

Europe Hybrid and Battery-Powered Train Market Forecast to 2028 - COVID-19 Impact and Regional Analysis By Propulsion Type (Hybrid, Battery-Powered, and Fuel Cell) and Charging System Type (Pantograph, Auxiliary Diesel Engine, and Dock-In)

<https://marketpublishers.com/r/E15B0C6F4E37EN.html>

Date: May 2023

Pages: 162

Price: US\$ 3,000.00 (Single User License)

ID: E15B0C6F4E37EN

Abstracts

The Europe hybrid and battery-powered train market is projected to reach US\$ 7,176.71 million by 2028, growing at a CAGR of 8.6% from 2023 to 2028.

The increasing demand for energy-efficient transportation is driving the hybrid and battery-powered train market. Governments of various European countries are taking initiatives to reduce carbon emissions. The European Union (EU) has adopted the United Nations (UN) 2030 agenda for sustainable development and the Paris Agreement on climate change. Furthermore, the European Green Deal is a part of the European Commission's strategy to implement the UN 2030 agenda and the Sustainable Development Goals (SDGs). EU is implementing these plans and policies to achieve climate neutrality by 2050. Through this Green Deal, the European Commission is aiming to reduce transport emissions by 90% by 2050. To achieve the goal of reducing carbon emissions, governments of various European countries are adopting fuel-efficient trains, driving the Europe hybrid and battery-powered train market growth.

The pantograph charging system is located on the roof of the train; it helps collect the electricity needed to power the train. Pantographs make direct contact with the overhead power lines in order to obtain electricity. The system provides fast charging with a wide range of power levels, thus, providing an uninterrupted power supply in the train. Pantograph based battery trains from the market players will fuel the segment's growth during the forecast period, promoting the overall Europe hybrid and battery-

powered train market growth.

A hybrid train is an energy-saving system that is a combination of a conventional diesel and electric drive system. The train comprises a generator with a combustion engine, one or more electric motors with corresponding power electronics, and a battery. As the hybrid train helps reduce greenhouse gases and other exhaust gas emissions in the environment, its demand in the market is increasing. In addition, the use of a combustion engine as a generator in the hybrid train can help maximize the working time of a combustion engine, thus, improving the efficiency of the entire system by up to 30%. All the above advantages of hybrid trains are increasing their adoption in the market tremendously. Battery-powered trains are one of the cleanest zero-emission solutions. Adopting these trains will help achieve climate change targets by improving air quality in cities and non-electrified stations. Battery-powered trains will also allow traveling beyond electrified routes, providing a seamless journey and an integrated passenger experience that benefits both operators and the environment. Due to all the above benefits of battery-powered trains, their demand is increasing in the region, pushing Europe hybrid and battery-powered train market players to develop innovative products.

The Europe hybrid and battery-powered train market is segmented based on propulsion type, charging system type, and geography. Based on propulsion type, the Europe hybrid and battery-powered train market is segmented into hybrid, battery-powered, and fuel cell. Based on charging system type, the Europe hybrid and battery-powered train market is segmented into pantograph, auxiliary diesel engine, and dock-in. By geography, the Europe hybrid and battery-powered train market is segmented into Germany, France, Italy, Spain, the UK, Poland, Austria, Slovenia, Bulgaria, Hungary, Romania, Greece, Serbia, Scandinavia, Croatia, and the Rest of Europe.

Alstom SA, Westinghouse Air Brake Technologies Corp, Construcciones y Auxiliar de Ferrocarriles SA, Kon?ar Electrical Industry Inc, Hitachi Rail STS SpA, Hyundai Rotem Co, Siemens Mobility GmbH, CRRC Corp Ltd, Toshiba Infrastructure Systems and Solutions Corporation, and Stadler Rail AG are among the key Europe hybrid and battery-powered train market players operating in the market and profiled in this study.

The overall Europe hybrid and battery-powered train market size has been derived using both primary and secondary sources. Exhaustive secondary research has been conducted using internal and external sources to obtain qualitative and quantitative information related to the Europe hybrid and battery-powered train market. The process also helps obtain an overview and forecast of the market with respect to all the market

segments. Also, multiple primary interviews have been conducted with industry participants to validate the data and gain analytical insights. This process includes industry experts such as VPs, business development managers, market intelligence managers, and national sales managers, along with external consultants such as valuation experts, research analysts, and key opinion leaders, specializing in the Europe hybrid and battery-powered train market.

