

Samy Akkari

Freelance HVDC Consultant



Areas of Expertise

High Voltage Direct Current
Voltage Source Converter
Modular Multilevel Converter
HVDC Systems Design
HVDC Systems Engineering
HVDC Commissioning
HVDC O&M
HVDC Offshore Platforms
HVDC Valve Type Testing
HVDC C&P Systems
HVDC C&P Replica
Real-Time Simulation
C&P Cyber-Security
Valve Cooling System
Valve Climate System
RAM, FMECA and RCM

summary

- **Education:** PhD in HVDC systems and engineering degree from French "Grandes Écoles"
- **Experience:** 12 years of hands-on experience in the field of HVDC systems.
- **Professional Roles:**
 - Worked as Principal HVDC O&M Engineer for the INELFE HVDC project.
 - Conducted type testing, factory acceptance testing (FST/DPT), and commissioning for the IFA2 HVDC project.
 - Extensive experience in real-time simulation and operation with C&P system replicas.
 - Specification writing, tendering, design and type testing of Celtic Interconnector, Biscay Gulf, and all Centre Manche Offshore HVDC projects, serving as an HVDC valve and C&P expert, and HVDC maintenance specialist.

My skills and experience in HVDC systems, combined with my advanced degree and comprehensive roles in operational positions, make me a valuable asset in the field.

experience

- Since 2024 **Freelance HVDC Consultant and CEO of HVDC Connect** HVDC CONNECT
Project Delivery, O&M, Technical Expertise for Onshore & Offshore HVDC Projects
- 2016-2024 **Senior HVDC Expert** RÉSEAU DE TRANSPORT D'ÉLECTRICITÉ (RTE)
National Centre for Grid Expertise, Power Electronics Assets Team
- **O&M Engineer** - Led operations and maintenance (O&M) strategy for the Baixas HVDC converter station (**INELFE B-SL, Siemens Energy** Project), ensuring over 98.5% availability over an 8-year period.
 - **Commissioning Engineer** - Commissioned the **IFA2, Hitachi Energy** Project, including successful execution of type testing, factory acceptance testing (FST/DPT), and on-site commissioning.
 - **HVDC Asset Manager** - Developed and managed maintenance policies and budgets for all RTE's HVDC links.
 - **HVDC Expert** - Leveraged extensive experience in tender specifications, tender evaluation, design, construction, type testing, FPT/DPT, and commissioning to contribute to ongoing projects like **France-Italy Link (GE vernova)**, **Celtic Interconnector (Siemens Energy)**, **Biscay Gulf (Hitachi Energy)**, and all three **Centre Manche (Hitachi Energy)** Offshore HVDC projects.
- 2013-2016 **PhD Candidate** GEEPs (CENTRALESUPÉLEC) & L2EP (CENTRALE LILLE)
Control and stability of a multi-terminal HVDC (MTDC) system and study of interactions between AC networks and the MTDC grid.
- **Management** of a 3-year project in 2 laboratories: **modeling**, using EMTP-RV and Matlab, of a VSC-MMC type MTDC network. **Analysis** of the interaction of the HVDC grid with interconnected AC networks.

education

- 2013-2016 **PhD Thesis** in Electrical engineering CENTRALESUPÉLEC, GIF-SUR-YVETTE
Control and stability of a multi-terminal HVDC (MTDC) system and study of interactions between AC networks and the MTDC grid.
- 2013 **Master Degree** - REST ÉCOLE POLYTECHNIQUE PARISTECH
Renewable Energy, Science & Technology.
Study of electrical networks (management, optimization...), renewable production technologies (solar, wind, hydro...), Project management.
- 2013 **Engineering Degree** ÉCOLE NORMALE SUPÉRIEURE
Engineer in Electrical Engineering. Title of "Ingénieur Normalien Agrégé".

Contact Information

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Languages

French (mother tongue)
English (fluent)

Programming

Simatic-TDC, HiDraw,
Matlab, Simulink,
EMTP, Hypersim,
LaTeX, Microsoft Office

Miscellaneous

Driving license