Smart Electricity Grids Metrology Week - Agenda

Time	13-17 May 2024
Place	VSL, Delft, The Netherlands
Weblink	Will be available – in person attendance recommended

- EURAMET **EMN SEG** - 6th Annual General Meeting
- EURAMET **TCEM** SC Power and energy - General Meeting
- Measurements for smart electricity grids: **workshop and open consultation**
- **DC grids** Project - Final Workshop

Monday, 13.5.

Time CEST, UTC+2	Item
12h30	Arrival and registration
13h00	**EMN SEG – Annual General Meeting (internal)**
	Introductions & housekeeping – Stefano Lodetti
13h15	Updates from other networks • News from EURAMET – Anne Trumpfheller (Euramet) • A chat with Annarita (chair of EMN Energy Gases) – Annarita Baldan (VSL) • A chat with Emma (chair of EMN Climate & Ocean Observation) – Emma Woolliams (NPL)
13h50	TG discussion I • Task Group Stakeholders – 30 min • Task Group Funding – 20 min • Task Group Events – 20 min
15h00	Coffee break [20 min]
15h20	TG discussion II • Task Group Synergies – 20 min • Task Group Communication – 20 min • Task Group Strategic Research Agenda – 20 min + [buffer 10 min]
16h30	General EMN • Minutes from 2023 AGM and actions • Renewal of *Memorandum of Understanding* • Task Group composition • Steering Committee composition • Future of EMN – where are we going
17h00	**End of day**

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Tuesday, 14.5. Internal SC P&E meeting

Time CEST, UTC+2	Item
8:45	Arrival & late registration
9:00	**EMN SEG + TCEM SC P&E (internal)**
	Good morning – agenda of the day
9:05	Update from RMO: Ilya Budovsky NMIA (10 min + 5 Q/A) *
9:20	Future of EMN – next steps
9:40	Wrap up
10:00	**TCEM SC P&E – annual meeting (internal)**
	Ongoing comparisons: • CCEM-K5, 50 Hz power – Gert Rietveld (VSL) • EURAMET.EM-K5.2018, 50 Hz power – Helko van den Brom (VSL)
10:20	Coffee break [20 min]
10:40	Ongoing comparisons (cont.): • CCEM-K13, Harmonics – Karl-Erik Rydler (RISE) * • EURAMET.EM-K13, Harmonics & flicker – Javier Diaz de Aguilar (CEM) • EURAMET.EM-S46, HVDC ratio, 200 kV – Alf Elg (RISE) • EURAMET.EM-S47, HV resistance, 2 GΩ – Alf Elg (RISE) • EURAMET.EM-S36, Partial discharge – Joni Klüss (RISE) *
12:00	Lunch
13:00	**P&E/SEG technical presentations (internal)**
	Planned comparison(s): • CCEM-K14, AC ratio, 100 kV – Jari Hällström (VTT) Technical talks • Grid stability monitoring and power quality – Stefano Lodetti (NPL) • Integration of CMI's high-resolution wavefom generator into PTB's new ac power standard – Enrico Mohns (PTB) & Jan Kučera (CMI) • Realization of a Lighting Impulse Calibration Facility at VSL – Wei Zhao (VSL)
14:00	Coffee break [20 min]
14:20 (15:00)	Technical talks (cont.) • Characteristics and impact of several current sensors in converter efficiency determination – N.N (PTB) * • CEM new laboratory for charging station testing – Albert Pueyo (CEM) * • CENAM-NRC pilot study for comparison of PQ meters – René Carranza (CENAM) *
15:15	Transfer to social event
	Social event
	Buffer time (option to pass by hotels if needed)
TBC	**Social dinner**

* On-line presentation

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Wednesday, 15.5.

Time CEST, UTC+2	Item
08h30	Arrival and registration
09h00	**Metrology R&D projects**
09h00	Good morning + agenda of the day – Stefano Lodetti
09h15	Ongoing metrology R&D projects I • Metrology for the next-generation digital substation instrumentation (digital-IT) – Jari Hällström & Tapio Lehtonen* (VTT) • Metrology support for enhanced energy efficiency in DC transportation systems (e-TRENY) – Domenico Giordano (INRIM)
10h20	Coffee break [20 min]
10h40	Ongoing metrology R&D projects II • Characterisation of AC and DC MV instrument transformers in extended frequency range up to 150 kHz (ADMIT) – Mario Luiso, Università degli studi della Campania Luigi Vanvitelli*
11h15	New metrology R&D projects – short pitches • Electric energy and supply reliability (ENSURE) – Alf-Peter Elg (RISE) • Metrology for static and dynamic characterisation of supercapacitors (MetSuperCap) – Mauro Zucca (INRIM) • Metrology for electric vehicle charging systems (Met4EVCS) – Helko van den Brom (VSL) • Support for standardisation of sample-by-sample waveform uncertainty computation – Heiko Füser, PTB*
11h35	Poster session • New metrology R&D projects
12h00	**Lunch**
13h00	**Lab tour**
14h00	**Workshop and open consultation**
14h00	The EMN SEG strategic research agenda • Marc-Olivier Andre, METAS
14h20	Keynote presentations • High Voltage Measurement Challenges *Prof. Peter Vaessen (KEMA and TU Delft)* • What's going on in IEC/TC85 and IEC/TC64 about DC applications?* *Franck Gruffaz (Schneider Electric) & Pierre-Henri Herr (Socomec)*
15h20	Coffee break [20 min]
15h40	Moderated discussion • *Moderator: 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**

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Thursday, 16.5.

Time CEST, UTC+2	Item
08h30	Arrival and registration
09:00	**Reliable Measurements for LVDC grids and DC metering**
09:00	Welcome – Helko van den Brom
09:10	Introduction • The European Research Project DC Grids: Overview – Helko van den Brom, VSL, Netherlands • The role of DC for modern utilities – Jorge Sánchez, ENDESA, Spain
09:50	Project outcomes I • Trigger mechanisms to detect DCPQ events and distortions – CIRCE, Universidad Zaragoza, Spain • On-site measurements in LVDC grids – VSL, Netherlands
10:30	Coffee break
11:00	Project outcomes II • Test waveforms for DC PQ analysis tools – University of Strathclyde, Glasgow, UK • Measurement of DC voltage ripple in laboratory environment – LNE, France • AC ripple over DC: new solutions for measurements and calibration – INRIM, Italy
12:00	**Lunch**
13:00	Project outcomes III • 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
14:20	Coffee break
14:40	External presentations • 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 • Transducers and energy meters in DC grid applications – Yihui Zuo, LEM, Switzerland*
16:00	**VSL lab tour**
17:00	**End of day and drinks**

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Friday, 17.5.

Time CEST, UTC+2	Item
09h00	**DC grids M36 (internal)**
12h00	**End of day**

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