

SmILES

Project ID: 730936

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H2020-EU.3.3.3. - Alternative fuels and mobile energy sources
H2020-EU.3.3.4. - A single, smart European electricity grid
H2020-EU.3.3.5. - New knowledge and technologies

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

From 2016-12-01 **to** 2019-11-30, ongoing project

Project details

Total cost: EUR 2 440 682,50	Topic(s): LCE-33-2016 - European Common Research and Innovation Agendas (ECRIAs) in support of the implementation of the SET Action Plan
EU contribution: EUR 2 440 682,50	Call for proposal: H2020-LCE-2016-ERA See other projects for this call
Coordinated in: Germany	Funding scheme: RIA - Research and Innovation action

Objective

SmILES zooms in simulation and optimisation of smart storage in local energy systems for increasing the understanding and transparency of innovative multi-energy projects. Setting up a shared data and information platform and effective dissemination of related results will contribute to competence building.

The objective is to obtain fundamental knowledge about linking and optimising heterogeneous energy carriers and systems including storage and renewable energy technologies from local to national level. Furthermore guidelines for modelling and optimising such systems on European level are developed. These guidelines are derived from knowledge of different energy system configurations (SC), which combine heat and electrical power with storage. The SCs are selected to favour a high relevance for replication throughout Europe including e.g. urban quarters, rural township or industrial environment.

This requires the development of a harmonised rich format describing hybrid energy systems and study cases for various scenarios. Different technologies are used to exchange models, allow cross-checks and validate results of simulation and optimisation. A catalogue of best practices of modelling, operating and integrating multi-energy systems is compiled and intended to serve as guideline for stakeholders. Key success factors and barriers from a socio-technical point of view are identified aiming at the reduction of technological gaps and successful implementation of best practices in a socio-economic context. Thus, SmILES will proof the benefit of a hybrid combined heat- and electrical power systems with storage capabilities and deploy the added value of storage integration in future energy systems. Supplementing the research activities, a long-lasting framework across EERA JP borders is set up by the consortium for extending storage integration technologies by linking other EERA members, stakeholders, energy supplier and industry.

Coordinator

KARLSRUHER INSTITUT FUER TECHNOLOGIE
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76131 KARLSRUHE
Germany

Germany

EU contribution: EUR 909 438,75

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Participants

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EU contribution: EUR 464 951,25

Activity type: Research Organisations

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EU contribution: EUR 283 012,50

Activity type: Higher or Secondary Education Establishments

ELECTRICITE DE FRANCE
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75008 PARIS 08
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France

EU contribution: EUR 321 750

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

ALLIANCE EUROPEENNE DE RECHERCHE DANS LE DOMAINE DE L'ENERGIE
RUE DE NAMUR 72
1000 BRUXELLES
Belgium

Belgium

EU contribution: EUR 142 625

Activity type: Other

VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V.
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Belgium

EU contribution: EUR 318 905



Activity type: Research Organisations

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