

PRESS RELEASE

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First order of hydrogen trains in France – a historic step towards sustainable mobility

Auvergne-Rhône-Alpes, Bourgogne-Franche-Comté, Grand Est and Occitanie regions sign the very first order of dual mode electric-hydrogen trains in France. This marks a historic step in rail transport's reduction in CO2 emissions for the benefit of passengers and regions, and in the development of a hydrogen ecosystem as well as a promising sector for the future.

Acting on behalf of the four regions, SNCF Voyageurs has placed an order with Alstom for the first 12 dual mode electric-hydrogen trains (plus two optional trainsets) in the Coradia Polyvalent range for Régiolis, developed by Alstom. The contract is worth a total of almost 190 million euros¹. In the early days, trains were powered by steam and thermal, then electric energy followed, this innovation marks a genuine revolution in rail mobility. A first in France, it will work towards the energy transition goals to cut greenhouse gas emissions and noise pollution, an ambition supported by the French government through its Hydrogen plan launched in June 2018. It is fully in line with the PLANETER programme to reduce the environmental impact of SNCF Voyageurs' regional mobility solutions, based on the conviction that introducing more TERs (regional express trains) can significantly reduce CO2 emissions. Other French regions have already expressed their interest in participating in a second phase of the project.

This official French order for hydrogen-powered trains is the result of two years of joint efforts by the project's various stakeholders. The dual mode electric-hydrogen Coradia Polyvalent train meets the requirements of France's diverse rail network and has an autonomy of up to 600 km on sections of non-electrified railway. This four-car, 72m-long train has a total capacity of 218 seats and the same dynamic performance and level of comfort as the dual mode electric-diesel version.

Almost 400 dual mode electric-thermal and full-electric Coradia Polyvalent trains have been ordered by French regions since 2011. The development and manufacture of Coradia Polyvalent trains secure over 2,000 jobs in France for Alstom and its suppliers. Six of Alstom's 15 sites in France are involved in the project: Reichshoffen (Bas-Rhin) for design and assembly, Ornans (Doubs) for engines, Le Creusot (Saône-et-Loire) for bogies, Tarbes (Hautes-Pyrénées) for traction chains and the development of hydrogen propulsion, Villeurbanne (Rhône) for on-board electronics and Saint-Ouen (Seine-Saint-Denis) for design.

¹ This contract was booked in the 4th quarter of Alstom's 2020/21 fiscal year

“France has everything it needs to become a hydrogen champion: the French government is fully committed to turning this ambition into reality. We will be covering 47 million euros of development costs for France’s first regional hydrogen-powered train. I am delighted that this support has enabled the four partner regions to confirm their order for the first 14 trains,” said **Jean-Baptiste Djebbari, Minister Delegate for Transport, French Ministry of the Ecological Transition.**

“Environmental protection is a major issue and without doubt the greatest challenge of the 21st century. This order for the first Coradia trains in Auvergne-Rhône-Alpes is the next step in our region’s ambition to boost green growth focusing on innovation, business development and job creation. Since our commitment to the European project Zero Emission Valley, we have aimed to make our region – home to almost all players in the hydrogen sector – one of the lowest carbon regions in Europe, by developing applications for this new source of energy. Hydrogen trains are an innovative alternative to the diesel trains running on our non-electrified lines,” said **Laurent Wauquiez, President of the regional council of Auvergne-Rhône-Alpes.**

“As a source of energy and a storage solution, hydrogen, and particularly green hydrogen, is a way not only to tackle the effects of global warming, but also to boost employment, attractiveness and growth in our region. As a pioneer in this strategic technology, the region has brought together the talents and skills of both Bourgogne and Franche-Comté in its shift towards hydrogen. The order for three Coradia Polyvalent H2s worth a total of 52 million euros marks another step in our rollout of hydrogen for low-carbon mobility solutions. The trains will run between Auxerre and Laroche-Migennes, and will be part of the first regional ecosystem in France to include the train, based in Auxerre,” said **Marie-Guite Dufay, President of the regional council of Bourgogne-Franche-Comté.**

“This landmark order confirms our commitment to maintaining employment and activity at the Reichshoffen site, where all the trains – three plus two optional for the Grand Est region and nine others ordered by our counterparts – will be assembled. This is the first step in the long-term strategy of TER Grand Est and our involvement in this unprecedented programme aims to stimulate a nationwide launch of the light hydrogen train in France. Indeed, the trials carried out will be fundamental in developing a French hydrogen rail sector and, in a second phase, producing the light hydrogen train that the Grand Est region badly needs to roll out its policy to save and develop its small railways,” said the President of the **regional council of Grand Est.**

