FROST & SULLIVAN

2024
ENABLING TECHNOLOGY LEADER

IN THE GLOBAL ELECTRIFICATION INDUSTRY

FROST & SULLIVAN

2024

BEST PRACTICES AWARD

GE VERNOVA

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. GE Vernova excels in many of the criteria in the electrification space.

AWARD CRITERIA

Technology Leverage	Customer Impact
Commitment to Innovation	Price/Performance Value
Commitment to Creativity	Customer Purchase Experience
Stage Gate Efficiency	Customer Ownership Experience
Commercialization Success	Customer Service Experience
Application Diversity	Brand Equity

Commitment to Innovation

In 1892, General Electric (GE) was established by none other than Thomas Edison, in collaboration with J.P. Morgan, Charles A. Coffin, Edwin J. Houston, and Elihu Thomson. The company has been at the forefront of power market innovation for more than 130 years. GE Vernova, a specialized global energy company emerging from GE, became an independent, publicly traded company in April 2024 and is supported by vast scale, breadth, and technological depth across its Power, Wind and Electrification businesses.

> *"GridOS represents a groundbreaking milestone in the power sector, reaching unparalleled heights of technological innovation. This comprehensive solution addresses utility providers' previously unmet needs and catalyzes a transformative shift in the market, leading the way for a seamless and efficient transition to renewable energy sources."*
>
> *- María Agustina de Sarriera*
> *Energy & Environment Senior Analyst*

Over its extensive journey, GE has successfully navigated numerous challenges in the power sector. GE Vernova will leverage this great heritage and continue to play a key role in the ongoing transformation and decarbonization efforts, a trend that has intensified notably in recent years. With the shift to more sustainable energy becoming an imperative; utility companies must rethink their strategies to address challenges arising from unpredictable power generation and increased severe weather-related grid disruptions.

In response, GE Vernova has leveraged years or collaboration with the most progressive utilities globally and deep energy software expertise to develop its GridOS® orchestration software, a modern, more flexible portfolio designed to help utilities meet present challenges in the electrification industry.

GridOS®: Orchestrate the Sustainable Energy Grid

GridOS marks a significant advancement in electrification, offering the world's first software portfolio comprising a platform and a suite of AI-driven grid applications and a partner ecosystem specifically built for grid orchestration. This innovative portfolio ensures the necessary reliability, resiliency, and flexibility required to transition to a sustainable energy grid.

The extensive scope of GridOS distinguishes GE Vernova as the only provider in the electrification industry that offers such an array of solutions.

The GridOS portfolio exemplifies GE Vernova's commitment to innovation, market leadership, vision and strategic execution to better serve utilities' energy transition needs. It empowers utilities to integrate renewables more effectively across transmission and distribution networks, even as they respond to climate-related disruptions, and work to strengthen energy security. GridOS applications are supported by a Zero Trust grid security model, a federated grid data fabric, and a hybrid cloud architecture.

GE Vernova stands out in the market for its advanced technology capabilities and offerings. GridOS supports utility providers with composable, scalable and AI/ML driven applications for planning, operating and transactional use cases. For example, GE Vernova's Disruption planning and Recovery application suite - comprising Disruption Prepare, Damage Assessment and Storm Manager solutions - significantly reduce the impact and damage caused by power outages. These application capabilities encompass planning and forecasting weather data analysis, impact predictions, asset visibility, power flow status, and workflow communication enhancement serving the entire spectrum of utility needs from prior planning to real-time assistance and post-disaster management.

Additionally, GridOS adeptly manages the rapid proliferation of distributed energy resources (DERs) and renewable energy sources coming onto the grid, offering a broad spectrum of distribution solutions. Its distributed energy resource management system (DERMS) software performs essential functions across the DER lifecycle, including visibility, scheduling, optimization, dispatch, and forecasting, and more. Moreover, GE Vernova's advanced distribution management system (ADMS) solution automates fault Location Isolation and Service Restoration (FLISR), demonstrating a high deployment success rate among utilities. As a result, GE Vernova's customers have observed considerable gains in utility reliability metrics. For example, a US utility has avoided over 150M customer minutes of interruption annually with effective outage management and significantly faster restoration time.

