

# Global Automotive Thermoelectric Generator Market Size study & Forecast, by Type (Cooling Plates, Thermoelectric Module, Heat Exchangers, Others) By Application (Passenger Cars, Commercial Vehicles) and Regional Analysis, 2022-2029

<https://marketpublishers.com/r/G6CFDF121DD8EN.html>

Date: May 2023

Pages: 200

Price: US\$ 4,950.00 (Single User License)

ID: G6CFDF121DD8EN

## Abstracts

Global Automotive Thermoelectric Generator Market is valued approximately USD xxx billion in 2021 and is anticipated to grow with a healthy growth rate of more than xx % over the forecast period 2022-2029. Automotive thermoelectric generator is a device that converts waste heat generated by a vehicle's engine into electricity using the Seebeck effect, which is a phenomenon where a temperature gradient across a material generates an electric voltage. The ATEG is typically installed in the exhaust system or the coolant system of a vehicle to capture the waste heat that would otherwise be lost and convert it into useful electrical power. The Automotive Thermoelectric Generator market is expanding because of factors such as increasing demand for fuel efficient vehicles and growing rate of global warming.

The Automotive thermoelectric generator consists of thermoelectric materials, are typically semiconductors, have a high thermoelectric efficiency. Its importance has progressively increased during the last few years. According to the Statista, as compared to other types of renewable-based propulsion systems, battery electric vehicles have a substantially greater efficiency rate. When using renewable electricity to directly charge a battery electric vehicle, only 23% of the energy was lost. On the other hand, green hydrogen-powered fuel cell vehicles, resulted in a 39% energy loss due to electrolysis, transporting, and storage alone, bringing fuel production efficiency to 61% and overall efficiency to 30% in year 2021. Furthermore, in 2021, with a range of 131 miles per gallon petrol equivalent, the Lucid Air G Touring AWD model was not only the leader in energy efficiency in the large car sector, but also across all light passenger

vehicles. Another important component driving space increase is the rate of global warming. As per Statista, in 2021, based on greenhouse gas emissions, temperature change, and EPI score, more than one-third of the world's countries were deemed to be at high risk of climate change impacts. The survey also discovered that almost half of the world's countries suffer a medium risk, with only 16.2% facing a low risk. In addition, Carbon dioxide levels in the atmosphere reached a new high of 418.56 parts per million in 2022, a 0.5% increase year over year. Also, rising investment in research and development of thermoelectric generators and growing stringency in government emission norms would create a lucrative growth prospectus for the market over the forecast period. However, the high cost of Automotive Thermoelectric Generator stifles market growth throughout the forecast period of 2022-2029.

The key regions considered for the Global Automotive Thermoelectric Generator Market study includes Asia Pacific, North America, Europe, Latin America, and Rest of the World. Asia Pacific dominated the market in terms of revenue, owing to the increasing demand for automotive thermoelectric generators from the automotive industry to improve fuel efficiency in vehicles. According to the Statista, in 2021 China accounts most car sales at a global level, with over 26 million vehicles sold. Furthermore, Europe is expected to grow with a highest CAGR during the forecast period, owing to factors such as increasing stringency in government regulations to decrease the carbon dioxide gas emission, as well as the increasing investment in research and development in countries such as U.K, Germany, and France in the market space.

Major market player included in this report are:

Coherent Corp.  
European Thermodynamics Ltd.  
Ferrotec Holdings Corp  
Gentherm Incorporated  
Laird Technologies  
otego GmbH  
RMT Ltd.  
Tenneco Inc  
Thermonamic Electronics (Jiangxi) Corp., Ltd.  
Yamaha Corporation

Recent Developments in the Market:

In December 2022, Coherent Corp has signed MoU with two Korean institutions, named the Electronics and Telecommunications Research Institute and the Korea Advanced

Institute of Science and Technology, to promote advanced electronic and photonic devices with emphasis on the Korean market.

Global Automotive Thermoelectric Generator Market Report Scope:

Historical Data 2019-2020-2021

Base Year for Estimation 2021

Forecast period 2022-2029

Report Coverage Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered Type, Application, Region

Regional Scope North America; Europe; Asia Pacific; Latin America; Rest of the World

Customization Scope Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Type

Cooling Plates

Thermoelectric Module

Heat Exchangers

Others

By Application

Passenger Cars

Commercial Vehicles

By Region:

North America

U.S.

Canada

Europe  
UK  
Germany  
France  
Spain  
Italy  
ROE  
Asia Pacific  
China  
India  
Japan  
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Rest of the World

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