

Measurements for smart electricity grids: workshop and open consultation *Draft Agenda*

Time 15-16 May 2024
Place VSL, Delft, The Netherlands
Registration [Via this link](#) – in-person attendance recommended

Jointly organised by the European Metrology Network on Smart Electricity Grids and the EMPIR project DC Grids

Wednesday, 15 May 2024

Time CEST, UTC+2	Item
08h30	Arrival and registration
09h00	Metrology R&D projects
09h00	<u>Introduction</u> Stefano Lodetti, NPL – chair of EMN Smart Electricity Grids
09h15	<u>Ongoing metrology R&D projects I</u> - digital-IT: Metrology for the next-generation digital substation instrumentation (Jari Hällström, VTT) - e-TRENY: Metrology support for enhanced energy efficiency in DC transportation systems (Domenico Giordano, INRIM)
10h20	Coffee break
10h40	<u>Ongoing metrology R&D projects II</u> ADMIT: Characterisation of AC and DC MV instrument transformers in extended frequency range up to 150 kHz (Mario Luiso, Università degli studi della Campania Luigi Vanvitelli)
11h15	<u>New metrology R&D projects – short pitches</u> - ENSURE: Electric energy and supply reliability (Alf-Peter Elg, RISE) TBC - MetSuperCap: Metrology for static and dynamic characterisation of supercapacitors (Mauro Zucca, INRIM) - Met4EVCS: Metrology for electric vehicle charging systems (Helko van den Brom, VSL) - SBS Uncertainty: Support for standardisation of sample-by-sample waveform uncertainty computation (Heiko Füser, PTB)

11h35	<u>Poster session</u> New metrology R&D projects
12h00	Lunch
13h00	Lab tour
14h00	Workshop and open consultation
14h20	<u>The EMN SEG strategic research agenda</u> Marc-Olivier Andre, METAS
14h20	<u>Keynote presentations</u> - High Voltage Measurement Challenges <i>Prof. Peter Vaessen (KEMA and TU Delft)</i> - What's going on in IEC/TC85 and IEC/TC64 about DC applications? <i>Franck Gruffaz (Schneider Electric) & Pierre-Henri Herr (Socomec)</i>
15h20	Coffee break
15h40	<u>Moderated discussion</u> <i>Moderator:</i> Guglielmo Frigo (METAS) This discussion aims to address measurement challenges related to electricity grids to shape future metrology R&D efforts. Together with the recently published strategic research agenda of the EMN SEG, this will serve as the basis of new research proposals in future calls for research projects in the European Partnership on Metrology, maximising the benefit for the sector.
16h40	Conclusions and next steps (Guglielmo Frigo, METAS)
17h00	End of day and drinks

Thursday, 16 May 2024 – organised by the DC Grids project

Time CEST, UTC+2	Item
09h00	Reliable Measurements for LVDC grids and DC metering
09h00	Welcome (Helko van den Brom, VSL)
09h10	<u>Introduction</u> - The European Research Project DC Grids: Overview (Helko van den Brom, VSL, Netherlands) - The role of DC for modern utilities (Jorge Sánchez, ENDESA, Spain)

09h40	<u>Project outcomes I</u> • Trigger mechanisms to detect DCPQ events and distortions (Julio J. Melero Estela, CIRCE, Universidad Zaragoza, Spain) • On-site measurements in LVDC grids (VSL, Netherlands)
10h20	Coffee break
10h50	<u>Project outcomes II</u> • Test waveforms for DC PQ analysis tools (University of Strathclyde, Glasgow, UK) • Algorithms for analyzing a variety of DCPQ events and disturbances (Eindhoven University of Technology, The Netherlands) • Measurement of DC voltage ripple in laboratory environment (LNE, France) • AC ripple over DC: new solutions for measurements and calibration (INRIM, Italy)
12h00	Lunch
13h00	<u>Project outcomes III</u> • DC power and energy and DCPQ reference systems with distorted signals (METAS, Switzerland) • Superposing DC and AC signals for testing DC meters (PTB, Germany) • Power Quality Compatibility Levels in DC power networks (University of Campania, Italy) • JRP DC grids input to standardization activities on DC metering and DC grids (EDF, France)
14h20	Coffee break
14h40	<u>External presentations</u> • Advanced DC Electricity Meter Testing and Standards (Henri Schouten, NMi Certin, Netherlands) • DC/DC Converters for MVDC grids (Bruno Lefebvre, SuperGrid Institute, France) • Shift to Direct Current: overview of a HORIZON 2023 project (Hugo Morais, University of Lisbon, Portugal) • Title TBC (Wolfram Teppan, LEM)
16h00	Lab tour
17h20	End of day and drinks