Solar Powered Drones Global Market Report 2025 | Business Growth, Development Factors, Current and Future Trends till 2029

The Business Research Company's Solar Powered Drones Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

The Business Research Company

LONDON, GREATER LONDON, UNITED KINGDOM, November 11, 2025 /EINPresswire.com/ -- How Much Is The Solar Powered Drones Market Worth?

The market for solar-powered drones has expanded swiftly in the past few years. Its size is projected to increase from $2.17 billion in 2024 to $2.58 billion in 2025, with a compound annual growth rate (CAGR) of 18.8%. Factors such as escalating environmental consciousness, a focus on sustainability, military and defense uses, a decrease in the price of solar panels, governmental incentives and policies supporting the use of renewable energy, and broader application in fields such as agriculture, surveillance, and disaster management have all contributed to the growth experienced in the historic period.

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The market for solar-powered drones is projected to experience robust growth in the upcoming years, reaching $5.19 billion by 2029 with a compound annual growth rate of 19.0%. This growth during the projected period could be linked to an increased demand for long-lasting drones for a plethora of commercial uses, the introduction of supportive regulatory frameworks for solar-powered drone use, a rise in precision agriculture and crop monitoring, an uptick in infrastructure inspection and maintenance applications, and a burgeoning telecommunications industry. Forecasted trends for this period include the use of hybrid solar-electric propulsion systems, the adoption of light materials for better performance and payload capacity, the incorporation of sophisticated sensors and imaging technology for more effective data collection, the development of solar-powered drone-as-a-service (DaaS) business models, and the emergence of solar-powered drones for emergency response and

disaster recovery.

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What Are The Factors Driving The Solar Powered Drones Market?
The escalation in military and defense allocations is projected to accelerate the expansion of the solar-powered drones market in the future. The concept of military and defense funding pertains to the monetary appropriations employed by a nation for the establishment and upkeep of its military force, inclusive of supplying weapons, gear, and personnel. To dissuade external assaults, safeguard national security, and possibly avert warfare, countries are escalating their military investments. Such increasing expenditure in defense and military fields strengthens the production and application of solar-powered drones for inspection, vigilance, and strategic activities, thereby enhancing their functionality and innovation. For example, as reported by the Stockholm International Peace Research Institute (SIPRI), an independent international research group based in Sweden, in April 2024, global military expenditure reached a sum of $2443 billion in 2023, witnessing a growth of 6.8% from 2022. Consequently, the upsurge in defense and military spending is promoting the growth of the market for solar powered drones.

Who Are The Major Players In The Solar Powered Drones Market?
Major players in the Solar Powered Drones Global Market Report 2025 include:
• Google LLC (Titan Aerospace LLC)
• Meta Platforms Inc. (Ascenta)
• DHL International GmbH (Deutsche Post DHL Group)
• FedEx Corporation
• The Boeing Company
• Lockheed Martin Corporation
• Intel Corporation
• Airbus SE
• International Business Machines Corporation (IBM)
• Thales Group

What Are The Upcoming Trends Of Solar Powered Drones Market In The Globe?
Leading firms in the solar-powered drones market are sharpening their competitive edge by focusing on the development of innovative solutions such as solar-powered stratospheric aircraft. These unmanned aerial vehicles (UAVs) are crafted to fly in the stratosphere with solar power as their primary energy source, permitting them to perform long-endurance flights for the collection and monitoring of high-altitude data. For example, in April 2023, Kea Aerospace, a tech company based in New Zealand, introduced the Kea Atmos Mk 1. This was the initial solar-powered drone or stratospheric aircraft created and produced in the Southern Hemisphere. With a wingspan of 12.5 meters, a weight of less than 40 kilograms, and the ability to fly up to 50,000 feet altitude, it provides long-endurance flight capabilities for several months along with high-altitude data collection. This breakthrough makes it a game-player in the solar-powered

drones market for applications demanding prolonged, high-altitude data collection.

Which Segment Accounted For The Largest Solar Powered Drones Market Share?
The solar powered drones market covered in this report is segmented –
1) By Type: Vertical Take-Off And Landing (VTOL), Fixed Wing, Rotary Wing, Hybrid
2) By Component: Payload, Motors, Energy Systems, Frames, Controller And Navigation
3) By Services: Data Analysis, Data Collection, Drone Leasing
4) By Application: Agriculture, Energy, Military, Telecommunication, Research And Exploration, Surveillance, Disaster Management
5) By End-User: Commercial, Government, Non-Profit

Subsegments:
1) By Vertical Take-Off And Landing (VTOL): Multirotor VTOL Drones, Single Rotor VTOL Drones
2) By Fixed Wing: Conventional Fixed Wing Drones, Solar-Powered Fixed Wing Drones
3) By Rotary Wing: Traditional Rotary Wing Drones, Solar-Enhanced Rotary Wing Drones
4) By Hybrid: VTOL-Fixed Wing Hybrids, VTOL-Rotary Wing Hybrids

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What Are The Regional Trends In The Solar Powered Drones Market?
In 2024, the Solar Powered Drones Global Market Report identified North America as the predominant region. However, the projection for fastest growth in the coming period is set for the Asia-Pacific region. The report encompasses several regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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