

August Highlights



1 · AUG 13

2026 C2-GRID Industry Expert Workshop

C2-GRID hosted an Industry Expert Workshop at Kim Soon Jeon Hall, Yonsei University, to share research achievements in future HVDC systems and power cables and discuss directions for industry-academia collaboration.

HVDC and Power Cable Research

The Converter and Cable teams presented research on GFM-HVDC and MTDC design and stability, large-scale EMT modeling, cable diagnostics, and ampacity enhancement. Before the presentations, Sunghan Kim demonstrated the in-house MMC HVDC Design Tool.

Special Session by Dr. Min-Seung Ko

Dr. Ko discussed how generative AI and scientific AI are transforming power system research and education and presented planning, operational, and stability challenges associated with large-scale AI data centers.

Panel Discussion

Participants shared industry needs and joint research priorities and discussed institutional collaboration, phased implementation plans, and follow-up activities.



2 · AUG 12

Research by the Lead Institution Accepted for Publication

The C2 Grid Hub developed a control strategy to mitigate DC-link voltage excursions in GFM-based MTDC systems. The study was accepted for publication in the International Journal of Electrical Power & Energy Systems.

Mechanism under AC Faults

The study analyzed AC-DC power imbalances and the mechanisms causing DC-link overvoltage and undervoltage in GFM converters during AC-side faults.

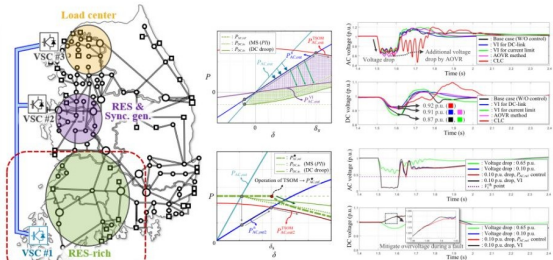
Mitigation Control Strategy

A coordinated strategy combining virtual impedance and active-power command control was proposed considering power-flow direction and current-limiting conditions.

Large-Scale EMT Validation

A three-terminal MTDC system embedded in a future Korean transmission network validated the mitigation of DC-link excursions and improved post-fault resynchronization.

Led by Yoonseok Kim, with Cholmin Kim, Chanho Ji, and Min-Seung Ko



3 · AUG 23-28

Participation in the CIGRE Paris Session 2026

C2 Grid Hub researchers participated in the C2 and B4 sessions and the joint B4-C4 workshop at the CIGRE Paris Session 2026, presenting research on future power system operation and GFM-HVDC technologies.

Junchol Lee

At the joint B4-C4 workshop, he presented GFM control technologies for a ±525 kV, 2 GW VSC-HVDC system for Korea's West Coast Energy Highway.

Jongwon Kang and Chanho Ji

During the B4 session, they presented research on GFM-HVDC damping validation and MTDC control stability considering MMC internal dynamics.

Minsung Kim

During the C2 session, he presented multi-point measurement-based effective inertia estimation and regional inertia assessment for the Korean power system.