

Smart Integration of Energy Storages in Local Multi Energy Systems for maximising the Share of Renewables in Europe's Energy Mix

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Summary

The objective of this report is to establish a communication and dissemination plan for the project in order to achieve an optimised communication and an adequate dissemination addressing the relevant audiences. The deliverable includes the internal communication and dissemination within the consortium as well as the external communication with EC, stakeholder from research and industry, other EERA Joint Programmes and the general public.

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Approval

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1 Introduction

The deliverable D1.2 “Dissemination and Communication Plan” for the Horizon 2020 project SmILES describes the dissemination and communication strategy, audiences and tools, implemented in the project with the goal of providing the means for internal communication and achieving a visibility outside the project.

2 Dissemination and Communication Concept

The dissemination and communication concept is based on individual audience oriented measures, divided up into the two main groups, internal and the external audiences. The idea is to create communication and dissemination tools with a long term perspective, so that the knowledge and network, which will establish during the project have consistent effect.

While the internal audience concentrates on the consortium, the external audience embraces four groups of stakeholders have been defined, which are

1. European Commission
2. Scientific community
 - Research organizations
 - EERA Joint programmes Energy Storage, Smart Cities, Smart Grids and e3s
3. Industry / Power Supplier and
4. General public

The measures for each of the audiences are described in the following chapters.

2.1 Internal Dissemination and Communication concept

2.1.1 Internal Dissemination and communication

The goal of the internal communication and dissemination is to establish a transparent, regular and participative communication combined with a simple and central data and information exchange platform for the members of the consortium.

The heart of the internal dissemination and communication is the **Shared Data and Information Platform (SDIP)**. The SDIP consists of a public website, a participative member area including project management tools and a research simulation model databases and repository, each of which described in detail in section 3.1.

A further element of the internal dissemination will be the **mobility scheme**, which has been set up by EERA AISBL based on the model established by “European Liaison on Electricity Committed Towards long-term Research Activities for Smart Grids (ELECTRA) and the IRP-Wind project. In the scope of the mobility scheme a researcher exchange of up 3 months between the participating organizations will be realized so that the institutions profit from each other’s knowledge and infrastructures and the cooperation is strengthened with a long term view.

This EERA mobility scheme will enhance the collaboration of the partners through an exchange of researchers. In this way researchers from one country can contribute to another MS project. Also external expert can be invited to improve the knowledge in this research frame and to disseminate results.

At least twice a year **technical workshops** with all partners at the different institutions will be organized for detailed discussion of research. Additionally **all-day communication** concerning the project progress is traditionally organized in Web conferences for sharing the present versions of joint documents and ideas. At least once a months a web-meeting with all partners has been organized, in order to keep all participants informed about the present status of running deliverables and deadlines. Also a list-email including all consortium participants was set up in order to simplify the internal communication.

Concerning the deliverables it is the duty of the Project coordinator organization (PCO) to remind the work package leader of upcoming deliverables.

To maximize the visibility and effectiveness of the communication and dissemination efforts, the consortium partners are asked to send project related news, such as conferences and other foreseeable events, to the PCO. The information will be put on the project website by the PCO.

2.2 External Dissemination and Communication

2.2.1 European Commission, national funding organisation and EERA

A substantial part of the dissemination activities involve the national funding organization, representatives of the European commission and EERA. The consortium will communicate and discuss the research actions needed to reach our long-term goal of a large-scale integrated energy system with a high share of renewables based on storage technologies. This process allows determining research gaps and assists the institutions in streamlining the national and international research agendas. It is intended to run several smaller workshops with MS representatives and in parallel meet the representatives in their home countries, discussing measures to improve the coordination between new upcoming projects and SmILES.

Several members of the SmILES consortium are also members of the H2020 Project INTENSYS4EU, which has inter alia the objectives to provide strategic guidance about the Research and Innovation (R&I) activities (low to high TRL, priorities) raised by the integration issues of the electricity system into the wider European energy system, to interact with the stakeholders of the European Technology and Innovation Platform (ETIP) Smart Networks for Energy Transition (SNET) at European level as well as the ETIP stakeholders at national and international level and maximizing cross border knowledge sharing about energy system optimization through interaction with national level players. It is intended to have a close collaboration between INTENSYS4EU and SmILES, so that INTENSYS4EU can serve SmILES as information platform.

