

# Global Blockchain in Energy Market to Reach USD 148.30 Billion by 2032

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# **Abstracts**

The Global Blockchain in Energy Market was valued at approximately USD 1.18 billion in 2023 and is projected to expand at an extraordinary CAGR of 71.10% over the forecast period from 2024 to 2032. Blockchain technology is revolutionizing the energy sector, offering enhanced transparency, security, and efficiency in transactions. The decentralized nature of blockchain enables peer-to-peer energy trading, efficient grid management, and automated compliance with energy regulations, eliminating the need for intermediaries and reducing costs. The growing push towards renewable energy, combined with the rising need for decentralized power distribution, is accelerating blockchain adoption across the energy industry. Companies are increasingly integrating blockchain-powered smart contracts to streamline energy trading and optimize demand response, thereby enhancing grid resilience.

The increasing adoption of renewable energy sources, alongside the surging demand for digital transformation in energy distribution, is a crucial factor driving the blockchain in the energy market. Governments and enterprises are actively exploring blockchain applications to improve transparency in carbon credit trading and enhance the traceability of renewable energy certificates (RECs). For instance, major industry players are investing heavily in blockchain-based platforms to develop decentralized energy marketplaces, enabling consumers and businesses to trade surplus energy efficiently. Additionally, regulatory support for energy decentralization and blockchainbacked grid optimization is fostering market expansion. However, scalability concerns, regulatory uncertainties, and integration challenges with legacy energy infrastructure pose significant hurdles to widespread adoption.

From a regional perspective, North America dominates the blockchain in the energy market, attributed to strong government initiatives, robust digital infrastructure, and the



presence of key blockchain technology firms. The United States, in particular, is witnessing extensive deployment of blockchain solutions in energy trading and supply chain management. Europe is also experiencing significant growth, with countries such as Germany and the UK leveraging blockchain to advance their transition towards renewable energy. Meanwhile, the Asia-Pacific region is anticipated to emerge as the fastest-growing market, driven by increasing investments in smart grid technologies, growing energy demand, and proactive government policies supporting decentralized energy trading. Latin America and the Middle East & Africa are gradually embracing blockchain applications in energy management, with several pilot projects underway.

Major Market Players Included in This Report:

**IBM Corporation** 

Microsoft Corporation

Siemens AG

Accenture PLC

Shell Global

Power Ledger

LO3 Energy

Electron (Chaddenwych Services Limited)

WePower UAB

Grid+

Energi Mine

SunContract

Infosys Limited

SAP SE



#### Oracle Corporation

The Detailed Segments and Sub-Segments of the Market Are Explained Below:

By Type:

Private

Public

By Component:

Platform

Services

#### By Application:

Grid Management

Supply Chain Transparency

Renewable Energy Trading

Energy Security & Fraud Prevention

Others

By End-Use:

**Power & Utilities** 



Oil & Gas

Renewable Energy Companies

Others

#### By Region:

North America:

U.S.

Canada

#### Europe:

UK

Germany

France

Spain

Italy

Rest of Europe

#### Asia-Pacific:

China

India

Japan



#### Australia

South Korea

Rest of Asia-Pacific

Latin America:

Brazil

Mexico

**Rest of Latin America** 

Middle East & Africa:

Saudi Arabia

South Africa

Rest of Middle East & Africa

Years Considered for the Study:

Historical Year: 2022

Base Year: 2023

Forecast Period: 2024 to 2032

Key Takeaways:

Market estimates & forecasts for 10 years (2022-2032)

Annualized revenue projections and regional-level analysis for each market



segment

In-depth examination of the geographical landscape with country-level insights into major regions

Competitive landscape assessment with intelligence on key market players and their strategies

Analysis of industry drivers, restraints, opportunities, and challenges affecting market growth

Demand-side and supply-side analysis of the blockchain in energy ecosystem



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