

## WORKSHOP LOCATION

**ENEA (Central Conference Room)**

**Lungotevere Thaon di Revel 76**

**00196, Rome (Italy)**

**Tel. +39 06-36271**

[www.enea.it](http://www.enea.it)



<http://www.after-project.eu>

### PRACTICAL INFORMATION

How to reach the Enea headquarters, from:

- **Fiumicino Airport (FCO):** by taxi 40 minutes, by public transportation: take the Leonardo Express to Roma Termini station, then see directions below.
- **Termini Station,** by taxi 30 minutes, by public transportation: take Line A Underground at Termini and get off at Flaminio. At Piazzale Flaminio take tram Number 2 to Piazza Mancini.

### REGISTRATION

Participation is free. For organizational reasons please register before November 25th, 2014

<http://www.enea.it/en/events/after-project-workshop>

For further info, please contact [diego.cirio@rse-web.it](mailto:diego.cirio@rse-web.it)



# AFTER

**A Framework for electrical power systems  
vulnerability identification, defense and Restoration**



## FINAL WORKSHOP

Rome, 27<sup>th</sup> November 2014



*“With the support of the Prevention, Preparedness and Consequence Management of Terrorism and other Security-related Risks Programme”  
European Commission - Directorate-General Home Affairs”*

## Workshop Themes

The **AFTER Project** (*A Framework for electrical power systems vulnerability identification, defence and Restoration*), co-funded by the European Commission – Seventh Framework Programme, addressed the challenges posed by the need for **vulnerability evaluation and contingency planning** of the power grids, in presence of **natural or man-related hazard scenarios**, considering also the relevant *Information Communication Technology* (ICT) systems used in protection and control. In its three-year course, the project developed innovative concepts regarding **physical security** of the power system, **risk assessment, defence and restoration** of system operation.

**The project focused on the physical security as well as on the operational security of the power system, dealing with high impact, multiple contingencies and cascading events, and service restoration from catastrophic outages of the electric grid.**

The AFTER project developed methodologies and tools for:

- **Physical security** improvement by innovative techniques for early warning of substation intrusion events
- **Global vulnerability analysis and risk assessment** of Electric Power Systems, by relating natural/human threats to power system contingencies and cascading, considering ICT dependencies
- **Advanced defence** of power system operation following severe grid outages, by innovative defence plans techniques
- **System restoration** after a major disruption, by designing adaptive and efficient restoration plans.

The AFTER Consortium is composed by **RSE (coordinator), ENEA, ALSTOM, ČEPS, SIEMENS, City University London, SINTEF Energy, SINTEF ICT, ELIA, TERNA, JRC, University of Genoa, University College Dublin.**

The Workshop will present the results of the Project to Transmission System Operators, regulatory authorities, power companies and experts from the Power System sector and Critical Infrastructure Protection (CIP) community.

Institutions, companies and representatives from relevant UE funded Projects are invited to participate and discuss the Project results.

## Agenda

09:30 10:00	Registration and Welcome coffee
10:00 10:10	<b>Introduction to the Project (Coordinator)</b>
10:10 10:50	<b>TSOs' needs and requirements (TSOs)</b>
10:50 11:20	<b>Physical security management (UCD)</b>
11:20 11:30	Coffee break
11:30 12:00	<b>Global risk assessment (RSE)</b>
12:00 12:30	<b>Advanced defence (SIEMENS)</b>
12:30 13:45	Lunch
13:45 14:00	<b>Projection of video "RESTART2013" (ČEPS)</b>
14:00 14:30	<b>Restoration support (UCD)</b>
14:30 15:00	<b>Assessment and applicability of the tools (SINTEF-EN)</b>
15:00 16:00	<b>Demos and Coffee break</b>
16:00 16:45	<b>Summing up and final round table</b>
16:45	End of the workshop