EERA JP coordinators of the related JPs, Economic, Environmental & Societal Impacts (e3s), Energy Storage (ES), Smart Cities (SC) and Smart Grids (SG) have been announced as members of the Governing Board, which supervises the projects progress and approves the periodic reporting, so that a regular communication is ensured. SmILES aims to set up a long-lasting, stable and open framework across the borders of single EERA JP. The communication with the EC project officer (ECPO) is mainly realized via the Participant Portal. It is foreseen to present the project's progress to the named JPs on their regular meetings.

2.2.2 Scientific Community

One of the most relevant audiences of dissemination is the scientific community, which includes the area of energy informatics, smart grids and cities. SmILES will zoom in on the simulation and optimization of smart storage in local energy systems as a way to increase the understanding and transparency of the

technical and economic viability of innovative multi-energy projects integrating storage. Setting up a shared data and information platform and effective dissemination of SmILES results will contribute to a successful roll-out of such solutions.

2.2.3 Industry / Power Supplier

The Advisory Board is composed of people from industry and power supplier to get feedback from the application side. Furthermore a seminar is planned for the second half of project period presenting the results of the projects to the industry and power supplier.

2.2.4 General Public

To impart the basics of local multi energy systems and the smart integration of storage solutions to the general public for rising the understanding and awareness of this topic, the public website and a massive open online course (MOOC) have been introduced, see section 3.2. Also, the Shared Data & Information Platform (SDIP) will serve as a dissemination tool for general public.

3 Dissemination and Communication Tools

3.1 Central project web portal

All data and other results of the project will be made available through a central web portal of the project using a single integrated web portal interface. Beside information related to the project management, such as the project description, public event descriptions or, final document deliverables, the portal will also contain the “Shared Data and Information Platform” which will allow exploring results of the project in a more interactive and playful way for experts but also the general public.

The shared data and information platform and the tools implemented for the platform will provide a good foundation for the dissemination activities and for further projects in which the data and information base contained in the platform can be enhanced to cover other smart energy technologies beside storage and renewables as well. In this respect the platform can be extended towards a central information hub on smart energy technology concepts, data and best practices.

The project partners aiming at enhancing and running this data and information platform beyond the project's life-time and open this platform e.g. for EERA members of the collaborating JPs to become a central access point for information about smart energy solutions combining renewables and storage in Europe.

3.1.1 Shared Data and Information Platform (SDIP)

Therefore, data resources, models and other results – such as system configurations and use cases – will be compiled into machine readable format and stored in background data services data platform established within one the national project (Energy Lab 2.0) for easy access. For exploring the results just within the web portal, interactive web components will be created, which allow exploring data through interactive diagrams and dashboards.

E.g. in a dashboard, visualizations of input data and output data of models maybe combined with user interface elements for changing parameters of the system configuration, e. g. weather data (Figure 1), consumer profiles or battery size, to then recalculate the output values according to the parameter changes. For recalculation of the outputs a (simplified) model of the scenarios could be implemented as calculation workflow on the process and co-simulation engine of the Energy Lab 2.0 which is then used by the dashboard for the recalculations.

Other dashboards or web pages can be created, which allow exploring time series result data, filter them to the user's like and e.g. analyze the time series for anomalies or certain usage patterns. The mentioned web components and interactive dashboards can also be used together with other media to create interactive web pages which could be part of Online Courses as described next in 3.2

