



SNCF Voyageurs and Alstom present the first of five battery-powered trains ordered by the French regions, as transport authorities in charge of organising regional mobility

- Presented on 18 October at the Rencontres Nationales du Transport Public in Clermont-Ferrand, this battery-powered regional train will help reduce CO2 emissions on non-electric lines
- A total of five dual-mode trainsets are to be modified by replacing their diesel engines with batteries, in order to become 100% electric
- This large-scale project is a first of its kind in Europe

18 October 2023 – Alstom, global leader in smart and sustainable mobility, and SNCF Voyageurs presented the first battery-powered Regional Train (TER) on 18 October 2023 at the Rencontres Nationales du Transport Public, in Clermont-Ferrand.

The Auvergne-Rhône-Alpes, Hauts-de-France, Nouvelle-Aquitaine, Occitanie Pyrénées-Méditerranée and Sud Provence-Alpes-Côte d'Azur regions have been working with SNCF Voyageurs and Alstom since 2021 on a project to develop battery-powered trains, to help reduce CO2 emissions on non-electric lines. Five dual-mode electric-diesel trainsets are to be modified by replacing their diesel engines with batteries, in order to become 100% electric. The first battery-powered trainset entrusted by the Nouvelle-Aquitaine Region left the Crespin Alstom site during the summer and has just begun its dynamic tests.

"Decarbonising mobility is at the heart of Alstom's strategy, and the battery solution completes our range of relevant solutions, along with hydrogen and hybridisation, to reduce greenhouse gas emissions from mobility," said Jean-Baptiste Eyméoud, President of Alstom France. "In this respect, we are proud to be able to present the first battery-powered TER, developed in collaboration with SNCF Voyageurs and with the support of the five partner Regions".

An innovative project to decarbonise rail transport

Launched in 2021, the first order is for five trainsets, some of which have already been in service for almost 20 years on the railway networks of the partner regions.

Now equipped with a new, cleaner and more environmentally-friendly traction system, they will be put back into commercial service to run on electrified and non-electrified lines for a further 20 years.

A successful first tune-up

A static and dynamic development phase at up to 60 km/h took place during the summer of 2023 at the Crespin Alstom site, in order to check the train's operation and test its battery-powered traction mode. The first trials show that the battery charging and discharging system is working properly.



Tests are now continuing at the Centre d'essais ferroviaires at Bar-le-Duc, with validation and certification tests at up to 160 km/h. The train's new traction modes will be tested, in order to validate the various route simulation models under operating conditions identical to those in commercial service.

Next steps

The final phase of tests on the French national railway network (RFN) is scheduled for December 2023 and January 2024. These tests should prove that the train is compatible with the existing French infrastructure.

They will enable SNCF Voyageurs to finalise the admission file that will be submitted to the Etablissement Public de Sécurité Ferroviaire (EPSF), with a view to obtaining the necessary authorisations for its commercial service.

The aim is for this new so called "AGC batteries" model of regional train to be authorised to enter commercial service as from December 2024 in the partner Regions, during an initial experimental period, enabling the technology to be rolled out on a larger scale.

The overall budget for the project, including the pre-production run of five trainsets, is 40.2 million euro, co-financed by the partners as follows: each Region contributing 5.7 million euro, Alstom 5.5 million euro and SNCF 6 million euro.

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Alstom commits to contribute to a low carbon future by developing and promoting innovative and sustainable transportation solutions that people enjoy riding. From high-speed trains, metros, monorails, trams, to turnkey systems, services, infrastructure, signalling and digital mobility, Alstom offers its diverse customers the broadest portfolio in the industry. With its presence in 63 countries and a talent base of over 80,000 people from 175 nationalities, the company focuses its design, innovation, and project management skills to where mobility solutions are needed most. Listed in France, Alstom generated revenues of €16.5 billion for the fiscal year ending on 31 March 2023.

For more information, please visit www.alstom.com.

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