

# **Hybrid Train Market Report by Propulsion Type (Electro-Diesel, Battery Operated, Hydrogen Powered, Gas Powered, Solar Powered), Operating Speed (Below 100 Km/h, 100-200 Km/h, Above 200 Km/h), Application (Passenger, Freight), and Region 2024-2032**

<https://marketpublishers.com/r/H29A1739A1BEEN.html>

Date: July 2024

Pages: 135

Price: US\$ 3,899.00 (Single User License)

ID: H29A1739A1BEEN

## **Abstracts**

The global hybrid train market size reached US\$ 15.2 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 22.6 Billion by 2032, exhibiting a growth rate (CAGR) of 4.42% during 2024-2032.

Hybrid train is a locomotive transportation medium that is powered by an on-board rechargeable energy storage system (RESS), in combination with other fuel, such as diesel. They are located between power source and traction transmission system that are directly connected with wheels to promote smooth operations. They further use various energy storing devices, including supercapacitors, flywheels, and batteries, to sustain additional energy produced from regenerative braking. As compared to conventional fuel trains, hybrid trains are more reliable, emission-free, noise-free, cost-effective, and eco-friendly. At present, hybrid trains are commercially available in solar-powered, compressed natural gas (CNG), battery-operated, and electro-diesel propulsion types.

### **Hybrid Train Market Trends:**

The widespread adoption of the hybrid train as a cost-effective, sustainable, and reliable mode of transportation can be attributed to the increasing scarcity of natural resources and the hiking fuel prices. This represents the key factor primarily driving the market growth. Furthermore, the emerging trend of green transportation solutions, along with

the introduction of stringency policies by governments of various nations to promote the uptake of alternative fuel-powered trains, such as hybrid trains that meet the required emission and efficiency standards, are propelling the market growth. Conventional fuel-powered trains generate various hazardous gases, including nitrogen dioxide (NO) and carbon dioxide (CO<sub>2</sub>), which is responsible for causing various ecological and health issues. In line with this, freight companies are increasingly participating in frequent mergers and acquisitions (M&A) to collectively invest in hybrid trains, thus helping them in cutting down operating costs, including fuel and maintenance. Moreover, the incorporation of lithium-ion batteries in hybrid trains to ensure minimal power consumption, improved voltage capacity, longer charge retention is contributing to the market growth. Other factors, such as rapid urbanization, expansion in construction activities to strengthen transportation infrastructure, and increasing railway connectivity, are positively stimulating the market growth.

#### Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global hybrid train market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on propulsion type, operating speed and application.

#### Breakup by Propulsion Type:

- Electro-Diesel
- Battery Operated
- Hydrogen Powered
- Gas Powered
- Solar Powered

#### Breakup by Operating Speed:

- Below 100 Km/h
- 100-200 Km/h
- Above 200 Km/h

#### Breakup by Application:

- Passenger
- Freight

## Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

## Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Alstom SA, Ballard Power Systems Inc., Construcciones y Auxiliar de Ferrocarriles, CRRC Corporation Limited, Hitachi Ltd., Rolls-Royce Holdings plc, Siemens AG, Stadler Rail AG, The Kinki Sharyo Co. Ltd., Toshiba Infrastructure Systems & Solutions Corporation and Vivarail Ltd.

## Key Questions Answered in This Report:

How has the global hybrid train market performed so far and how will it perform in the coming years?

What has been the impact of COVID-19 on the global hybrid train market?

What are the key regional markets?

- What is the breakup of the market based on the propulsion type?
- What is the breakup of the market based on the operating speed?
- What is the breakup of the market based on the application?
- What are the various stages in the value chain of the industry?
- What are the key driving factors and challenges in the industry?
- What is the structure of the global hybrid train market and who are the key players?
- What is the degree of competition in the industry?

## Contents

### **1 PREFACE**

### **2 SCOPE AND METHODOLOGY**

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
  - 2.3.1 Primary Sources
  - 2.3.2 Secondary Sources
- 2.4 Market Estimation
  - 2.4.1 Bottom-Up Approach
  - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

### **3 EXECUTIVE SUMMARY**

### **4 INTRODUCTION**

- 4.1 Overview
- 4.2 Key Industry Trends

### **5 GLOBAL HYBRID TRAIN MARKET**

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

### **6 MARKET BREAKUP BY PROPULSION TYPE**

- 6.1 Electro-Diesel
  - 6.1.1 Market Trends
  - 6.1.2 Market Forecast
- 6.2 Battery Operated
  - 6.2.1 Market Trends
  - 6.2.2 Market Forecast
- 6.3 Hydrogen Powered

- 6.3.1 Market Trends
- 6.3.2 Market Forecast
- 6.4 Gas Powered
  - 6.4.1 Market Trends
  - 6.4.2 Market Forecast
- 6.5 Solar Powered
  - 6.5.1 Market Trends
  - 6.5.2 Market Forecast

## **7 MARKET BREAKUP BY OPERATING SPEED**

- 7.1 Below 100 Km/h
  - 7.1.1 Market Trends
  - 7.1.2 Market Forecast
- 7.2 100-200 Km/h
  - 7.2.1 Market Trends
  - 7.2.2 Market Forecast
- 7.3 Above 200 Km/h
  - 7.3.1 Market Trends
  - 7.3.2 Market Forecast

## **8 MARKET BREAKUP BY APPLICATION**

- 8.1 Passenger
  - 8.1.1 Market Trends
  - 8.1.2 Market Forecast
- 8.2 Freight
  - 8.2.1 Market Trends
  - 8.2.2 Market Forecast

