IFS · accenture

Building the resilient grid of the future

The Challenge
Build a reliable future with a more resilient, flexible, and net zero grid to accommodate the new order.

With an outdated, vastly distributed network, the damaging effect of changing weather conditions, and a need to reduce emissions, energy and utilities (E&U) companies are in the middle of a perfect storm. E&U organizations need to be more strategic; this means assessing critical assets before and after a storm, investing where it matters, and planning for better resilience and restoration.

- Meeting increasing demand while existing assets are pushed, and new ones are developed and built.
- Adapting to evolving business models with diversified assets and technological advancements.
- Mitigating risk by managing the knowledge transfer gap due to aging workforce, expanding asset portfolio and evolving best practice.
- Improving operational efficiency by utilizing new and disruptive technology.

Three Key Pillars Transforming Grid Operations

1 Decentralization	2 Energy Storage	3 Load Management
Growing energy demand is helping drive decentralization	The global energy storage market almost tripled in 2023	Load management enables existing systems to carry a larger load more evenly, stabilizing the grid while increasing resilience

Key Actions for Utility Leaders to Enhance Grid Reliability and Flexibility

1 Decentralization & Microgrids
Managing complexity with control and service agility

The Challenge
- Energy consumption by Distributed Energy Resources (DER) (e.g. EVs, solar, storage) is rising rapidly
- Utilities need to balance variable supply and evolving customer expectations
- Integration of new technology into legacy systems is a top concern

Key actions for Utility Leaders:
1. Utilities must **embrace technology** to help manage the transformation and ongoing operations
2. Utilities must **leverage its expertise and existing relationships** to provide a more service-oriented business model
3. Utilities workers must be **reskilled** to learn how to manage new technologies and interact within an evolved customer dynamic

How IFS Helps
- **IFS Enterprise Asset Management (EAM):** Tracks and manages a growing number of distributed assets across geographies
- **IFS Mobile Workforce Management (MWM):** Empowers field teams to efficiently install, maintain, and service DER-connected assets
- **AI-Driven Analytics:** Supports predictive insights and optimal dispatching for prosumer interactions and decentralized control

Operational Impact Decentralization demands an end-to-end visibility, remote coordination, and seamless service delivery—IFS integrates these seamlessly.

2 Energy Storage Expansion
Turning variability into stability

The Challenge
- Grid reliability depends on energy storage to balance intermittent renewables
- Utilities must manage utility-owned and third-party batteries at scale
- New land-use models and demand response programs are emerging

Key actions for Utility Leaders:
1. Utilities must ensure that energy storage assets are modeled into the utility's **existing IT system** to support grid connectivity and maintenance
2. Utilities must collaborate with **market stakeholders and regulators** to establish new demand response programs that increase overall flexibility of the system
3. Utilities need to establish a **long-term strategy** for the evolution of the grids which considers the contribution in flexibility provided by utility scale and local/residential storage

How IFS Helps
- **IFS Asset Performance Management (APM):** Monitors battery health, lifecycle, and safety parameters in real-time
- **IFS Asset Investment Planning (AIP):** Supports long-term strategic planning for utility- and customer-owned storage deployments
- **IFS ERP & Finance Modules:** Manage incentive programs, storage contracts, and shared infrastructure agreements

Operational Impact IFS solution gives utilities control over storage assets—from behind the meter to utility scale – supporting optimization and resilience.

3 Smart Load Management & Demand Flexibility
Maximizing value from existing infrastructure

The Challenge
- Infrastructure upgrades are costly; smarter load orchestration avoids them
- Utilities must support flexible customer usage, while maintaining grid stability
- Engagement and technical enablement of users is essential

Key actions for Utility Leaders:
1. Utilities must ensure that data transfer and communication between **enterprise software applications** and the **load management panel** is adequately supported, since demand response occurs in real time
2. Utilities should **review the business relationship** between them and the end user as more balanced and contractual
3. Utilities should look to **run organized campaigns** to solicit interest from end users/community while upskilling field workforce

How IFS Helps
- **IFS Scheduling Optimization:** Coordinates large-scale rollouts of smart panels and orchestrates response during high load periods
- **Real-Time Monitoring Dashboards:** Help visualize load distribution and identify optimization opportunities instantly
- **Improved Decision Making:** Monitor critical assets and gain actionable insights to help inform operational and business decisions

Operational Impact With IFS, utilities can gain better visibility and control over all grid-connected assets improving service quality and grid resilience.

Powering grid modernization with AI and full asset lifecycle management

IFS solution helps you optimize operations, maintenance and performance across the asset lifecycle and maximize operational efficiencies.

Find out more

Watch How Exelon is transforming Asset Lifecycle Management with IFS

Exelon.

Find out more