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# ieema journal

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## From the President's Desk

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## Samvaad

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## Interview

On the distribution side we will have to be very sensitive about cost effective technologies: **Mr Arvind Singh**, Principal Secretary, Energy

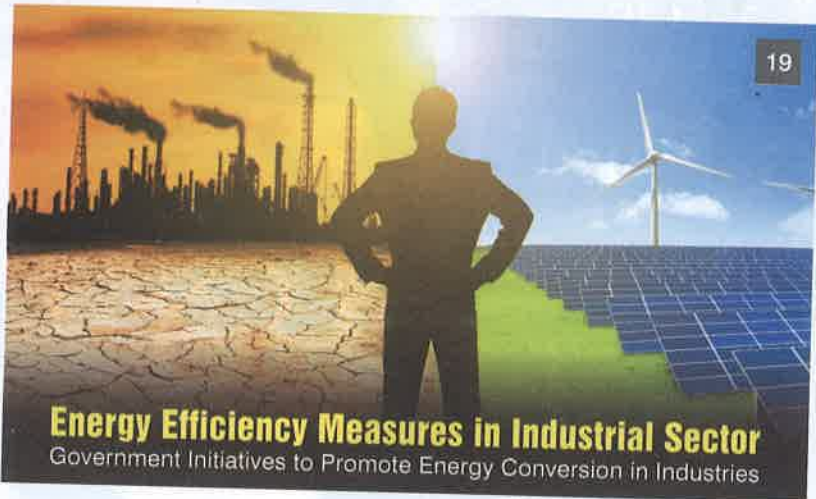


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## Cover Story

### Energy Efficiency measures in Industrial Sector Government Initiatives to promote Energy conversion in Industries

Energy efficiency has assumed greater importance in the country following the ratification of the Paris agreement, wherein India committed to reducing the emission intensity of its gross domestic product by 33-35 percent by 2030 from the 2005 levels. This requires a shift to a low carbon growth strategy, which can be achieved by promoting energy efficiency domestic and industrial sector including thermal power stations.



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## Expert speak

### Power Quality (PQ) Concerns for Energy Efficient Economy



Power Quality and Reliability is the key to successful delivery of quality products and uninterrupted operation of an industry, be it conventional or service sector. It is now even more critical to industry pursuing Energy Efficiency (EE), because of the increasing application of electronic loads and digital controllers which are sensitive to the quality of power supplied.

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## In Focus

### Power Quality Monitoring: Need of Modern Energy World

This document provides an overview of the importance of power quality monitoring in industries, infrastructure applications, power utilities and possible measures to identify and deal with PQ problems. Due to the increasing use of the renewable sources of the supply, the population of inverters connected to the grid is increasing and as a result, higher frequencies are becoming much more common in the network.

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## Advertorial

### Greater safety and full functionality: 16BL system

Stäubli Electrical Connectors presents the latest MULTILAM design

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**In Depth**

**Short Circuit Forces in Air Insulated Substations: A review of Standard Design Guidelines**

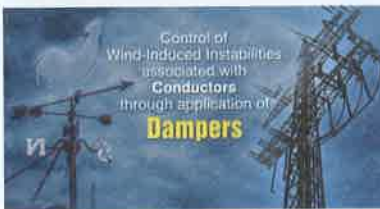
Short circuit forces (SCFs) are experienced in all substation environment during faults leading to short circuit currents. This article deals with the design aspects associated with estimations of SCFs and the factors influencing the same. The related standard guidelines are deliberated which should help in structural design of substations with reference to SCFs. This article is intended to give a comprehensive overview to the practicing engineers in substation design aspects related to SCF.



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**Guest article**

**Control of Wind-Induced Instabilities associated with Conductors through application of Dampers**



The interruption of electricity due to failure of transmission lines can trigger social and economic calamities. Suspended conductors of overhead power lines are lightweight and lightly damped structural elements, which are very prone to vortex-induced vibrations under the action of light or moderately strong winds.

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**Guest article**

**Preventive measures to maintain Circuit Breakers in healthy condition**



Switchgear includes all the switching devices associated with power system protection. It also includes all devices associated with control, metering and regulating of electrical power systems. Assembly of such devices in a logical manner forms switchgear. In other words systems used for switching, controlling and protecting the electrical power circuits and different types of electrical equipment are known as switchgear.

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**Viewpoint In Depth**

**“Arc fault detection device (AFDD)” to prevent fire in electrical installations in low voltage industrial plants and residential buildings as per british iec standards 60364 and british standards BS7671:2008**

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**Insight**

**Higher energy bills - breaking the norm!**

Various case studies indicate that industries can save anywhere upto 20% on their electricity bills just by reducing harmonics in their electrical network and improving the power factor.

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**Opinion**

**Smart Grid a game changer for Power sector**



Smart Grid is the result of a large-scale integration of the Information & Communication Technology with the Utility Services, i.e., Power System, Gas Distribution, Water Supply through Pipelines, and other similar applications. The flow of the resource is monitored all the way from the point of injection, right down to the consumer level, whereby individual control is available at every useful point.

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**Workshop on Smart Grids for Smart Cities**

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**Opinion**

**Smart Grid: An unsaid requirement for Smart Cities**

We have all come across the phrase "Smart Cities" somewhere or the other, but what does it actually mean for us in India? The goal is this to promote cities that provide the urban infrastructure required to enable citizens to live in comfort, whilst maintaining a healthy, clean, inspiring and sustainable environment, through the application of 'Smart' solutions.

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**Solutions**

**Smart Grid and Grid Interactive Building**

The number of Internet-connected devices i.e. "Smart Devices" (12.5 billion) surpassed the (7 billion) of the earth in 2011, and by 2020, Internet-connected devices are expected population to number between 26 billion and 50 billion globally

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**Power Scenario**

**Global Scenario  
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