## **9 MARKET BREAKUP BY REGION**

- 9.1 North America
  - 9.1.1 United States
    - 9.1.1.1 Market Trends
    - 9.1.1.2 Market Forecast
  - 9.1.2 Canada
    - 9.1.2.1 Market Trends
    - 9.1.2.2 Market Forecast

## 9.2 Asia-Pacific

### 9.2.1 China

#### 9.2.1.1 Market Trends

#### 9.2.1.2 Market Forecast

### 9.2.2 Japan

#### 9.2.2.1 Market Trends

#### 9.2.2.2 Market Forecast

### 9.2.3 India

#### 9.2.3.1 Market Trends

#### 9.2.3.2 Market Forecast

### 9.2.4 South Korea

#### 9.2.4.1 Market Trends

#### 9.2.4.2 Market Forecast

### 9.2.5 Australia

#### 9.2.5.1 Market Trends

#### 9.2.5.2 Market Forecast

### 9.2.6 Indonesia

#### 9.2.6.1 Market Trends

#### 9.2.6.2 Market Forecast

### 9.2.7 Others

#### 9.2.7.1 Market Trends

#### 9.2.7.2 Market Forecast

## 9.3 Europe

### 9.3.1 Germany

#### 9.3.1.1 Market Trends

#### 9.3.1.2 Market Forecast

### 9.3.2 France

#### 9.3.2.1 Market Trends

#### 9.3.2.2 Market Forecast

### 9.3.3 United Kingdom

#### 9.3.3.1 Market Trends

#### 9.3.3.2 Market Forecast

### 9.3.4 Italy

#### 9.3.4.1 Market Trends

#### 9.3.4.2 Market Forecast

### 9.3.5 Spain

#### 9.3.5.1 Market Trends

#### 9.3.5.2 Market Forecast

### 9.3.6 Russia

9.3.6.1 Market Trends

9.3.6.2 Market Forecast

9.3.7 Others

9.3.7.1 Market Trends

9.3.7.2 Market Forecast

9.4 Latin America

9.4.1 Brazil

9.4.1.1 Market Trends

9.4.1.2 Market Forecast

9.4.2 Mexico

9.4.2.1 Market Trends

9.4.2.2 Market Forecast

9.4.3 Others

9.4.3.1 Market Trends

9.4.3.2 Market Forecast

9.5 Middle East and Africa

9.5.1 Market Trends

9.5.2 Market Breakup by Country

9.5.3 Market Forecast

## **10 SWOT ANALYSIS**

10.1 Overview

10.2 Strengths

10.3 Weaknesses

10.4 Opportunities

10.5 Threats

## **11 VALUE CHAIN ANALYSIS**

## **12 PORTERS FIVE FORCES ANALYSIS**

12.1 Overview

12.2 Bargaining Power of Buyers

12.3 Bargaining Power of Suppliers

12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes



## 13 PRICE ANALYSIS

## 14 COMPETITIVE LANDSCAPE

### 14.1 Market Structure

### 14.2 Key Players

### 14.3 Profiles of Key Players

#### 14.3.1 Alstom SA

##### 14.3.1.1 Company Overview

##### 14.3.1.2 Product Portfolio

##### 14.3.1.3 Financials

##### 14.3.1.4 SWOT Analysis

#### 14.3.2 Ballard Power Systems Inc.

##### 14.3.2.1 Company Overview

##### 14.3.2.2 Product Portfolio

##### 14.3.2.3 Financials

##### 14.3.2.4 SWOT Analysis

#### 14.3.3 Construcciones y Auxiliar de Ferrocarriles

##### 14.3.3.1 Company Overview

##### 14.3.3.2 Product Portfolio

##### 14.3.3.3 Financials

#### 14.3.4 CRRC Corporation Limited

##### 14.3.4.1 Company Overview

##### 14.3.4.2 Product Portfolio

#### 14.3.5 Hitachi Ltd.

##### 14.3.5.1 Company Overview

##### 14.3.5.2 Product Portfolio

##### 14.3.5.3 Financials

##### 14.3.5.4 SWOT Analysis

#### 14.3.6 Rolls-Royce Holdings plc

##### 14.3.6.1 Company Overview

##### 14.3.6.2 Product Portfolio

##### 14.3.6.3 Financials

##### 14.3.6.4 SWOT Analysis

#### 14.3.7 Siemens AG

##### 14.3.7.1 Company Overview

##### 14.3.7.2 Product Portfolio

##### 14.3.7.3 Financials

##### 14.3.7.4 SWOT Analysis

#### 14.3.8 Stadler Rail AG

14.3.8.1 Company Overview

14.3.8.2 Product Portfolio

14.3.8.3 Financials

#### 14.3.9 The Kinki Sharyo Co. Ltd.

14.3.9.1 Company Overview

14.3.9.2 Product Portfolio

14.3.9.3 Financials

#### 14.3.10 Toshiba Infrastructure Systems & Solutions Corporation

14.3.10.1 Company Overview

14.3.10.2 Product Portfolio

#### 14.3.11 Vivarail Ltd

14.3.11.1 Company Overview

14.3.11.2 Product Portfolio

## I would like to order

Product name: Hybrid Train Market Report by Propulsion Type (Electro-Diesel, Battery Operated, Hydrogen Powered, Gas Powered, Solar Powered), Operating Speed (Below 100 Km/h, 100-200 Km/h, Above 200 Km/h), Application (Passenger, Freight), and Region 2024-2032

Product link: <https://marketpublishers.com/r/H29A1739A1BEEN.html>

Price: US\$ 3,899.00 (Single User License / Electronic Delivery)

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

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/H29A1739A1BEEN.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