

EY UtilityWave

P&U and E-Mobility AI-first & Data SaaS Platform

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The better the world works.



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with confidence



Microsoft

Business drivers

The energy industry faces substantial challenges that obstruct operational efficiency, diminish customer satisfaction and restrict adaptability to the evolving energy landscape. Key pain points include:

- **Fragmented asset management:** Difficulty in monitoring diverse assets, such as electric vehicle (EV) infrastructure, photovoltaic systems, wind farms, meters and transformers.
- **Reactive maintenance practices:** Unexpected failures increase operational costs.
- **Inefficient fault identification:** Lack of tools to improve customer experience leads to dissatisfaction and reduced loyalty.
- **Underutilization of AMI data:** Advanced Metering Infrastructure (AMI) data, including meter reads and alarm is often underutilized, leading to missed insights and optimization opportunities.
- **Challenges in grid modernization:** The fragmented integration of demand response programs and distributed energy resources (DER) reduces efficiency and responsiveness.
- **Limited customer engagement:** Lack of tools to improve customer experience leads to dissatisfaction and reduced loyalty.

Solution overview

EY UtilityWave is a cloud-based Power & Utilities (P&U) and e-mobility solution built on Microsoft Azure platform supporting deployment to operation of intelligent in-field devices and integration back into the enterprise.

Key offerings include:

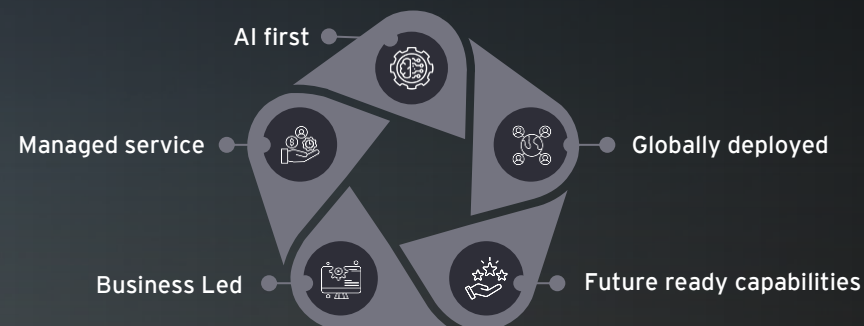
- End-to-end cloud managed service
- Advanced reporting and analytics
- AI or ML powered insights

Solution benefits

EY UtilityWave offers a range of benefits designed to enhance efficiency, adaptability and customer satisfaction in today's dynamic market:

- **Leading edge delivery methodology:** Employs innovative approaches to help ensure timely and effective service delivery
- **Unique and flexible commercial structure:** Provides customizable options to meet diverse business needs and preferences
- **Highly Agile and scalable service:** Adapts quickly to changing demands, allowing for seamless scaling as your business grows.
- **Customer-centric design:** Market leading technology and platform accelerators

Since inception, EY UtilityWave has been driving measurable growth and solidifying its role as a key differentiator in the energy sector.



Core platform capabilities

- Highly scalable architecture for horizontal and vertical scaling
- Inherent security with multiple layers from Microsoft Azure and EY Infosec certification
- Automated deployment using DevOps and ML Ops processes
- Ongoing cost optimization aligned with financial operations

Cutting edge features

- Real-time analytics on electric vehicle charging data across an entire city
- Ingesting and processing approximately 500GB of data daily in micro-batches
- Customer experience platform delivering sub-second response times
- EY proprietary, state-of-the-art, and secure portal

AI/Gen AI powered capabilities

- Gen AI driven test data and test case generation
- Computer vision-based field engineering use cases
- Cloud cost projection models

Modern data platform

- AI-driven ingestion layer
- Domain-specific proprietary common data model
- Versatile, purpose-built data storage solution
- Automated development of machine learning models
- Generative AI-enabled self-service business intelligence
- Scalable predictive analytics

Use case-oriented architecture patterns

- Event-driven architecture
- Microservices-based design
- Big data and high-performance computing

Solution differentiators

- Accelerated deployment of the solution with pre-built capabilities delivered as a managed service, requiring minimal involvement from subject matter experts (SMEs)
- Business outcome-driven capabilities developed by SMEs from the Digital Grid, AMI, DER, and E-mobility industry sectors.
- AI-first strategy to embed the power of AI in most point solutions addressing specific problem areas.
- Gen AI-driven personalized conversational AI solution for delivering insights on energy data

Joint value proposition

- EY and Microsoft are collaborating to transform the utilities sector through innovative solutions and robust support:
- Developing architecture in collaboration with Microsoft to leverage "best-of-breed" solution patterns and utilize the latest features of Microsoft Azure services
 - Leveraging the enterprise-level security, reliability, and scalability of the Azure platform
 - Collaborating with Microsoft for accelerated resolution of product issues, ensuring quick access to Product and Support teams

Case study

Advanced metering infrastructure (AMI) deployment, operations and install audit for a leading utilities company in the U.S.

Client challenge	Engagement summary	Value provided
▪ Centralize monitoring capability to simplify the oversight of deployment and operational activities for smart meters. ▪ Improve the efficiency of the smart meter deployment program by helping ensure quality analysis of 100% of installations. ▪ Identify potential installation issues and support the client in resolving these identified problems. ▪ Mitigate safety issues and revenue risks. ▪ Provide insights on vendor performance.	▪ Create an AI-powered computer vision solution to enable auditing of 100% of smart meter deployments. ▪ Focus on research and development, as well as the implementation of six primary AI-based use cases to support installation quality assurance and improve the efficiency of the deployment program. ▪ Manage end-to-end delivery, including project planning and execution using Agile Scrum methodologies. ▪ Refine the business case in collaboration with stakeholders and clients	▪ Help enable the client to embrace their vision of data analytics-driven executive dashboards for faster decision-making. ▪ Provide consistent week-over-week installation progress for all client group subsidiaries with just a single click. ▪ Identify and resolve unprotected and vulnerable meter assets. ▪ Fix vendor performance issues by offering guidelines and constant feedback on required image capture and quality standards. ▪ Enhance visibility into over 5 million meter deployments and their operations, using data analytics to support executive users in business decision-making. ▪ Implement an intelligent solution to proactively identify potential audit issues, strive for continuous improvement, and drive high-quality service to utilities and their customers by leveraging deep learning and image processing.

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EY and Microsoft: Helping the world work better to achieve more.

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EY and Microsoft bring a compelling formula to spark the potential of the cloud and unlock the power of data. We solve our clients' most challenging issues by blending trusted industry experience with innovative cloud technology. Our strategic relationship draws on decades of success developing visionary solutions that provide lasting value.

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For more information, visit: ey.com/Microsoft.

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EY is building a better working world by creating new value for clients, people, society and the planet, while building trust in capital markets.

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EY teams work across a full spectrum of services in assurance, consulting, tax, strategy and transactions. Fueled by sector insights, a globally connected, multi-disciplinary network and diverse ecosystem partners, EY teams can provide services in more than 150 countries and territories.

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