



IFS 2026 Utility Predictions

A Strategic Guide for
Utility Leaders in an Era
of Permanent Disruption

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The Race to Rule the Energy Future

Last year, utilities quietly hit the reset button: **reliability and affordability** continue to be the top priorities, even as decarbonization remains non negotiable. That recalibration is now shaping 2026 investment decisions, operating models, and technology roadmaps.

This eBook provides utility leaders with strategic insights and predictions for 2026 and beyond. Drawing from industry analysis and expert perspectives, it offers a roadmap for navigating complexity, leveraging technology, and building resilient operations in an era of constant change.



Disruption is the new normal. Leaders are planning for thinner margins, shorter recovery windows, and more frequent extreme weather during peak demand—treating resilience as an operational mandate, not a long term aspiration.



Demand is accelerating from electrification and AI/data centers—often outpacing traditional planning cycles. System stress is higher, reliability risk is elevated, and recovery windows are shrinking.



Affordability pressure is rising. Utilities must modernize, harden, expand, and digitize while keeping rates defensible; every dollar must “perform” across resilience, reliability, customer outcomes, and regulatory confidence.



Global competition for energy leadership is intensifying—across critical minerals, clean firm generation (e.g., SMRs), and grid digitalization. Utilities’ execution pace will influence national economic outcomes.

IFS 2026 Predictions at a Glance



Prediction 1: **IoT Led Intelligent Grids Go Mainstream**

Utilities will scale sensors, AMI 2.0, distribution automation, and grid edge software to move control from field to control center, enabling faster restoration, distributed energy resources (DER) orchestration, and real time risk management.



Prediction 2: **Small Modular Reactors (SMRs) Re enter the Plan**

Regions under firming pressure will revisit nuclear via SMRs to complement intermittent renewables with scalable, clean baseload—backed by digital project/asset governance from siting through operations.



Prediction 3: **Geothermal Steps into the Spotlight**

Next gen geothermal (including EGS/closed loop) gains momentum as reliable, weather resilient zero carbon supply; utilities will need lifecycle asset and project controls fit for complex, long dated assets.

Prediction 1:

The Future of IoT Led Utility Grids

The integration of IoT into utility grids represents more than a technological upgrade. It's a strategic transformation that will redefine how we generate, distribute, and consume energy.

Market Opportunity

The numbers tell a compelling story. IoT in utilities is projected to reach \$40.87 billion by the end of 2025, growing at a CAGR of 11.3% through 2033. The broader smart grid market is expected to grow from \$73.3 billion in 2024 to \$269.5 billion by 2033, at a CAGR of 15.6%.

Strategic Implications for Utility Leaders

Utility leaders must navigate a complex landscape where microgrids and decentralization are becoming the norm. Localized energy systems are enhancing resilience and enabling peer-to-peer energy trading, which is a significant departure from traditional centralized grids. This shift requires a holistic approach to end-to-end asset lifecycle management that spans traditional generation, transmission, distribution and decentralized energy resources (DER).

Technologies Driving Transformation

AI, IoT & Automation: The Backbone of Smart Grids: AI-native operations are expected to be core to daily utility functions by 2030, with up to 70% adoption in developed markets. Utilities are shifting from reactive to proactive operations using edge devices, smart sensors, and machine learning algorithms. These technologies enable real-time load forecasting, predictive outage prevention, and automated diagnostics.

IFS solutions are playing a crucial role in this transformation, providing comprehensive full asset lifecycle management capabilities, predictive maintenance, and real-time data analytics, which are essential for optimizing grid operations and ensuring reliability.

**Explore IFS Asset Lifecycle
Management Solution for Utilities**

[Learn more](#)



Prediction 2:

Small Modular Reactors: The Next Frontier in Clean Energy

As the world demands clean, reliable baseload power, Small Modular Reactors (SMRs) are emerging as the next frontier in energy generation.

Market Growth and Potential

The global SMR market is projected to grow from \$4.1 billion in 2025 to between \$40–50 billion by 2035, depending on regulatory progress. That's a tenfold increase in a decade—driven by the need for carbon-free, always-on power that can complement intermittent renewables.

Strategic Implications for Utility Leaders

For utility leaders considering SMRs, the question isn't whether nuclear will play a role in the clean energy future - it's how to position your organization to capitalize on this opportunity while managing the risks.

Technologies Driving Transformation

IoT and SCADA integration provides a digital backbone, enabling real-time monitoring of reactor conditions and asset health, while AI-driven insights forecast equipment failures and optimize maintenance schedules. With project lifecycle management providing end-to-end visibility across engineering, procurement, construction, and commissioning phases. Enhancing operational efficiency, safety, and regulatory compliance for SMR deployments.

IFS Cloud is uniquely positioned to support the complex needs of SMR operators, offering a unified platform for asset, project, and compliance management.