“This is a key moment in our drive for hydrogen in Occitanie. This first order gives the go-ahead for a new era of technological progress at the service of green mobility with the liO regional public transport service. The Occitanie Region is the only one committed to the 4 greening solutions for its regional trains (Régiolis Hybrid, battery train, bioGNV, hydrogen) and will welcome the 3 hydrogen Régiolis trains on the Montréjeau - Luchon line which we are going to reopen by 2025. It is also good news for our region’s employment and growth, particularly with the Alstom plant in Tarbes involved in manufacturing these innovative trains. Low-carbon

reindustrialisation of our regions and green mobility solutions are no longer a utopian dream, they are already at work in our regions. I would like to salute the collective engagement of the four regions that have demonstrated their capacity to initiate and support this project, which promotes the emergence of a promising sector for the future here in France,” said **Carole Delga, President of the regional council of Occitanie / Pyrénées – Méditerranée.**

“Alstom is particularly proud to be contributing, alongside SNCF Voyageurs and the Auvergne-Rhône-Alpes, Bourgogne-Franche-Comté, Grand Est and Occitanie regions, to a cleaner and more sustainable mobility solution. Alstom is the first rail company in the world to launch a hydrogen train onto the market and to master this technology through its iLint train, developed for the German market. This new order for the French market is fully in line with Alstom Group’s ambition to become number one in the green and smart mobility market and to help roll out an efficient hydrogen ecosystem in our regions,” said **Jean-Baptiste Eyméoud, President of Alstom France.**

“This order marks a historic and concrete step towards clean mobility, by rolling out a new rail solution with zero direct emissions. Hydrogen has become a concrete solution to help regions achieve their energy transition. We are proud of our commitment to this way forward and of the addition of this technology to the range of solutions developed for our regions through our PLANETER programme. This order is the result of several years of work alongside our organising authorities and the manufacturer, achieved through the commitment and expertise of our teams in the Rolling Stock and TER departments, to develop a hydrogen train to meet our regions’ needs,” said **Christophe Fanichet, CEO, SNCF Voyageurs.**

About the Grand Est region

Transport, mobility and intermodality form one of the Grand Est region’s key skill sectors, with a budget of almost 900 million euros in 2020 (nearly a third of the regional budget). The region’s aim is to make its residents’ day-to-day life easier and to help build mobility solutions for tomorrow. To achieve this, it is committed to supporting travel, building links between metropolitan areas and medium-sized towns, and opening the region in all directions. Today, the energy transition, particularly in the transport sector, is a key priority for the region, which has adopted an ambitious approach to ensure an effective, energy-efficient and low-carbon service for its regional passenger rail transport network. In this respect, replacing trains’ diesel engines with fuel cells is one of the solutions that will be tested in this Régiolis H2 project and for which the region has purchased five dual mode electric-hydrogen trains (of which two are optional), with a view to significantly improving the environmental impact of tomorrow’s rolling stock.

About the Occitanie region

Occitanie has an ambitious green hydrogen plan, combining ecology and economic growth.

In 2016, the Occitanie / Pyrénées-Méditerranée region set a clear goal: to become the leading positive energy region in Europe. To achieve this, it is implementing a €150 million regional plan to develop green hydrogen based around four strategic areas:

- Supporting hydrogen production, storage, and distribution projects (Port-La-Nouvelle, Genvia);
- Developing hydrogen applications (buses, trains, green aircraft);
- Supporting regional hydrogen ecosystems (HyPort);
- Making Occitanie one of Europe's leading regions.

Occitanie is also the only region to be involved in the three trials – hybrid, battery, and hydrogen – currently underway to replace diesel trains.

About SNCF Voyageurs

SNCF Voyageurs is the SNCF Group company handling passenger rail transport. It provides shared and door-to-door mobility solutions to meet passenger needs regarding service, cost, quality, and environmental impact. It offers both commuter mobility and long-distance travel in France and Europe through: Transilien in Ile-de-France; TER for regional trains; and Voyages (TGV INOUI, OUIGO, Intercités, Eurostar, Thalys, TGV Lyria, etc.). Its online travel agency OUI.sncf is currently France's leading e-commerce site. SNCF Voyageurs carries approximately five million passengers a day. Created on 1 January 2020, SNCF Voyageurs is a public limited company and wholly-owned subsidiary of SNCF Group.

About Alstom

Leading societies to a low carbon future, Alstom develops and markets mobility solutions that provide the sustainable foundations for the future of transportation. Alstom's products portfolio ranges from high-speed trains, metros, monorail, trams, and e-buses to integrated systems, customised services, infrastructure, signalling and digital mobility solutions. With Bombardier Transportation joining Alstom on January 29, 2021, the new Group's combined revenue amounted to €15.7 billion for the 12-month period ended March 31, 2020². Headquartered in France, Alstom is now present in 70 countries and employs 75,000 people.

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² *unaudited proforma*

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