

SuperGrid Institute is a private research and innovation centre. We are specialised in high power, high voltage and high efficiency power converters. We have experience in the power electronics development based on SiC power semiconductors and medium frequency transformers. We are equipped with power converter test benches allowing to test the high power, high voltage power converters. Our Power electronics and converters department (<https://www.supergrid-institute.com/en/research-and-development/power-electronics-and-converters/>) is 30 people including engineers, researchers and PhD students. SuperGrid Institute has realised 3 relevant projects :

- internal demonstrator of a 1,2kVdc - 0,6kVdc 100kW DC-DC converter using 1,7kV SiC power modules and ferrite medium frequency transformer
- internal demonstrator of a 4kVdc - 8kVdc 800kW DC-DC converter using 3,3kV IGBT and SiC power modules and a nanocrystalline medium frequency transformer
- internal development of a small scale mock-up of a railway AC-DC single-phase SST allowing to validate the SST topology and controls

and our relevant test facilities are:

- Power converter test platform allowing to test the complete SST (<https://www.supergrid-institute.com/en/our-technologies-services-supergrid-institute/our-test-platforms/power-converter-platform/>)
- Medium frequency transformer and technologies allowing to test the transformer (<https://www.supergrid-institute.com/en/our-technologies-services-supergrid-institute/our-test-platforms/medium-frequency-transformer-and-technologies/>)
- Power switches characterization platform allowing to characterise the semiconductor power switches necessary in the power electronics design (<https://www.supergrid-institute.com/en/our-technologies-services-supergrid-institute/our-test-platforms/power-switches-characterization-platform/>)

We believe that the above presented expertise & experience can provide a high added value in the project consortium.



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