GE Vernova's GridOS software is improving grid performance for utility leaders that have implemented the software in their operations. Customers have reported 18% fewer network failures and 40% faster power restoration times.

GridOS represents a groundbreaking milestone in the power sector, reaching new heights of technological innovation. This comprehensive portfolio addresses utility providers' previously unmet needs and

catalyzes a transformative shift in the market, leading the way for a seamless and efficient transition to renewable energy sources.

Commitment to Creativity

GE Vernova has consistently demonstrated an unwavering dedication to fostering creativity. With a rich legacy of over 130 years in the power market, the company has formed a remarkable team of 1,000 accomplished scientists and engineers, including over 500 distinguished Ph.Ds. GE Vernova collaborates with research establishments, industry experts and has a rich partner ecosystem to accelerate creativity and innovation within the organization. These advisors serve a critical role in providing expert advice and guidance, ultimately encouraging, and developing a robust pipeline of new and innovative ideas within teams.

A prime example of GE Vernova's creative thinking is evident in its GridOS Visual Intelligence solution.

This provides an innovative solution to the industry's challenge of utility vegetation management (UVM) and minimizing the risk of power asset damage due to encroaching vegetation. Truly effective UVM has two requirements, 1) clear visibility into the location of vegetation growth and 2) the ability to assess whether it poses a genuine threat of infrastructure damage.

Visual Intelligence differentiation is its flexibility to utilize satellite imagery, and LIDAR imagery, whatever is most appropriate for a given scenario. It then overlays those scans with geo-mapping (typically provided by an entirely different application) within a single interface. The result is a clear, intuitive picture of the user's entire power network and any areas that are a damage threat that requires trimming. This holistic approach leads to reduced asset downtime and vegetation related outages, improved planning and investment decisions and reduced reliance on inefficient trim cycle, based practices resulting in significant savings on one of the industry's largest O&M expenditures. Additionally, Visual Intelligence has been used extensively for asset inspection and damage assessment use cases, driving significant reductions in asset replacements, higher accuracy damage identification, and more rapid response insights.

Data Driven Application Diversity

One of the most notable features of GE Vernova's GridOS portfolio is its data driven application versatility. From asset management to system planning and real-time control to market participation, GE Vernova offers the most comprehensive suite of grid modernization solutions available.

The GridOS software platform, empowers utility providers to discover, govern and utilize grid-wide data across IT/OT, optimize those resources and surface valuable insights. This support and drives GridOS applications across planning, operations, and transaction categories. For planning the data-driven portfolio enables utilities to mitigate potential damages, expedite power restoration, enhance recovery coordination, optimize communication between the control room and field crews, effectively manage vegetation, and strategically plan system optimization, among many other valuable applications. Likewise in transmission and distribution operations, GridOS facilitates real-time management, grid balancing and optimization while quickly and safely onboarding, integrating, and managing the flow of energy from renewables and DERs. Finally in the transact space, GridOS enables optimization of the energy supply to

unlock greater market participation while ensuring energy security and affordability for wholesale and emerging flexibility, transactive markets.

Suitable for diverse applications and industries shifting toward electrification and powered by renewable energy. GridOS is the only solution on the market addressing the broad spectrum of utility needs rather than attempting to implement individual and/or monolithic products to address specific use cases. GE Vernova's acquisition of Greenbird Integration Technologies AS has accelerated the GridOS Data Fabric and enables utilities to unlock the power of data from across numerous disparate and siloed sources. Flexibility and scalability are dependent on seamless integration, and GridOS's wide range of applications and solutions allows utilities to meet their diverse needs.