IFS customers have realized:

20 – 30%
reduction in maintenance costs through predictive analytics

20%
increase in asset uptime

Streamlined regulatory compliance with automated workflows and reporting

[Learn more](#)



Prediction 3:

Beneath the Surface: The Future of Geothermal Energy Generation

In the race toward a clean, resilient energy future, geothermal power is emerging from the shadows. Long overshadowed by solar power and wind, geothermal energy is now poised to become a cornerstone of global electricity and heating systems.

Market Growth and Potential

In the U.S. alone, next-generation geothermal could supply up to 100 GW by 2050, with 40 GW achievable by 2035. That's enough to power tens of millions of homes with reliable, 24/7 clean energy.

Strategic Implications for Utility Leaders

High upfront costs, long development timelines, and permitting complexity, especially in environmentally sensitive areas, limit investor appetite. But for utilities willing to take a long-term view, geothermal represents a strategic advantage in a diversified clean energy portfolio.





Technologies Driving Transformation

Next-generation technologies like Enhanced Geothermal Systems (EGS) and Advanced Closed-Loop Systems (ACLs) are unlocking geothermal potential in places previously deemed unsuitable. These innovations allow developers to tap heat from deep, dry rock formations, virtually anywhere on earth. Techniques honed during the shale boom, like horizontal drilling and hydraulic fracturing, are now being repurposed to unlock clean energy from deep rock.

IFS solutions are designed for complex, asset-intensive operations. With world-class Enterprise Asset Management (EAM) for tracking geothermal assets throughout their entire lifecycle from investment planning, through construction, operations, and ultimately decommissioning.

IFS.ai provides predictive analytics and real-time asset performance monitoring, while Field Service Management supports field crews with inspections, maintenance, and outage response. All while tracking emissions and enabling sustainability reporting.

Priorities Driving Technology Investments by Utilities

The AI Imperative—From Hype to ROI

AI is no longer a future technology for utilities—it's a present reality delivering measurable returns. A survey of 1,700 executives by IFS found that 70% of businesses reported better-than-expected ROI from AI investments, with 88% saying AI has already improved profitability.



Real-World Applications

Forward-thinking utilities are embedding AI directly into day-to-day operations. Some examples include:

Cable Analytics:

Using AI to predict cable failures before they occur

Supply Chain Optimization:

Generative AI identifies leakage between contracts and invoices, reducing waste

Customer Service:

AI-powered service agents retrieve real-time account information, enabling faster, better customer interactions

Asset Inspection:

Drone-based AI systems provide comprehensive asset visibility at a fraction of traditional inspection costs



Where Utilities Should Focus

The key is embedding technology into workflows, not bolting it on top. When technology becomes part of the daily routine, workforce embraces it and value emerges. Utilities should focus on use cases with clear ROI, measurable productivity gains, and direct cost reduction.

The Platform Consolidation Imperative



One of the biggest constraints facing utilities today isn't efficiency - it's fragmentation. In large utilities, operators may navigate hundreds of systems across assets, outages, field work, and customer ops; the inefficiency shows where decisions slow down under pressure. Consolidated platforms that align people, assets, work management, and supply chain reduce handoffs and raise decision quality.



The Path Forward

Operational efficiency will come from alignment and from fewer systems doing more work together. Platforms that bring together asset management, work management, and supply chain—all the operational elements—are getting serious attention.

IFS Cloud capabilities help reduce operational seams by aligning people, assets, and work on a common operational backbone, rather than forcing teams to stitch together different point solutions after the fact.

The Strategic Roadmap for 2026 and Beyond

As utility leaders look ahead, several strategic priorities emerge:

1. Invest in Full Asset Lifecycle Management

IFS solutions provide comprehensive full asset lifecycle management capabilities, predictive maintenance, and real-time data analytics—essential for optimizing grid operations and ensuring reliability. These aren't nice-to-haves; they're operational necessities.

2. Prioritize Cybersecurity

As grid operations become increasingly digital, cybersecurity moves from IT concern to operational imperative. Every connected device is a potential vulnerability. Security must be built in, not bolted on.

