Energy Management Solution

Internet of Things
The growth of smart cities has brought about greater awareness on energy efficiency. Smart meters are increasingly being deployed as they ensure on-demand availability of comprehensive energy data, enable remote monitoring, and offer analytics-based insights. Further, with the increase in regulatory and legal compliance requirements, there is greater focus on sustainability and carbon footprint reduction.

Tata Consultancy Services’ (TCS') Energy Management Solution enables enterprises to achieve significant energy optimization by using an advanced artificial intelligence (AI)-based self-learning system, which facilitates real-time decision-making. The solution helps enterprises manage energy needs and drive business growth, without compromising on safety or eco-sustainability goals.

Overview
Enterprises often operate on a massive scale, with diverse infrastructure spread across geographies, which makes it challenging to optimize their energy consumption. Further, legacy and proprietary systems offer little flexibility in deriving data. Such companies are unable to get a holistic view of energy consumption associated to asset performance. They need accurate real-time data to gain actionable insights.

TCS' Energy Management Solution enables enterprises to acquire data in various formats from geographically-distributed buildings, facilities, and datacenters. The flexible and scalable solution adapts to new consumption, weather, and occupancy patterns. Our solution leverages technologies such as AI and the Internet of Things (IoT) to gather and analyze energy consumption data from disparate sources in real-time, and derive relevant and useful patterns that aid decision-making.

Our Solution
TCS' Energy Management Solution uses TCS' IOT framework as the backbone and leverages data analytics to ensure a high level of scalability and efficiency in processing real-time information from sensors to the cloud. We help deploy control algorithms and closed-loop solutions. Our system is highly configurable, and can acquire data from diverse building systems, meters, and sensors, and transmit the data in various formats as required by different protocols. Once configured, TCS' Energy Management Solution uses AI for self-learning and self-optimizing. It adapts on its own to changes in locations, consumption, outages, climate, and occupancy.

Benefits
TCS' Energy Management Solution offers benefits such as:
- MCAPEX and OPEX savings
- Reduced energy consumption
- Better energy usage due to accurate tariffs
- Reduced wastage as a result of just-in-time energy
- Enhanced decision-making using real-time data
- Better insights into future energy consumption and enhanced power procurement options
- Improved monitoring of disparate systems through aggregation of data from various sources
- Optimized asset utilization

The TCS Advantage
TCS offers the following advantages to enterprises:
- Easy and quick deployment of solution
- Minimal initial investment by customers
- New opportunities such as energy trading
- Partnerships with hardware and system integrators
- Collaboration with cloud partners and asset manufacturers for a strong ecosystem
- Operational excellence

How we help our customers
We deliver advanced energy management services to enhance efficiency, lower costs, and foster sustainability. With all its capabilities the TCS Energy Management Solution has shown tremendous results helping save close to 10% energy year on year.
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About Tata Consultancy Services Ltd (TCS)
Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India’s largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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