

Web support for educators within DER fields

Please find below for your support and inspiration a collection of links to web-sites with information that might be relevant and useful to educators of higher education within the DER fields. The list has been made as part of the [DERri project](#), supported by the EU FP7 research support programme.

Links to general education support sites

SustEner

Teaching Energy for Sustainable World

<http://sustener.eu/>

European universities provide learning resources from sustainable energy for self-education of secondary school teachers and possible usage by them on secondary education level.

Links to DERri partner sites

VTT energy research

A higher-level web-site, providing access to various themes under energy research. Each topic link has more information, including publications etc.

<http://www.vtt.fi/research/ene/?lang=en>

More detailed on energy system knowledge area.

http://www.vtt.fi/research/area/energy_systems.jsp?lang=en

The VTT Energy Visions 2050 book is available online. This could be useful for educative purposes.

http://www.vtt.fi/files/publications/EnergyVisions_2050.pdf

DTU

Technical University of Denmark

PowerLabDK

PowerLabDK is a collection of experimental facilities for electric power and energy, ranging from flexible laboratories over large-scale experimental facilities to a complete full-scale electric power system at Bornholm:

<http://www.powerlab.dk/>

The focus of the SYSLAB facility is the system characteristics and system integration of DER components:

<http://www.powerlab.dk/Facilities/SysLab>

IEE Lodz

The Institute of Electrical Power Engineering at Lodz University of Technology

<http://www.i15.p.lodz.pl/en/index.htm>

AIT

Electricity Network System Analysis

AIT uses numerical network simulations to examine the effect of these new players on the overall system and can thus provide network operators with important information relevant to future network planning and operation:

<http://www.ait.ac.at/research-services/research-services-energy/electricity-network-system-analysis/?L=1>

Grid-connected Inverters

AIT provides a wide range of measurement and consultancy services ensuring reliable assessment of the performance and grid compatibility of inverters, including accredited testing according to national and international specifications:

<http://www.ait.ac.at/research-services/research-services-energy/grid-connected-inverters/?L=1>

Development Support for Grid Components

The infrastructure includes both advanced simulation tools and cutting-edge high-current and high-voltage laboratories. The range of components are switchgear and fuses as well as transformers and isolation systems:

<http://www.ait.ac.at/research-services/research-services-energy/development-support-for-grid-components/?L=1>

RSE

List of topics

Topics, related to the DERri themes, with brief introductions of the concerned matters, and with descriptions of the main studies by RSE in the field:

<http://www.rse-web.it/home.page?country=eng>

Test facilities

Description of the test facility made available under DERri project. The description of other facilities is accessible through the “Laboratories” heading:

<http://www.rse-web.it/lab-retecomponenti.page?country=eng>

RSE results

Results of research and studies carried out by RSE. The document provides an update lookout on a large amount of the hottest energy topics, objectives and proposed solutions. The material may be subject to copyright restrictions, but access can be allowed subject to a specific request of the User to RSE:

<http://www.rse-web.it/documenti/risultati>

<http://www.rse-web.it/documenti/pubblicazioni>

Software tools

A number of software and interactive application tools are made available to the user at

<http://www.rse-web.it/prodotti/prodotti>

The web application tool GDPint is a decision support instrument for the technical-economical assessment of Distributed Generation Grids with co and tri-generation inside. It allows the optimized planning of an energy district and provides the simulation of the performances of all equipment and elements in the plant for their optimal performance management. The suitability of this tool for educational scope is evident:

<http://www.rse-web.it/notizie.page?docId=6475&country=eng>

EU projects

An overview of EU funded projects where RSE has been and is currently involved:

http://www.rse-web.it/applications/webwork/site_rse/local/doc-rse/RSE_Schede_EU_2013/index.html#p=1

Further details and results are available at each project website.

SmartRUE

Smart grids Research Unit of the Electrical and Computer Engineering School of NTUA

<http://www.smartrue.gr/>

Topics

A list of the SmartRUE research topics:

<http://www.smartrue.gr/Default.aspx?tabid=100&language=en-US>

SmartRUE lab

An overview of the laboratory and the main components of the lab. Information on the capabilities of the infrastructure:

<http://www.smartrue.gr/Default.aspx?tabid=363&language=en-US>

Test sites

A brief description of 4 pilot test sites, where the knowledge produced in the lab can be implemented:

<http://www.smartrue.gr/Default.aspx?tabid=455&language=en-US>

Courses

A list of Smart RUE supported university courses (undergraduate and postgraduate) at NTUA:

<http://www.smartrue.gr/Default.aspx?tabid=140&language=en-US>

Projects

A list of the projects that SmartRUE has been involved is also provided:

<http://www.smartrue.gr/Default.aspx?tabid=290&language=en-US>

The projects are divided in three sets: EU, national and international projects with links and short descriptions of the projects. A detailed list of partners is also included.

Publications

A list of publications and some statistics (publications per year etc):

<http://www.smartrue.gr/Default.aspx?tabid=120&language=en-US>

Rural Electrification Research Group

The Rural Electrification Research Group is a part of SmartRUE:

<http://rurerg.net/>

Main activity of this group is the construction of small wind turbines. Other activities include the construction of pico-hydro turbines and software tools for small wind turbine systems sizing and simulations.

CRES

The Greek Centre for Renewable Energy Sources

DER-units in system contexts-3 MW demonstration wind farm

3 MW demonstration wind farm (owned and operated by the Wind Energy Department of CRES) to undertake test and research work for the integration of wind energy technologies with technologies for the production, storage and use of hydrogen (i.e. energy storage), water desalination systems, etc:

http://www.creswindfarm.gr/site1/index_en.htm