3. Embrace Platform Thinking

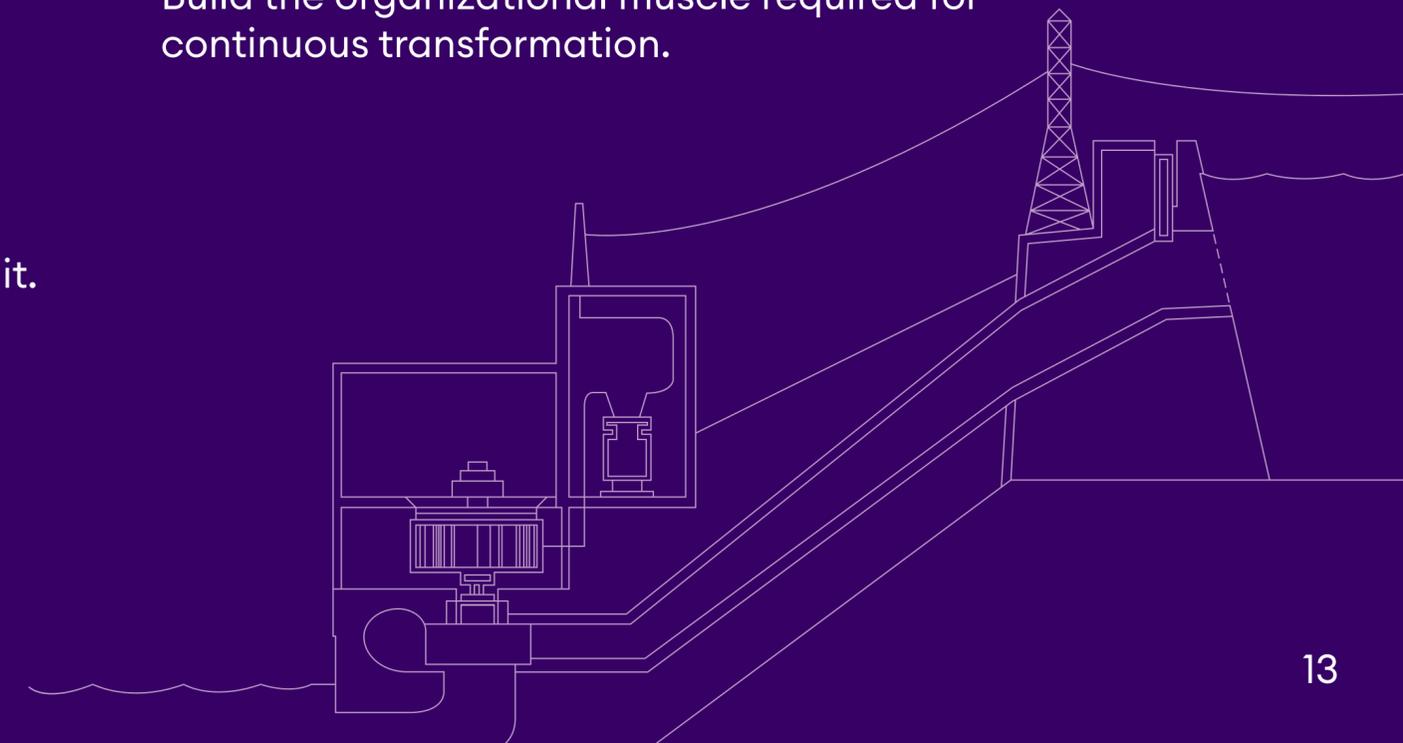
Treat complexity as a design problem. Use platforms, data, and AI to simplify decision-making. Reduce the number of systems operators must navigate. Create unified views of assets, work, and data.

4. Focus on Outcomes, Not Projects

Move from pilot projects to production systems. Embed technology into daily operations where people will actually use it. Measure success by ROI and productivity gains, not by technology deployed.

5. Build Organizational Capability

Invest in workforce development. Create pathways for technical and data science talent. Foster collaboration between finance, operations, and technology teams. Build the organizational muscle required for continuous transformation.



Conclusion: Turning Disruption into Opportunity

Disruption is the new normal for utilities. The pace of change won't slow down. Demand will continue to surge. Technologies will continue to evolve. Regulations will continue to shift.

But within this disruption lies an extraordinary opportunity. IoT and smart grids promise unprecedented operational visibility and control. AI delivers measurable ROI and productivity gains. Platform consolidation reduces complexity and empowers teams. Emerging technologies like SMRs and geothermal offer pathways to clean, reliable energy at scale.

[Explore How IFS Can Help](#)



About IFS

IFS is the world's leading provider of Industrial AI for hardcore businesses that service, power and protect our planet. Our technology enables businesses which manufacture goods, maintain complex assets, and manage service-focused operations to unlock the transformative power of Industrial AI™ to enhance productivity, efficiency, and sustainability.

IFS Cloud is a fully composable AI-powered platform, designed for ultimate flexibility and adaptability to our customers' specific requirements and business evolution. It spans the needs of Enterprise Resource Planning (ERP), Enterprise Asset Management (EAM), Supply Chain Management (SCM), and Field Service Management (FSM). IFS technology leverages AI, machine learning, real-time data and analytics to empower our customers to make informed strategic decisions and excel at their Moment of Service™.

IFS was founded in 1983 by five university friends who pitched a tent outside our first customer's site to ensure they would be available 24/7 and the needs of the customer would come first. Since then, IFS has grown into a global leader with over 7,000 employees in 80 countries. Driven by those foundational values of agility, customer-centricity, and trust, IFS is recognized worldwide for delivering value and supporting strategic transformations. We are the most recommended supplier in our sector. Visit [ifs.com](https://www.ifs.com) to learn why.

