FROST & SULLIVAN

STEM
RECEIVES THE 2023
NEW PRODUCT
INNOVATION AWARD

Identified as best in class in the North American energy asset performance optimization industry

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Stem excels in many of the criteria in the energy asset performance optimization space.

AWARD CRITERIA

New Product Attributes	Customer Impact
Match to Needs	Price/Performance Value
Reliability	Customer Purchase Experience
Quality	Customer Ownership Experience
Positioning	Customer Service Experience
Design	Brand Equity

A History of Innovation and Sustainable Solutions

Founded in 2009 and headquartered in San Francisco, California, Stem is a developer of artificial intelligence (AI)-driven clean energy solutions. The company's innovative energy storage services revolutionize electricity management. It offers a cloud-based platform called Athena®, which helps organizations deploy and maximize the value of their clean energy assets on a large scale. The platform uses predictive AI and machine learning (ML) to analyze data from solar, storage, and vehicle infrastructure assets, considering external factors such as weather, utility rates, power market prices, and grid constraints. Furthermore, it predicts and models the most efficient operations for energy assets in real time. Athena also individually controls storage of clean energy until it is needed.

"Since its inception, Stem's sterling reputation and customer-centric framework have led to its coveted preferred partner status. Over the years, it added a range of new customers to its established base. The company helps more than 385 clients in over 250 cities across 50 countries, including industry players like UPS, Meta, and AMC."

- Silvana Rulet
Best Practices Research Analyst

The company's cutting-edge technology allows customers to store and utilize renewable energy more efficiently, reducing costs and carbon emissions. Its focus on sustainability and reliability has earned the company the trust and loyalty of businesses and utilities worldwide. With its proven track record and commitment to innovation, Stem stands poised to continue leading the way in the energy asset performance optimization industry.

Meeting Client Needs through Reliable and Quality Design

Stem invests heavily in research and development and leverages market insights to ensure its solutions align with customer needs. The company monitors market trends and invests heavily in technological exploration, which advances the company's commitment to new clean energy solutions development. This needs-based approach inspired the company to create Athena, a unified energy optimization platform. Athena is designed to enhance project valuation, improve system resiliency, empower users to participate in wholesale markets, and streamline sustainability management through advanced AI and ML technologies and data analytics. Additionally, the platform simplifies EV charging management, enables precise bill optimization, factors in applicable state and federal incentives, and facilitates grid services, making it a comprehensive solution that drives sustainability and efficiency across the energy landscape.

Athena acquires real-time data from various sources (e.g., smart meters, weather forecasts, market prices and asset conditions) as well as historical data. It then employs AI and ML to analyze the information and predict energy consumption and generation patterns. By doing so, it can pinpoint prospects for energy optimization, anticipate energy demand peaks and dips, market price volatility and regulate energy storage systems. During low-demand periods or low energy prices, the platform stores surplus energy, which helps mitigate electricity costs when demand or energy prices are high. Athena can also adapt energy consumption based on signals from grid operators or energy markets, allowing businesses to partake in wholesale markets and earn revenue by providing grid services. Furthermore, Athena consistently improves its algorithms to optimize energy usage, ensuring that businesses employ clean energy when it is most cost-effective and environmentally advantageous. The platform also features a user-friendly and interactive interface, equipping users with the necessary information to make informed decisions and track cost savings and sustainability metrics.

Purposeful Innovation

Stem's corporate culture revolves around using purpose to drive innovation. Its product roadmap, e.g., planning, development, and implementation strategies, incorporates customer feedback, ensuring its offerings align with customers' dynamic needs.

The company's solution suite takes energy asset optimization one step further than any competing solution. In September 2023, Stem launched PowerBidder™ Pro[1]. This groundbreaking bidding software helps asset owners directly manage energy storage assets (standalone, co-located with solar, or hybrid) and optimize trading performance in a simple, secure, and scalable way. Some of PowerBidder Pro's key features and benefits include:

- **AI-Driven Automated Bid Optimization Workflows:** The software harnesses the power of AI to automate the process of optimizing bids for energy assets, helping asset owners, traders, and tolling off-takers make more effective and profitable bids in energy markets.

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[1] https://investors.stem.com/news/news-details/2023/Stem-Introduces-Athena-PowerBidder-Pro-for-Bid-Optimization-in-Wholesale-Energy-Markets/default.aspx

- **Real-Time Monitoring and Control:** PowerBidder Pro offers comprehensive real-time monitoring and control features, allowing users to monitor energy asset performance and make real-time adjustments.

- **Integration with Athena Platform:** The software is part of Stem's Athena platform, allowing customers to harness data and insights to succeed in dynamic wholesale energy markets.

- **Configurability:** PowerBidder Pro is highly customizable, enabling users to tailor their strategies to align with their organization's risk tolerance levels and helping them make decisions that suit their specific needs and objectives.

- **User-Friendly Interface:** The software boasts a user-friendly interface that makes it easy for energy professionals to manage economic performance, fine-tune strategies, adjust parameters, test scenarios, and explore alternative trading approaches.

- **Real-Time Performance Updates:** PowerBidder Pro provides systematic and regular updates on asset performance data and analytics, eliminating the need for manual data collection and analysis.

Stem's new and purpose-built PowerBidder Pro software sets it apart from its competitors, with superior design, reliability, and quality as its central pillars.

