

COSYS-DC 2017

International Conference on
COmponents and SYStems for DC Grids

Grenoble, 14th–15th March 2017

FIRST CALL FOR PAPERS

Sponsors (to be confirmed):

Grenoble INP—ENSE3
TENERRDIS

Organisation:

COSYS s'inscrit dans le cycle des conférences organisées par l'APIME (Association pour la Promotion de l'Innovation des Matériels Electriques).



Topics:

I. Considered Grids Topologies

The concept of DC Grids may cover many categories of electrical installations at low, medium and high voltage levels

- High Voltage DC grids
- Railway supply networks
- Smart Cities: MVDC and LVDC
- Isolated networks dominated by Photovoltaic or wind production
- Embedded networks in ships or aircrafts

II. Specific Equipment and Functionalities

DC grids involve a set of particular equipment whose design and operation principles differ from those known in conventional AC facilities

- AC-DC converters
- DC-DC converters
- DC current Limiters
- DC Circuit Fuses and Circuit Breakers
- Other Switching devices
- Relevant Passive Components
- Protection strategies (Internal Self-protection; Algorithms and relays to properly trigger external protective devices)
- Voltage and current controllers

III. Constraints to comply with

Reliability Availability Maintainability shall be guaranteed taking into account

- Wind and waves for offshore platforms
- Corrosion in salty environment
- Temperature and humidity
- Vibrations on mobile vehicles
- Low footprint without sacrificing accessibility

IV. Efficiency – Ecological – Economic Impacts

- Optimum trade-offs to reach acceptance
- Targeted Markets (Congested Urban MVDC, Supergrids etc.)
- Limited acquisition and operation costs
- Strategy and maintenance costs
- Evolutivity of the implemented systems
- Eco-design and energy efficiency

V. Stakeholders

Institutions, OEM, Grid Operators, Private asset owners.

Language:

English will be the preferred language for papers and presentations during the conference. French language would also be an option for both sessions and the text of the communications in the final proceedings.

Abstracts Submission:

Prospective authors should submit an abstract of one or two pages (A4) using the following email address: apime38@gmail.com

Important dates:

15th December: Abstract Submission deadline
15th January: Notification of acceptance
15st February: Full paper submission deadline
14th-15th March 2017: COSYS-DC 2017, Grenoble, France

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Objectives:

In the fast changing perspective of energetic transition, direct current and more broadly power electronics appear as a solution for high voltage as well as distribution level voltages and embedded power systems. The conference will focus on dc grid equipment and topologies including protections and consider their coordination towards a sustainable, efficient and economical grid.

Scope:

The integration of power electronics based equipment in various grids topologies and environments brings a number of challenges. Having them in mind from the design phase and throughout the life cycle management of the 50 year life time installations is an exercise that requires the attention of many stakeholders.

Chairman

J-L. BESSEDE: APIME, Grenoble

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GRENOBLE 2017



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Venue:

Grenoble INP-ENSE³
21 rue des Martyrs, GRENOBLE,
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