaison with Standardization Initiatives

2.1. Standardization Initiatives

The landscape of standardization initiatives worldwide is widespread. Not only Smart Grids is a very broad domain, but also many of the concepts vary between countries or regions, which impacts in the standardization process.

In the scope of ENCOURAGE task 2.3, related to the design of the system architecture, a review of standardization efforts is being undertaken. From all the current international standardization initiatives, the ENCOURAGE project started by focusing in the three main ones from: the International Electrotechnical Commission (IEC), the USA National Institute of Standards and Technology (NIST) and the joint work of CEN (European Committee for Standardization), CENELEC (European Committee for Electrotechnical Standardization) and ETSI (European Telecommunications Standards Institute).

The IEC effort on Smart Grids is structured around the Strategic Group on Smart Grid (SG3) [1], which is responsible for monitoring new ideas and technologies, capable of being the basis for new standards in the area. The group is responsible for more than 100 standards, among them being particularly relevant the IEC 61968 standard, which defines the Common Information Model and the representation of physical entities in the software model, and the IEC 62056, which defines the data exchange protocols for meter reading.

The National Institute of Standards and Technology (NIST) [2] is also putting forward an initiative to coordinate the Smart Grids' standardization process in the USA. Its efforts are coordinated by the Smart Grid Interoperability Panel (SGIP) and by the Smart Grid Federal Advisory Committee, where the first is mostly responsible for the standard definition and the second is mainly responsible for the strategy and evaluation of the NIST effort. For the particular case of ENCOURAGE this organization is endorsing efforts to standardize SEP 2.0.

The CEN/CENELEC/ETSI [3] effort started with a Joint Working Group (JWG) on standards for Smart Grids, which produced in March 2011 a report addressing the landscape of standards [4] and recommendations for standardization in Europe [5]. On March 2011, the European Commission issued a standardization mandate M/490 requesting these organizations to develop the European standards framework in the field of Smart Grids. For that purpose, the three organizations created the CEN/CENELEC/ETSI Smart Grids Coordination Group (SG-CG), based on the previous working group. The current goal of the SG-CG is to provide the first set of standards by the end of 2012. Meanwhile, the group has already delivered a report on the Reference Architecture, with a conceptual model and a general Smart Grid Architecture Model (SGAM). Nevertheless, work is also performed by the three organizations.

Smart home and building automation topics are still not fully addressed by these reference standards, work being performed in this regard. There are numerous standards (and de-facto standards) for this purpose, but it is not clear how these can be incorporated in an overall, holistic, scenario, which is the goal of these initiatives. It is thus important for ENCOURAGE, in parallel to the technical work being performed, to exchange information with these initiatives.



2.2. Liaison Activities

Of the three standardization initiatives listed above, ENCOURAGE intends to address particularly the European framework (CEN/CENELEC/ETSI), and the CIM object model (from IEC). The goal is twofold: firstly to be able to follow with more detail the evolution of the relevant standards; and secondly to be able to present ENCOURAGE results as inputs to the standardisation process.

Therefore, in the beginning of April 2012, contacts were established with the CEN/CENELEC/ETSI Smart Grids Coordination Group (SG-CG) and with the IEC Strategic Group on Smart Grid (SG3). After a positive reply of SG-CG, ENCOURAGE requested Project Liaison status, to be able to observe and collaborate with the work which is being undertaken.

In the meanwhile, contacts with ETSI were also established, and a request was performed for guest status with the ETSI TC M2M.

At the time of writing of this report, there is still no reply from the IEC SG3.

The NIST framework is being also followed up, although externally, in particular related to the potential use of the Smart Energy Profile (SEP) 2.0, to interoperate the in-building devices with the Smart Grid.



3. Liaison with Related Projects and Initiatives

3.1. Related Projects

Another objective of the ENCOURAGE consortium is to interact with related projects or initiatives, for information exchange, result dissemination, feedback gathering, and fostering joint initiatives. Those contacts will be explored initially through direct interaction of WP8 with the respective contact points of other projects. Afterwards we will identify relevant tasks and partners within ENCOURAGE to perform follow-up activities. The goal is to have direct interaction between the teams doing the technical work in both ENCOURAGE and the other projects.

An initial listing of relevant initiatives and projects is presented in the following table:

Initiative	Scope
European Technology Platform for Electricity Networks of the Future http://www.smartgrids.eu/	European
HOSPILOT Project (Intelligent Energy Efficiency Control in Hospitals) http://www.hospilot.eu/	European
ENERSip Project (ENERgy Saving Information Platform for generation and consumption networks) www.enersip-project.eu/	European
EnPROVE Project (Energy Consumption Prediction with Building Usage Measurements for Software-Based Decision Support) http://www.enprove.eu/	European
eDIANA Project (Embedded Systems for Energy Efficient Buildings) http://www.artemis-ediana.eu/ediana_contact.php	European
ADDRESS Project (Active Distribution network with full integration of Demand and distributed energy RESourceS) http://www.addressfp7.org/index.html	European
THINK Project http://www.eui.eu/Projects/THINK/Home.aspx	European



GREENERBUILDINGS Project http://www.greenerbuildings.eu/	European
FINSENY Project (Future Internet for Smart Energy) http://www.fi-ppp-finseny.eu/	European
Internet of Energy for Electric Mobility http://www.artemis-ioe.eu	European
Artemis Center of Innovation Excellence on Embedded Systems for Intelligent Buildings	European
INOGRID Project http://www.edpdistribuicao.pt/pt/rede/InovGrid/Pages/InovGrid.aspx	Portugal
ECO GRID Project www.eu-ecogrid.net	Denmark

Table 1 – List of planned projects and initiatives

3.2. Liaison Activities

During the first year of the project, a data base of potential contacts has been created. We approached the before mentioned initiatives by introducing our aims and offered them to be included into our dissemination activities. At the time of the report, replies have been received from eDIANA, HOSPILOT, ADDRESS, FINSENY and Artemis CoIE on Embedded Systems for Intelligent Buildings, which will be further pursued over the following months.



4. CONCLUSIONS

The purpose of the liaison activities is to ensure that the project will use the most relevant standards and existing results, so the work performed has the maximum potential impact to relevant stakeholders. These activities will provide a bidirectional flow of information between the project consortium and the external entities, allowing both to receive information and inputs to support the projects' technical tasks and to present the projects' results as inputs for standardisation and other activities.

This document thus presented the planned and performed activities in the first year of the project in this regard.



References

- [1] <http://www.iec.ch/smartgrid/development/>
- [2] <http://www.nist.gov/smartgrid/>
- [3] <http://www.cen.eu/cen/Sectors/Sectors/UtilitiesAndEnergy/SmartGrids/Pages/default.aspx>,
<http://www.cenelec.eu/aboutcenelec/whatwedo/technologysectors/smartgrids.html>,
<http://www.etsi.org/website/Technologies/SmartGrids.aspx>,