# How AI can slash utilities costs and boost green initiatives

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Mounting pressure to increase efficiency, adopt renewable energy sources, and meet evolving customer expectations requires a fundamental shift in operational strategies.

While traditional manual data analytics have provided valuable insights in the past, AI is revolutionising this process by offering more accurate, deeper insights, and actionable intelligence.

Gartner predicts 94% of power and utility CIOs plan to increase their AI investments in 2025, with an average spending increase of +38%. By 2027, 40% of power and utilities organisations are projected to deploy AI-driven operators in control rooms, reducing human error risks.

In addition, Fujitsu's 2024 Sustainability Transformation Report underscores this trend, revealing that 63% of business leaders acknowledge that advancing AI adoption will be crucial to driving sustainability and efficiency efforts.

## 1. Optimise the power grid with AI to drive efficiency and sustainability

**Boost powerplant output through AI-driven optimisation**

AI can help power plants operate more efficiently by analysing real-time telemetry from machines. By continuously monitoring parameters like temperature, pressure and output, AI can identify small adjustments that improve machine performance.

This translates into significant cost savings through optimised fuel consumption and reduced maintenance needs, while simultaneously minimising environmental impact.

**Integrate energy sources seamlessly with AI-powered grid management**

AI plays a crucial role in enhancing the sustainability of utility operations through its ability to analyse demand patterns, weather forecasts and grid conditions, allowing it to optimise a mix of energy sources (including renewable) in real time.

This intelligent orchestration of energy resources maximises the use of renewables and ensures a stable and reliable power supply, even with the fluctuating nature of renewable sources.

**Unlock strategic value with AI-driven predictive maintenance**

AI-driven predictive maintenance, based on equipment performance data and historical records, allows for more accurate and timely forecasting of replacement needs. This proactive approach minimises costly unplanned downtime and extends the lifespan of critical equipment.

With AI handling this routine monitoring and predictive maintenance, human engineers can shift their focus to more strategic, value-added activities. By automating these routine tasks, AI drives better budget planning, operational efficiency and enhances job satisfaction for better utilisation of human expertise.

A prime example is Fujitsu's collaboration with Meridian Energy, a leading New Zealand wind and hydroelectric provider. Fujitsu's cloud-based AI platform provides Meridian with critical data-driven insights, resulting in measurable cost savings, reduced downtime through predictive maintenance, and progress towards its 100% sustainable power goal.

## 2. Elevate customer engagement and grid intelligence with AI

### Create personalised customer experiences with AI-powered insights

AI-driven analytics can help utilities understand individual customer behaviours by providing deep insights into their preferences, driving highly personalised experiences.

This proactive approach, offering personalised incentives and addressing potential issues early, minimises churn and maximises customer lifetime value. It can improve the effectiveness of marketing efforts significantly, as well as providing overall better customer support, freeing human agents to deal with more complex issues.

## Empower energy-conscious customers with AI-driven recommendations

With AI-driven analytics, utilities can gain a deep understanding of individual customer preferences and behaviours, empowering them to make more informed choices.

This could include customised energy-saving tips, tailored communication preferences, or personalised product recommendations. AI chatbots can provide 24/7 customer support, handling routine queries and freeing human agents to deal with more complex issues to improve overall customer satisfaction.

These proactive engagements help customers save money and positions the utility as a trusted advisor in energy management.

### Build a smarter grid with AI-driven dynamic pricing

AI can process vast amounts of smart meter data to develop more sophisticated, dynamic pricing models.

These personalised pricing plans are based on individual usage patterns, encouraging more efficient energy use and potentially reducing peak demand.

## 3. The future of utilities is powered by AI

As the utilities market evolves towards a decentralised model, generator and retail providers must adopt AI to remain viable.

Especially as renewable energy sources and sustainability efforts gain prominence, this will continue to reshape demand patterns. The utilities sector stands on the brink of a significant disruption, and those who harness their data with AI will be best positioned to capitalise on the opportunities this disruption reveals.

For information on how Fujitsu's Data & AI solutions please visit our Fujitsu Data & AI : Fujitsu Australia.