# Energy & Utilities

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## Energy Transmission and Distribution

### Optimising maintenance spend

Energy and utility companies spend billions of dollars maintaining and renewing their assets. In an environment of increasingly strict industry regulation, it becomes a challenge to quantify and justify future maintenance funding to the regulator.

Some utility organisations ultimately make major decisions related to maintenance based on rules of thumb or educated guesses. This exposes them to the substantial risks of increased cost and reduced uptime, in addition to the risk of their funding requests not standing up to regulatory scrutiny.

To minimise such risk, it is critical to develop clearly quantified degradation profiles of utility assets. Top-performing utility companies worldwide increasingly rely on predictive Data Science methods to gain valid, accurate and proactive insight from their asset data.

### Demand Forecasting

Data-driven understanding of the drivers of demand is key to accurate forecasting and resource planning. Sensor array data from new generation equipment presents significant business challenges because of Volume, Velocity and Variety (the Big Data "3 Vs"). Data Science methods are designed to deliver significant business value from such sources.

## Energy Retail

### Customer insight

Customer-facing organisations fighting for market share in a competitive market. They would like to acquire more customers, get maximum value from existing customers and retain customer, and grow market share.

Typically they face the following business problems:

- Marketing is expensive whether done via direct mail or media, with questionable effectiveness.
- It is not fully clear how to best achieve customer value growth, improve customer retention, ensure customer satisfaction, and understand customer behaviour in order to drive maximum customer value.

A Data Science approach allows the business to derive actionable insights into key business problems

- getting right offer to the right customer at the right time
- event-triggered marketing
- improving ROI on Media
- Grow customer base and customer value
- Get more value from existing customers
- Estimate future customer value
- Improve customer retention
- Focus on most valuable customers

**Credit management**

Energy and utility companies write off millions of dollars in bad debt caused by customers who do not pay their bills.

A Data Science approach allows the business to gain actionable insights into revenue and debt-related business problems

- reduction of bad debt
- increasing debt collection team efficiency by optimising their work