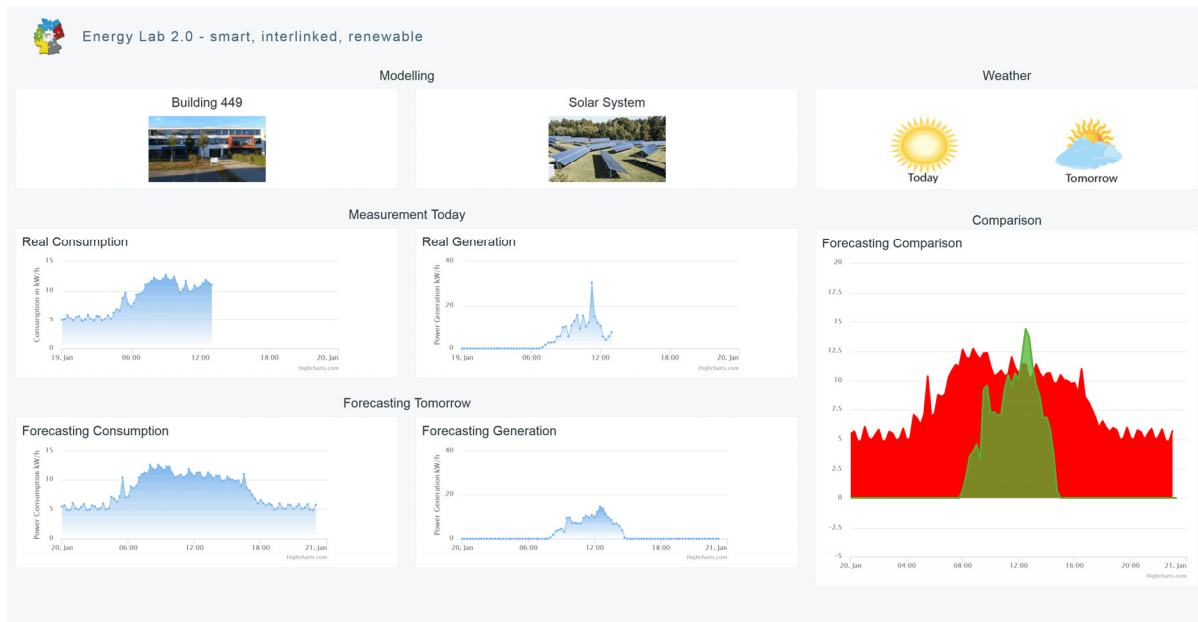


Figure 1: Interactive dashboard displaying output of a model calculation of the process and co-simulation platform of the Energy Lab 2.0.

The Shared Data and Information Platform includes a central research simulation model databases and repositories for access by users horizon and from other tools as well as the public Website and a Member Area, which are described in the following paragraphs.

3.1.2 Logo & Public Website

A logo and a website has been set up. Using the link www.ecria-smiles.eu the general public is informed about the project with five initial planned sections on project, partners, downloads, events and contact. Screen shot in figure 1 gives an idea of the SmILES website.

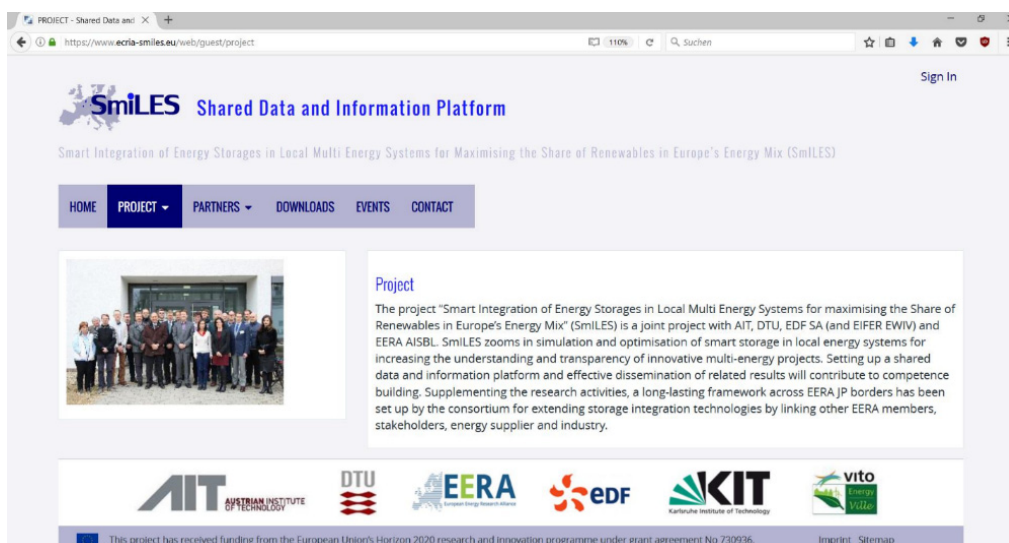


Figure 2: Screen shot of the SmILES public Website

The public Website of the SDIP will be connected to a working director, in the following called “Member Area”

3.1.3 Member Area

Additionally to the Participant Portal, the member area, which has been started, will not only include a file repository with all documents of proposal and meetings (presentations, minutes, attachments, pictures), Figure 3, but will open even more the possibility of interactive communication and dissemination. In that manner the SmILES member area enables a central creation and discussion of documents as well as organization of project work. The internal member area will give every work package its own space to store work, look up action items and present versions of jointly created documents.

