

Data Analytics in Energy Management

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Abstract : With increasing energy costs and its impact on the business, sustainability today has evolved from a social expectation to an economic imperative. Therefore, finding methods to reduce cost has become a critical directive for Industry leaders. Effective energy management is the only way to cut costs. However, Energy Management has been a challenge because it requires a change in old habits and legacy systems followed for decades. Today exorbitant levels of energy and operational data is being captured and stored by Industries, but they are unable to convert these structured and unstructured data sets into meaningful business intelligence. It must be noted that for quick decisions, organizations must learn to cope with large volumes of operational data in different formats. Energy analytics not only helps in extracting inferences from these data sets, but also is instrumental in transformation from old approaches of energy management to new. This in turn assists in effective decision making for implementation. It is the requirement of organizations to have an established corporate strategy for reducing operational costs through visibility and optimization of energy usage. Energy analytics play a key role in optimization of operations. The paper describes how today energy data analytics is extensively used in different scenarios like reducing operational costs, predicting energy demands, optimizing network efficiency, asset maintenance, improving customer insights and device data insights. The paper also highlights how analytics helps transform insights obtained from energy data into sustainable solutions. The paper utilizes data from an array of segments such as retail, transportation, and water sectors.

Keywords : energy analytics, energy management, operational data, business intelligence, optimization

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