Roadmap to Success: Customer-centric, Continuous, Proactive

Stem's solutions go beyond its extensive expertise and best-in-class capabilities, with customer value as a strategic imperative. Through the years, the company has earned a sterling reputation supporting customers' paths toward sustainability. Stem aims to accelerate decarbonization and promote clean energy usage at a mass scale, achieving this through AI-powered energy storage and asset optimization software solutions. Moreover, it monitors its environmental impact and implements low-carbon and energy-efficient solutions in all its operations, guaranteeing minimal energy waste. The company also has a sustainability policy that complies with international laws, regulations, and best practices regarding efficient energy usage and management, including the Paris Agreement and ISO 14001[2].

Unlike competitors, Stem builds its products and services by collaborating closely with a range of stakeholders and partners to evolve alongside market needs and trends. In 2022, the company acquired AlsoEnergy, a global leader in performance, analytics, monitoring, and control solutions for solar asset management.

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>
> *- Abigail Collins*
> *Mobility Consultant*

After the acquisition, AlsoEnergy's solar asset performance monitoring and control platform, PowerTrack™, was integrated with Stem's Athena platform. This integration has resulted in a comprehensive solution that facilitates

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[2] https://www.stem.com/wp-content/uploads/2021/08/Stem-Sustainability-Policy-Statement-Final-08.02.21.pdf

commissioning, monitoring, optimizing, and controlling clean energy portfolios and fleets, encompassing utility, commercial, and residential assets. PowerTrack provides high-quality analytics for intelligent decision-making, potentially reducing operating expenses by 3% to 5% and increasing total energy production by 1% to 5%[3]. Furthermore, it is compatible with a broad variety of hardware and can integrate with data from third-party vendors. This feature allows organizations to incorporate various clean energy assets and data sources, thus ensuring a flexible solution for managing and optimizing their portfolios.

Stem's transparent, seamless approach and close relationships position it as a partner of choice and preferred vendor.

A Promising Outlook for 2023 and Beyond

Since its inception, Stem's sterling reputation and customer-centric framework have led to its coveted preferred partner status. Over the years, it added a range of new customers to its established base. The company has customers in more than 260 cities across more than 50 countries, including industry players like UPS, Meta, and AMC. In April 2023, Stem joined forces with Sysco, the world's largest food distributor, to establish Sysco's first electric vehicle fleet hub[4]. Utilizing Stem's Athena platform, Sysco will optimize on-site energy resources, turning its distribution center into an electrified fleet hub. This initiative will not only curb carbon emissions but also bolster operational efficiency for Sysco.

Frost & Sullivan believes Stem is well-positioned to drive the energy asset performance optimization space into its next growth phase, capturing market share and sustaining its leadership in the coming years.

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[3] https://www.stem.com/solutions/athena/powertrack/
[4] https://investors.stem.com/news/news-details/2023/Stems-Athena-a-Key-Integrating-Technology-in-Syscos-First-EV-Hub/default.aspx

Conclusion

To create a new solution, a company needs to understand the market's needs and deliver a solid solution designed and embedded with high-quality and reliable performance. Frost & Sullivan finds that Stem Inc. (Stem) embodies this concept. Stem heavily invests in research and development, using market insights to create customer-focused clean energy solutions. Its flagship platform, Athena®, employs artificial intelligence (AI) and machine learning to optimize energy usage, predict consumption patterns, and participate in energy markets, promoting sustainability and efficiency. In addition, Stem's latest offering, PowerBidder™ Pro, is an AI-driven bidding software that allows energy asset owners to optimize trading performance, offering real-time monitoring, customization, and seamless integration with the Athena platform, showcasing the company's commitment to innovation and quality in the energy sector.

Furthermore, Stem integrates a customer-centric approach to ensure that its offering addresses the wants and needs of users. The company is committed to delivering customer value and promoting sustainability, using AI-powered energy solutions to accelerate decarbonization and minimize waste. Its collaboration with stakeholders and acquisition of AlsoEnergy allow Stem to integrate PowerTrack™ into the Athena platform, creating a comprehensive clean energy portfolio management solution that enhances efficiency and reduces expenses. The company's strong brand equity and strategic partnerships with industry-leading companies, like Sysco, highlight its leadership, positioning it for continued growth and market dominance.

With its strong overall performance, Stem earns Frost & Sullivan's 2023 North America New Product Innovation Award in the energy asset performance optimization industry.

What You Need to Know about the New Product Innovation Recognition

Frost & Sullivan's New Product Innovation Award recognizes the company that offers a new product or solution that uniquely addresses key customer challenges.

Best Practices Award Analysis

For the New Product Innovation Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

New Product Attributes

Match to Needs: Customer needs directly influence and inspire product design and positioning

Reliability: Product consistently meets or exceeds customer performance expectations

Quality: Product offers best-in-class quality with a full complement of features and functionality

Positioning: Product serves a unique, unmet need that competitors cannot easily replicate

Design: Product features an innovative design that enhances both visual appeal and ease of use

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.

Learn more.

Key Impacts:

■ **Growth Pipeline:** *Continuous Flow of Growth Opportunities*

■ **Growth Strategies:** *Proven Best Practices*

■ **Innovation Culture:** *Optimized Customer Experience*

■ **ROI & Margin:** *Implementation Excellence*

■ **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

■ **Mega Trend (MT)**

■ **Business Model (BM)**

■ **Technology (TE)**

■ **Industries (IN)**

■ **Customer (CU)**

■ **Geographies (GE)**