Commercialization Success

GE Vernova has achieved remarkable commercial success with the launch of GridOS. This innovative portfolio effectively addresses previously unmet industry needs and has achieved widespread adoption, even by more traditionally conservative and risk adverse industry participants.

Recognizing the urgent need to embrace digital transformation and expedite decarbonization, many of the world's largest transmission operators, distribution operators, and vertically integrated utilities have embraced GE Vernova's GridOS platform and applications. The software's AI and ML capabilities, which enable users to digitize and automate their operations, are key components of the portfolio's promise. These technologies can drive grid orchestration, a significant differentiator and competitive advantage in the electrification sector. Moreover, GridOS's adaptability and broad spectrum of applications make it useful for all types of utility participants, electric utilities, grid operators, and market operators worldwide.

> *"With its exceptional combination of commitment to creativity, knowledge, and expertise, GE Vernova displays the remarkable ability to address the most formidable challenges in the electrification market through a single integrated solution."*
>
> *María Agustina de Sarriera*
> *Senior Energy Research Analyst*

The prospect for further commercial success looks promising, driven by the substantial demand for grid orchestration. As DERs continue to gain prominence, the urgent need for advanced, integrated orchestration technologies to effectively manage the associated challenges and opportunities of DER integration will increase. GE Vernova is well equipped to confront these surges in demand with better software solutions drawing upon 130+ years of experience in navigating diverse regulatory landscapes and managing multifaceted portfolios across various global regions. With its extensive expertise, the company can foresee the evolving needs of the industry and can consistently deliver innovative solutions with seamless precision.

Customer Service Experience

Customer service at GE Vernova has garnered exceptionally positive reviews. The company has numerous customer support initiatives at play including dedicated account teams, comprehensive architectural reviews, customer roadmaps and implementation resources with a focus on client success.

In addition, GE Vernova hosts yearly Orchestrate customer conferences to share industry perspective,

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showcase software innovation, illustrate partner collaboration, deliver training and education while fostering an elite community of utility executives. During these conferences, experts from the organization and their clients can further develop their relationships and receive one-on-one customized attention.

The company's ability to address client challenges and provide ongoing support is an essential component of the excellent feedback that GE Vernova has received from its customer base.

Brand Equity

GE and now GE Vernova is globally recognized for its pioneering contributions to the power market, consistently driving transformative innovations throughout its history. GE Vernova remains committed to its mission of accelerating the transition to more economical, sustainable, and dependable energy sources. Currently, 90% of the world's power transmission utilities have deployed GE Vernova's solutions, with the company contributing to the generation of 30% of electricity worldwide.

The company has invested heavily in R&D over the years and continues to forge mutually beneficial partnerships to expand its expertise and technical capabilities. The acquisitions of Opus One and Greenbird are noteworthy examples of GE Vernova's collaboration with technology innovators to fast track the development of its modern solutions. The synergy between GE Vernova and Opus One has resulted in the successful release of the GridOS DERM solution for example.

Furthermore, GE Vernova's dedication to customer-centric principles has been the cornerstone of the company's brand equity, which has been a consistently successful approach over the decades.

Conclusion

GE Vernova has showcased an unprecedented level of innovation, creativity, expertise, and technological disruption through its GridOS orchestration software. The company has successfully launched the first all-encompassing software portfolio designed for grid orchestration, effectively meeting urgent market demands with a singular suite of solutions. Exhibiting broadness and versatility, the company is set apart in the power market by its exceptional grid technology and integrated solutions. Its achievements in, facilitating electrification and decarbonization for utilities marks a significant step towards sustainability and progress earning it Frost & Sullivan's 2024 Global Enabling Technology Leadership Award.

What You Need to Know about the Enabling Technology Leadership Recognition

Frost & Sullivan's Enabling Technology Leadership Award recognizes the company that applies its technology in new ways to improve existing products and services and elevate the customer experience.

Best Practices Award Analysis

For the Enabling Technology Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

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)