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Peer-to-Peer Energy Trading Market Forecasts to 2034 – Global Analysis By Trading Model (Direct Peer-to-Peer Trading, Community-Based Energy Trading, Utility-Facilitated Peer Trading, and Hybrid Trading Models), Platform Type (Blockchain-Enabled Platforms, Cloud-Based Platforms, On-Premise Platforms, and Integrated Energy Management Platforms), Energy Source, Transaction Mechanism, Grid Connectivity, End User, and By Geography

https://marketpublishers.com/r/P7666956334EEN.html
Date: February 2026
Pages: 200
Price: US$ 4,150.00 (Single User License)
ID: P7666956334EEN

Abstracts

According to Stratistics MRC, the Global Peer-to-Peer Energy Trading Market is accounted for $0.38 billion in 2026 and is expected to reach $5.08 billion by 2034 growing at a CAGR of 38.2% during the forecast period. The peer-to-peer energy trading allows consumers and prosumers to buy and sell electricity directly through digital platforms, often supported by blockchain or secure settlement systems. It promotes local energy exchange and consumer participation in energy markets. Growth is driven by rooftop solar adoption, declining storage costs, digital payment integration, regulatory pilots supporting decentralized trading, and growing consumer interest in energy independence and transparent pricing mechanisms.

Market Dynamics:

Driver:

Empowerment of prosumers

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The rising emergence of prosumers, individuals who both produce and consume energy, acts as a primary driver for market expansion. Driven by the falling costs of rooftop solar panels and residential battery storage, households are transitioning from passive ratepayers to active market participants. This empowerment allows them to monetize surplus generation by selling it directly to neighbors, bypassing traditional utility markups. Consequently, the desire for energy autonomy and localized financial returns is fueling the demand for decentralized trading platforms. This shift improves household economics but also fosters a more democratic and resilient energy ecosystem globally.

Restraint:

Regulatory bans or complex licensing

In many jurisdictions, existing laws are structured around a centralized monopoly model, often requiring P2P participants to hold the same complex licenses as large-scale utilities. Furthermore, some regions maintain strict bans on third-party energy sales to protect incumbent providers. These legal hurdles create high entry barriers for startups and discourage prosumer participation. Without standardized rules for grid access and wheeling charges, the market struggles to move beyond localized pilot projects into full-scale commercial implementation across diverse geographies.

Opportunity:

Standardization of market & communication protocols

Developing uniform communication protocols and market rules can streamline the integration of smart meters, IoT devices, and blockchain-enabled platforms. Standardization reduces technical complexity for developers and lowers costs for end-users, facilitating a plug-and-play environment for energy trading. By establishing global benchmarks for data security and transaction validation, stakeholders can accelerate the scaling of P2P networks. This technical harmonization is essential for creating a seamless, interconnected energy web that operates efficiently across different utility territories.

Threat:

Low liquidity in early-stage markets

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When a trading network has too few active buyers and sellers, the lack of transaction volume leads to extreme price volatility and difficulty in matching supply with demand in real time. Prosumers may become discouraged if they cannot reliably sell their excess energy or if prices fluctuate unpredictably compared to fixed retail rates. This illiquidity can stall market momentum, making it difficult for platforms to achieve the critical mass necessary to prove their long-term economic viability and reliability.

Covid-19 Impact:

The COVID-19 pandemic exerted a dual impact on the peer-to-peer energy trading landscape. Initially, global lockdowns disrupted supply chains and delayed numerous pilot projects and hardware installations. However, the crisis underscored the need for resilient, localized energy systems as commercial demand plummeted while residential consumption soared. This shift accelerated digital transformation within the energy sector, as utilities sought automated, remotely managed solutions. Ultimately, the pandemic acted as a wake-up call for grid decentralization, boosting long-term interest in self-sufficiency and digital trading platforms to mitigate future shocks.

The solar energy segment is expected to be the largest during the forecast period

The solar energy segment is expected to account for the largest market share during the forecast period due to the widespread adoption of rooftop photovoltaic systems. Solar technology offers the most accessible entry point for residential and commercial prosumers, thanks to its modular nature and rapidly declining installation costs. Unlike wind or hydro, solar can be easily integrated into urban environments, providing a consistent source of surplus energy for local trading. As government incentives and net-metering policies evolve, the sheer volume of solar-generated units available for exchange solidifies its dominance in the market.

The utility-facilitated models segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the utility-facilitated models segment is predicted to witness the highest growth rate as traditional energy providers seek to integrate P2P trading into their existing infrastructure. Rather than viewing decentralization as a threat, utilities are increasingly acting as platform operators or market makers to manage grid congestion and balance local loads. This model provides the necessary trust and regulatory compliance that purely decentralized platforms often lack. By leveraging their existing customer bases and billing systems, utility-facilitated frameworks can scale rapidly,

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making them the fastest-growing segment in the global market.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share, underpinned by its progressive regulatory environment and ambitious decarbonization targets. Countries like Germany, the Netherlands, and the UK have pioneered several P2P pilot projects and community energy initiatives. The European Union’s 'Clean Energy for All Europeans' package specifically encourages citizen participation and energy communities, providing the legal foundation for peer-to-peer exchange. High electricity prices and a mature digital infrastructure further incentivize European consumers to adopt trading platforms, maintaining the region's position as a global leader in decentralized energy.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by rapid urbanization and massive investments in renewable energy infrastructure. Developing economies like India, Thailand, and Vietnam are increasingly exploring P2P trading to improve rural energy access and manage the strain on centralized grids. The proliferation of smart city projects and a tech-savvy population provide fertile ground for blockchain-based energy platforms. With supportive government mandates and a high volume of new solar installations, the region is poised for explosive growth as it leapfrogs traditional utility models.

Key players in the market

Some of the key players in Peer-to-Peer Energy Trading Market include Power Ledger, LO3 Energy, Sonnen, WePower, SunContract, SunExchange, Exergy, Verv, Lition, Electrify.Asia (Electrify), BlockEnergy, Grid+, and Tennet.

Key Developments:

In December 2025, TenneT reported €5.5 billion in grid expansion investments and continued initiatives to optimize grid use, supporting European market integration and enabling peer-to-peer electricity trading across borders.

In May 2023, Sonnen GmbH expanded its sonnenCommunity and sonnenVPP, enabling households with PV and storage systems to directly sell electricity at market

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prices, pioneering peer-to-peer energy trading in Germany.

Trading Models Covered:

- Direct Peer-to-Peer Trading
- Community-Based Energy Trading
- Utility-Facilitated Peer Trading
- Hybrid Trading Models

Platform Types Covered:

- Blockchain-Enabled Platforms
- Cloud-Based Platforms
- On-Premise Platforms
- Integrated Energy Management Platforms

Energy Sources Covered:

- Solar Energy
- Wind Energy
- Biomass and Biogas
- Hydropower
- Hybrid Renewable Systems

Transaction Mechanisms Covered:

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Real-Time Spot Trading

Auction-Based Trading

Bilateral Contract Trading

Tokenized and Credit-Based Trading

Grid Connectivity’s Covered:

Grid-Connected Systems

Off-Grid and Islanded Systems

Hybrid Grid Systems

End Users Covered:

Residential Prosumers

Commercial Buildings and Campuses

Industrial Facilities

Microgrids and Energy Communities

Electric Vehicle Charging Operators

Regions Covered:

North America

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- UK
- Italy
- France
- Spain
- Rest of Europe

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- China
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Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 3032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

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Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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