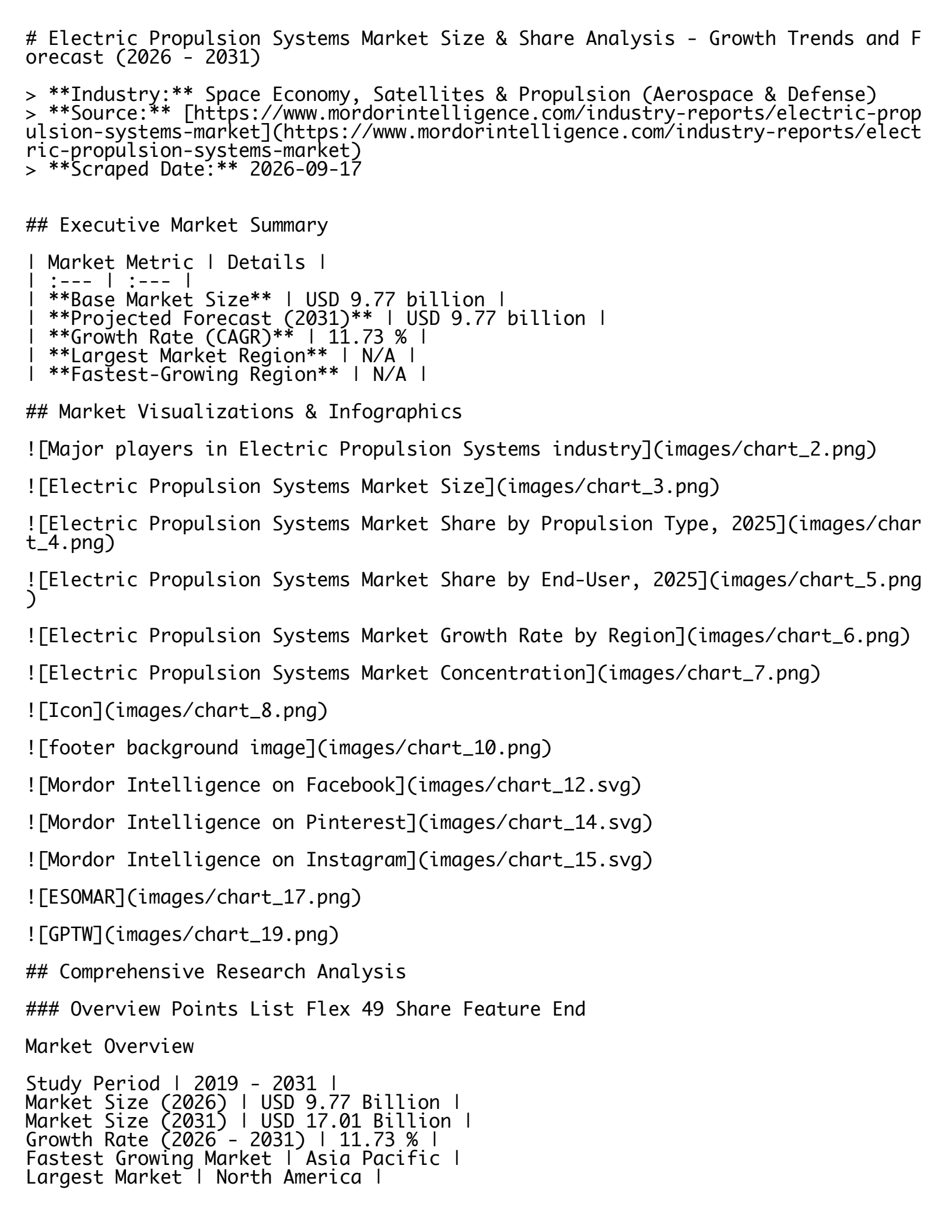
Electric Propulsion Systems Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031)

> **Industry:** Space Economy, Satellites & Propulsion (Aerospace & Defense)
> **Source:** https://www.mordorintelligence.com/industry-reports/electric-propulsion-systems-market
> **Scraped Date:** 2026-09-17

Executive Market Summary

Market Metric	Details
Base Market Size	USD 9.77 billion
Projected Forecast (2031)	USD 9.77 billion
Growth Rate (CAGR)	11.73 %
Largest Market Region	N/A
Fastest-Growing Region	N/A

Market Visualizations & Infographics



Comprehensive Research Analysis

Overview Points List Flex 49 Share Feature End

Market Overview

Study Period	2019 - 2031
Market Size (2026)	USD 9.77 Billion
Market Size (2031)	USD 17.01 Billion
Growth Rate (2026 - 2031)	11.73 %
Fastest Growing Market	Asia Pacific
Largest Market	North America

Market Concentration | Medium |
Major Players*Disclaimer: Major Players sorted in no particular order

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Market Overview

Electric Propulsion Systems Market Analysis by Mordor IntelligenceThe electric propulsion systems market size is expected to grow from USD 8.74 billion in 2025 to USD 9.77 billion in 2026 and is forecast to reach USD 17.01 billion by 2031, at a 11.73% CAGR over 2026-2031. Decarbonization mandates in shipping and aviation, the miniaturization of Hall-effect thrusters for small satellites, and naval lifecycle-cost optimization collectively reshape the propulsion cost curve across air, sea, land, and space platforms. Market expansion is further amplified by battery energy density gains exceeding 400 Wh/kg, Integrated Full Electric Propulsion (IFEP) retrofits that reduce vessel operating expenditure by more than 15%, and regulatory certainty provided by FAA and EASA guidance on eVTOLs' EMI compliance. Supply-chain pressure around high-voltage batteries and noble-gas propellants, however, continues to temper short-term shipments despite strong order pipelines.