Contents

1. INTRODUCTION

- 1.1 Study Scope
- 1.2 The Insight Partners Research Report Guidance
- 1.3 Market Segmentation

2. KEY TAKEAWAYS

3. RESEARCH METHODOLOGY

- 3.1 Coverage
- 3.2 Secondary Research
- 3.3 Primary Research

4. HYBRID AND BATTERY-POWERED TRAIN MARKET LANDSCAPE

- 4.1 Market Overview
- 4.2 PEST Analysis
 - 4.2.1 Europe
- 4.3 Ecosystem Analysis
- 4.4 Expert Opinions

5. HYBRID AND BATTERY-POWERED TRAIN MARKET – KEY MARKET DYNAMICS

- 5.1 Market Drivers
 - 5.1.1 Rise in Demand for Energy-Efficient Transportation
 - 5.1.2 Increase in Initiatives to Support Adoption of Train Travel
- 5.2 Market Restraints
 - 5.2.1 High Purchase Cost of Hydrogen and Battery-Powered Trains
- 5.3 Market Opportunities
 - 5.3.1 Next Generation EU and Similar Policies Offer Growth Opportunities
- 5.4 Future Trends
 - 5.4.1 Increasing Demand for Hydrogen-Powered Trains
- 5.5 Impact Analysis of Drivers and Restraints

6. HYBRID AND BATTERY-POWERED TRAIN MARKET – EUROPE ANALYSIS

6.1 Europe: Hybrid and Battery-Powered Train Market

6.1.1 Europe: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

6.2 Market Positioning- Top Five Players

7. EUROPE HYBRID AND BATTERY-POWERED TRAIN MARKET ANALYSIS – BY PROPULSION TYPE

7.1 Overview

7.2 Europe Hybrid and Battery-Powered Train Market, by Propulsion Type (2022 and 2028)

7.3 Hybrid

7.3.1 Overview

7.3.2 Hybrid: Europe Hybrid and Battery-Powered Train Market – Revenue, and Forecast to 2028 (US\$ Million)

7.4 Battery-Powered

7.4.1 Overview

7.4.2 Battery-Powered: Europe Hybrid and Battery-Powered Train Market – Revenue, and Forecast to 2028 (US\$ Million)

7.5 Fuel Cell

7.5.1 Overview

7.5.2 Fuel Cell: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

8. EUROPE HYBRID AND BATTERY-POWERED TRAIN MARKET ANALYSIS – BY CHARGING SYSTEM TYPE

8.1 Overview

8.2 Europe Hybrid and Battery-Powered Train Market, by Charging System Type (2022 and 2028)

8.3 Pantograph

8.3.1 Overview

8.3.2 Pantograph: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

8.4 Auxiliary Diesel Engine

8.4.1 Overview

8.4.2 Auxiliary Diesel Engine: Europe Hybrid and Battery-Powered Train Market –

Revenue and Forecast to 2028 (US\$ Million)

8.5 Dock-In

8.5.1 Overview

8.5.2 Dock-In: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

9. EUROPE HYBRID AND BATTERY-POWERED TRAIN MARKET – COUNTRY ANALYSIS

9.1 Germany: Hybrid and Battery-Powered Train Market

9.1.1 Germany: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.1.2 Germany: Hybrid and Battery-Powered Train Market, by Charging System Type

9.2 France: Hybrid and Battery-Powered Train Market

9.2.1 France: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.2.2 France: Hybrid and Battery-Powered Train Market, by Charging System Type

9.3 Italy: Hybrid and Battery-Powered Train Market

9.3.1 Italy: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.3.2 Italy: Hybrid and Battery-Powered Train Market, by Charging System Type

9.4 Spain: Hybrid and Battery-Powered Train Market

9.4.1 Spain: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.4.2 Spain: Hybrid and Battery-Powered Train Market, by Charging System Type

9.5 UK: Hybrid and Battery-Powered Train Market

9.5.1 UK: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.5.2 UK: Hybrid and Battery-Powered Train Market, by Charging System Type

9.6 Poland: Hybrid and Battery-Powered Train Market

9.6.1 Poland: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.6.2 Poland: Hybrid and Battery-Powered Train Market, by Charging System Type