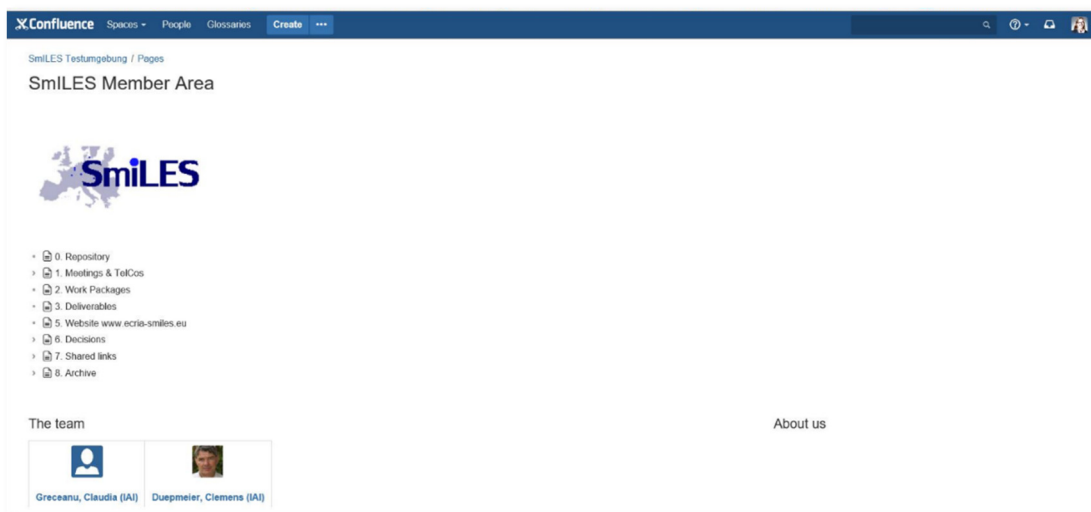


Figure 3: Screen shot of the SmILES Member Area (under construction)

The Member area is foreseen for confidential exchange among members for simultaneous document processing, and deliverable and milestone tracking as well as detailed project monitoring. This area is still under development and will be finalized after input from all the partners. Chief sections of the member area will be:

- a. Document exchange and simultaneous document access and processing
- b. Wiki
- c. Milestone and deliverable tracking
- d. Identifying task responsible persons/institutions

3.2 Massive Open Online Courses (MOOCs)

To impart the basics of local multi energy systems and the smart integration of storage solutions for maximizing the share of renewables in the energy mix as well as to communicate the intermediate results and outcomes of SmILES, we are developing and executing a massive open online course (MOOC).

MOOCs are a contemporary educational as well as marketing instrument accessible online free of charge. It is broken down into chapters containing videos and other interactive learning materials (see section 3.1), that teach content, scripts and books, intermediate and exit quizzes for self-assessment and progress monitoring, animations, Wikis, discussion fora, mailing lists etc. MOOCs deliver educational content according to the latest results in pedagogical research in a multimodal way.

To achieve our goal the planned procedure is to form a working group that identifies the MOOCs topic as well as a specific target group out of the body of the general public. The idea is to tailor the content for this promising target group that then again will function as a disseminator. Therefore, the MOOC will apply the Open Access principle and we will share the material under a Creative Commons license to permit it's use as an Open Educational Resource (OER).

If possible the MOOC will be promoted via social media and edutainment elements can be used separately.

3.3 Open Access Publications

It is the goal of the project to publish the scientific results of the research in the project in peer reviewed in peer reviewed journals as much as possible with respect to the proper acknowledgment of EU funding¹ and the EU open access obligations in Horizon 2020². For each technical work-package, at least two to three publications in these journals are foreseen. Each partner will be responsible to take up the initiative in writing up and submitting manuscripts. As specified in the project agreement, each publication will be communicated to the project office which will keep records. Each publication shall acknowledge support from the SmILES project.

3.4 Conferences, Workshops and Journals

The results from the work in SmILES will be presented in different types of conferences, workshops and journals as they represent an important dissemination channel. A list of possible events, indicating the type of audience, is presented in the table below. This table is of course a non-exhaustive list.

CONFERENCE / WORKSHOP / etc
EERA Conference, Birmingham
D-A-CH+ Energy Informatics Conference
PCIM-Europe (International Exhibition and Conference for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management)
EPE – ECCE (European Conference on Power Electronics and Applications)
IEEE ISGT Europe (Innovative Smart Grid Technologies Europe)
ECC (European Control Conference)
IECON (Annual Conference of the IEEE Industrial Electronics Society)
CIREN (International Conference on Electricity Distribution)
IFAC World Congress (20 th World Congress of the International Federation of Automatic Control)
SET-Plan Conference
EUSEW (EU Sustainable Energy Week)
International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems.

¹ http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-infograph-oa-sci-publ_en.pdf

² https://ec.europa.eu/research/participants/api/notificationapp/notification_details.html?notificationId=b30e1d91-319e-11e7-947d-0050568b5284