GE Power Conversion to provide SNCF Réseau with boosters for future extended RER E line

At the end of February, GE Power Conversion signed a major contract with SNCF Réseau as part of the Eole project, extending the express regional train network's E line (RER E) to the West. The contract includes the turnkey supply of four STATCOM systems/High Voltage Boosters (HVB) as well as the maintenance of the equipment in operational conditions for a period of 10 years, in order to contribute to the sustainability of the overall performance of the operation.

The project's main stakes:

- Decongestion of the RER A line by the extension of the RER E between Haussmann Saint-Lazare and Nanterre stations, by serving Porte Maillot and La Defense sites
- Increase of the frequency in Paris Intramuros up to 22 trains per hour per direction of traffic at the commissioning of the extension to Mantes la Jolie
- Major innovation of the operating system with the implementation of NExTEO, an automated train handling assistance, allowing more trains to run faster
- To support these challenges, the need to modernize the electrical system –by improving the quality of power on the central section, the boosters allow the passage to 22 trains without power inside the tunnel

The reactive power compensation solution offered by GE Power Conversion is therefore essential in the line power supply process. With an antenna supply of some 20 kilometers from the Noisy-le-Sec substation, it will not only ensure stability on the network with regard to harmonics, but also, thanks to its booster function, maintain a good level of electrical voltage (25 kV) on the catenary regardless of the number of trains in operation – preserving travel times and customer experience.

“With its latest technology applied to a STATCOM HVB system, GE Power Conversion will enable SNCF Réseau to meet the challenge of train performance in a context of increased traffic on line E of the RER,” said Christian Courtois, Head of Electrical Traction Engineering at SNCF Réseau when signing the contract. “And this solution could also be preferred wherever there is a significant increase in rail traffic in France. Power electronics on the traction network is a very interesting alternative to conventional electrotechnical solutions. We rely on GE to help us determine industry solutions at the best cost over the life cycle of the system.”

The contract specifically covers the supply by GE Power Conversion, from study to commissioning, of two systems each composed of two redundant boosters, installed at two separate sites, at the ends of the tunnel (La Défense and Riquet), for a total of four converters. GE Power Conversion's latest converters offer better dynamic performance than systems based on reactive energy compensator technology, ensuring improved reliability and network availability. They are also up to 20% more compact, a crucial advantage in constrained environments such as underground developments.

“By selecting GE Power Conversion, SNCF Réseau is choosing innovation, but also proximity.” said Philippe Piron, President and CEO of GE Power Conversion. “As a French industrial company, we are proud to be able to collaborate with SNCF on this major project and to contribute to the development of Greater Paris.”

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About GE Power Conversion

GE Power Conversion applies the science and systems of power conversion to help drive the electric transformation of the world’s energy infrastructure. Designing and delivering advanced motor, drive and control technologies that evolve today’s industrial processes for a cleaner, more productive future, it serves specialized sectors such as

energy, marine, industry and all related services.
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