9.7 Austria: Hybrid and Battery-Powered Train Market

9.7.1 Austria: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.7.2 Austria: Hybrid and Battery-Powered Train Market, by Charging System Type

9.8 Slovenia: Hybrid and Battery-Powered Train Market

9.8.1 Slovenia: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.8.2 Slovenia: Hybrid and Battery-Powered Train Market, by Charging System Type

9.9 Bulgaria: Hybrid and Battery-Powered Train Market

9.9.1 Bulgaria: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.9.2 Bulgaria: Hybrid and Battery-Powered Train Market, by Charging System Type

9.10 Hungary: Hybrid and Battery-Powered Train Market

9.10.1 Hungary: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.10.2 Hungary: Hybrid and Battery-Powered Train Market, by Charging System Type

9.11 Romania: Hybrid and Battery-Powered Train Market

9.11.1 Romania: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.11.2 Romania: Hybrid and Battery-Powered Train Market, by Charging System Type

9.12 Greece: Hybrid and Battery-Powered Train Market

9.12.1 Greece: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.12.2 Greece: Hybrid and Battery-Powered Train Market, by Charging System Type

9.13 Serbia: Hybrid and Battery-Powered Train Market

9.13.1 Serbia: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.13.2 Serbia: Hybrid and Battery-Powered Train Market, by Charging System Type

9.14 Scandinavia: Hybrid and Battery-Powered Train Market

9.14.1 Scandinavia: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.14.2 Scandinavia: Hybrid and Battery-Powered Train Market, by Charging System Type

9.15 Croatia: Hybrid and Battery-Powered Train Market

9.15.1 Croatia: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.15.2 Croatia: Hybrid and Battery-Powered Train Market, by Charging System Type

9.16 Rest of Europe: Hybrid and Battery-Powered Train Market

9.16.1 Rest of Europe: Hybrid and Battery-Powered Train Market, by Propulsion Type

9.16.2 Rest of Europe: Hybrid and Battery-Powered Train Market, by Charging System Type

10. HYBRID AND BATTERY-POWERED TRAIN MARKET- COVID-19 IMPACT ANALYSIS

10.1 Europe

11. INDUSTRY LANDSCAPE

11.1 Overview

11.2 Market Initiative

11.3 New Product Development

11.4 Merger and Acquisition

12. COMPANY PROFILES

12.1 Alstom SA

12.1.1 Key Facts

12.1.2 Business Description

12.1.3 Products and Services

- 12.1.4 Financial Overview
- 12.1.5 SWOT Analysis
- 12.1.6 Key Developments
- 12.2 Westinghouse Air Brake Technologies Corp
 - 12.2.1 Key Facts
 - 12.2.2 Business Description
 - 12.2.3 Products and Services
 - 12.2.4 Financial Overview
 - 12.2.5 SWOT Analysis
 - 12.2.6 Key Developments
- 12.3 Construcciones y Auxiliar de Ferrocarriles SA
 - 12.3.1 Key Facts
 - 12.3.2 Business Description
 - 12.3.3 Products and Services
 - 12.3.4 Financial Overview
 - 12.3.5 SWOT Analysis
 - 12.3.6 Key Developments
- 12.4 Hyundai Rotem Co
 - 12.4.1 Key Facts
 - 12.4.2 Business Description
 - 12.4.3 Products and Services
 - 12.4.4 Financial Overview
 - 12.4.5 SWOT Analysis
 - 12.4.6 Key Developments
- 12.5 Siemens Mobility GmbH
 - 12.5.1 Key Facts
 - 12.5.2 Business Description
 - 12.5.3 Products and Services
 - 12.5.4 Financial Overview
 - 12.5.5 SWOT Analysis
 - 12.5.6 Key Developments
- 12.6 CRRC Corp Ltd
 - 12.6.1 Key Facts
 - 12.6.2 Business Description
 - 12.6.3 Products and Services
 - 12.6.4 Financial Overview
 - 12.6.5 SWOT Analysis
 - 12.6.6 Key Developments
- 12.7 Toshiba Infrastructure Systems and Solutions Corporation