Key Report Takeaways

* By propulsion type, hybrid architectures accounted for 55.34% of the electric propulsion systems market share in 2025. Full-electric systems are projected to expand at a 12.65% CAGR between 2026 and 2031.
* By platform, airborne applications led with a 46.38% revenue share in 2025; space propulsion is projected to accelerate at a 13.58% CAGR through 2031.
* By end user, commercial operators accounted for 43.81% of the electric propulsion systems market size in 2025, while government and defense spending is projected to rise at an 11.92% CAGR through 2031.
* By geography, North America accounted for 39.27% of the 2025 revenue, whereas Asia-Pacific is forecasted to advance at a 12.38% CAGR through 2031.

Key Market Trends

Global Electric Propulsion Systems Market Trends and InsightsDrivers Impact Analysis*

Driver | (~) % Impact on CAGR Forecast | Geographic Relevance | Impact Timeline |
Fleet-level decarbonization mandates | +2.8 % | Global, strongest in EU and North America | Medium term (2-4 years) |
Rapid miniaturization of Hall-effect thrusters for New-Space small-sat constellations | +2.1 % | Global, led by North America and Asia-Pacific | Short term (≤2 years) |
Naval IFEP retrofits unlocking lifetime OPEX savings greater than 15% | +1.9 % | North America, Europe, India, Japan | Long term (≥4 years) |
Megawatt-class hybrid-electric demonstrators entering commercial flight tests | +1.7 % | North America, spill-over to Europe | Medium term (2-4 years) |
Arctic shipping corridors favouring ice-class podded electric drives | +1.3 % | Europe (Norway, Russia), Canada | Long term (≥4 years) |
On-orbit servicing demand driving sub-kW EP thrusters | +1.2 % | Global, concentrated in North America | Medium term (2-4 years) |
Source: Mordor Intelligence |

Competitive Landscape

Competitive Landscape

Market concentration is moderate. Aerospace primes, including General Electric Company, Safran SA, Airbus SE, Rolls-Royce plc, and Northrop Grumman Corporation, compete with space-propulsion specialists such as Busek, ENPULSION, and Exotrail, as well as marine integrators like Daihatsu Diesel and Collins Aerospace. Certification speed, battery pack sourcing, and EMI compliance have a significant impact on competitive positioning.

Northrop Grumman leads in on-orbit servicing, fielding the only flight-proven Mission Extension Vehicles.[5]Northrop Grumman, “Mission Extension Vehicles,” northropgrumman.com ENPULSION and Exotrail disrupt the market with iodine propulsion, which lowers bill-of-materials costs by more than 12%, challenging xenon-based incumbents.

Vertical integration accelerates. GE and Safran develop motors, power electronics, and thermal management in-house to control margins and timelines, while niche players defend technical moats around thruster miniaturization and ice-class pods. Patent intensity in silicon-carbide and gallium-nitride devices signals power-electronics efficiency as a future differentiator.

Electric Propulsion Systems Industry Leaders* General Electric Company

* Safran SA

* Airbus SE

* Northrop Grumman Corporation

* Rolls-Royce plc

* *Disclaimer: Major Players sorted in no particular order

Scope Methodology P Space

Our study defines the electric propulsion systems market as all integrated hardware and control electronics that use externally supplied or on-board electricity to accelerate a working fluid or convert motor torque into thrust across airborne, marine, space, and selected terrestrial platforms. According to Mordor Intelligence, components span thrusters, motors, power-processing units, batteries, and associated thermal or propellant management subsystems.

Scope exclusion: purely mechanical drive trains or chemical propulsion modules without an electric energy input are kept outside this assessment.

Segmentation Container

* By Propulsion Type* Hybrid
* Full-Electric

* By Platform* Airborne (e-Aircraft and eVTOL)
* Terrestrial (Rail, Commercial EV, Mining)
* Marine (Commercial, Naval, Cruise)
* Space (Satellites, Deep-Space, In-Orbit Services)

* By End-User* Government and Defense
* Commercial Operators
* OEM/System Integrators

* By Geography* North America* United States
* Canada
* Mexico

* Europe* United Kingdom
* France
* Germany
* Italy
* Rest of Europe

* Asia-Pacific* China
* India
* Japan
* South Korea
* Rest of Asia-Pacific

* South America* Brazil
* Rest of South America

* Middle East and Africa* Middle East* Saudi Arabia
* United Arab Emirates
* Rest of Middle East

* Africa* South Africa
* Rest of Africa

Frequently Asked Questions

What is the expected value of electric-propulsion shipments by 2031?

Global deliveries are projected to reach USD 17.01 billion by 2031.

How much fuel and maintenance savings can naval IFEP retrofits deliver?

IFEP can cut lifetime operating expenditure by more than 15% per hull.

Which region is forecasted to see the fastest demand growth?

Asia-Pacific is expected to log a 12.38 % CAGR through 2031 on the back of rail electrification and naval modernization.

What battery-energy density is considered the tipping point for regional all-electric aviation?

Pack densities of roughly 400 Wh/kg unlock viable sub-1,000 km routes for 20 to 50-seat aircraft.

Why are satellite operators exploring iodine instead of xenon propellant?

Iodine costs less and packs more densely, lowering thruster bill-of-materials by around 12% despite added materials challenges.

How do noble-gas price spikes affect electric-propulsion budgets?

Xenon and krypton volatility has raised satellite propulsion hardware costs by more than 12%, pushing buyers to diversify propellants.