- 12.7.1 Key Facts
- 12.7.2 Business Description
- 12.7.3 Products and Services
- 12.7.4 Financial Overview
- 12.7.5 SWOT Analysis
- 12.7.6 Key Developments
- 12.8 Stadler Rail AG
 - 12.8.1 Key Facts
 - 12.8.2 Business Description
 - 12.8.3 Products and Services
 - 12.8.4 Financial Overview
 - 12.8.5 SWOT Analysis
 - 12.8.6 Key Developments
- 12.9 KON?AR Electronics and Informatics Inc
 - 12.9.1 Key Facts
 - 12.9.2 Business Description
 - 12.9.3 Products and Services
 - 12.9.4 Financial Overview
 - 12.9.5 SWOT Analysis
 - 12.9.6 Key Developments
- 12.10 HITACHI RAIL STS SPA
 - 12.10.1 Key Facts
 - 12.10.2 Business Description
 - 12.10.3 Products and Services
 - 12.10.4 Financial Overview
 - 12.10.5 SWOT Analysis
 - 12.10.6 Key Developments

13. APPENDIX

- 13.1 About The Insight Partners
- 13.2 Glossary of Terms

List Of Tables

LIST OF TABLES

Table 1. Germany: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 2. Germany: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 3. France: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 4. France: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 5. Italy: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 6. Italy: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 7. Spain: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 8. Spain: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 9. UK: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 10. UK: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 11. Poland: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 12. Poland: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 13. Austria: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 14. Austria: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 15. Slovenia: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 16. Slovenia: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 17. Bulgaria: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 18. Bulgaria: Hybrid and Battery-Powered Train Market, by Charging System

Type – Revenue and Forecast to 2028 (US\$ Million)

Table 19. Hungary: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 20. Hungary: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 21. Romania: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 22. Romania: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 23. Greece: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 24. Greece: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 25. Serbia: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 26. Serbia: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 27. Scandinavia: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 28. Scandinavia: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 29. Croatia: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 30. Croatia: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 31. Rest of Europe: Hybrid and Battery-Powered Train Market, by Propulsion Type – Revenue and Forecast to 2028 (US\$ Million)

Table 32. Rest of Europe: Hybrid and Battery-Powered Train Market, by Charging System Type – Revenue and Forecast to 2028 (US\$ Million)

Table 33. Glossary of Term: Hybrid and Battery-Powered Train Market

List Of Figures

LIST OF FIGURES

Figure 1. Hybrid and Battery-Powered Train Market Segmentation

Figure 2. Hybrid and Battery-Powered Train Market Segmentation – By Country

Figure 3. Hybrid and Battery-Powered Train Market Overview

Figure 4. Hybrid Segment Dominate the Market by Propulsion Type

Figure 5. Auxiliary Diesel Engine Segment Dominate the Market by Charging System Type

Figure 7. Europe PEST Analysis

Figure 8. Hybrid and Battery-Powered Train Market, Ecosystem

Figure 9. Hybrid and Battery-Powered Train Market Impact Analysis of Drivers and Restraints

Figure 10. Europe: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 12. Europe Hybrid and Battery-Powered Train Market Revenue Share, by Propulsion Type (2022 and 2028)

Figure 13. Hybrid: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 14. Battery-Powered: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 15. Fuel Cell: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 16. Europe Hybrid and Battery-Powered Train Market Revenue Share, by Charging System Type (2022 and 2028)

Figure 17. Pantograph: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 18. Auxiliary Diesel Engine: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 19. Dock-In: Europe Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 20. Germany: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 21. France: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 22. Italy: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 23. Spain: Hybrid and Battery-Powered Train Market – Revenue and Forecast to

2028 (US\$ Million)

Figure 24. UK: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 25. Poland: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 26. Austria: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 27. Slovenia: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 28. Bulgaria: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 29. Hungary: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 30. Romania: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 31. Greece: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 32. Serbia: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 33. Scandinavia: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 34. Croatia: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 35. Rest of Europe: Hybrid and Battery-Powered Train Market – Revenue and Forecast to 2028 (US\$ Million)

Figure 36. Impact of COVID-19 Pandemic in European Markets

I would like to order

Product name: Europe Hybrid and Battery-Powered Train Market Forecast to 2028 - COVID-19 Impact and Regional Analysis By Propulsion Type (Hybrid, Battery-Powered, and Fuel Cell) and Charging System Type (Pantograph, Auxiliary Diesel Engine, and Dock-In)

Product link: <https://marketpublishers.com/r/E15B0C6F4E37EN.html>

Price: US\$ 3,000.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/E15B0C6F4E37EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970