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POWER SCENE
THIRUVANANTHAPURAM

MONTHLY NEWSLETTER OF THE KSEB ENGINEERS' ASSOCIATION, THIRUVANANTHAPURAM UNIT

Vol. III | Issue : 101 | January 2012

Members are requested to give the articles to The Editor, Power Scene, Tvpm. Articles from family members are most welcomed. Articles may be e-mailed to ksebea@gmail.com

SMART GRID " ENERGY INTERNET OF THE FUTURE"

In India, the demand for power is surging with shortage peaking over 15 per cent. Many of the households are still not connected to the country's electricity grid. According to the Ministry of Power, India's transmission and distribution losses are among the highest in the world, averaging 24 per cent of total electricity production, in some states as high as 62 per cent.

In fact, the total average losses are as high as 50 per cent when energy theft is taken into consideration of which technical losses alone account for 30 per cent of all losses. Indian utilities need to address challenges of high AT&C losses, payment default by consumers, encroachments on electrical network creating unsafe situations, theft of electricity and electrical equipment, distribution transformer failure and rising power purchase costs.

To address what is emerging to be a serious national issue, considering the increase in demand for power and to create the required infrastructure for growth, India needs to invest in building a modern, intelligent grid. Let us first define a grid⇨

A grid is a collective name for all the wires, transformers and infrastructure that transport electricity from power plants to end users. The present day grid is unidirectional and does not maximize technological developments.

Even today people need to inform the utility of a problem or failure in their area. The effort is to change this in India, and across the world. Solutions such as capability of remote disconnection on non-payment by consumers, automatic alarms when network is being encroached or when people engage in theft will enable utilities stop pilferage and avoid unsafe situations or accidents. In addition, optimal asset utilisation can be planned with online data of overloading of transformers and network, which can help to reduce or prevent failures.

A national Smart Grid would evolve the existing system into one that would be better suited for the information flow which is required for energy conservation, higher reliability and the introduction of variable generation power from renewable sources. Smart Grid is the convergence of Information Technology (IT), communication technology and electrical infrastructure.

It is a network for electricity transmission and distribution systems that uses two way state-of-the-art communications, advanced sensors and specialized technology to improve the efficiency, reliability and safety of electricity delivery and use. It is actually a process, an evolution of the electricity network from generation to consumption in a way that is interactive, flexible and efficient.

Proper implementation of Smart Grid might provide uninterrupted electricity to consumers across India to a larger extent, even in remote locations, while eliminating wastage of power units. Smart Grid solutions would enable utilities to increase energy productivity and power reliability while allowing customers to manage usage and costs through real time information exchange. It impacts all components of the power system like generation, transmission and distribution.

The Smart Grid presents some primary benefits including lower operating and maintenance costs, lower peak demand, increased reliability and power quality, reduction in power theft and resultant revenue losses, reduction in carbon emissions and expansion of access to electricity. Smart Grids through demand response and load management reduce the per unit production cost. By reducing the peak demand, a Smart Grid can reduce the need for additional transmission lines.

Smart Grids are undoubtedly the "energy internet" of the future. The engagement and cooperation of all stakeholders (regulators, utilities, vendors, customers, etc) is a vital first step. Everybody has to work together and move at the same speed.

It will take India a few years to realize the full impact of Smart Grid when a utility control room operator can regulate an electric meter in homes.

The technology can help us to reduce electricity transmission and distribution losses to 5-10 per cent annually. Without Smart Grid, India will not be able to keep pace with the growing needs of its cornerstone industries and will fail to create an environment for economic growth. ✵

KSEB ENGINEERS' ASSOCIATION

NOTIFICATION FOR THE SPECIAL SEMINAR SERIES–III– 2012

KSEB Engineers' Association is the leading professional body of Power Engineers in the State Power Sector. The Association is committed to give priority to the dissemination of technical knowledge. The Association has been regularly conducting technical seminars for the student community of various engineering colleges in Kerala. This year, the topic for the special seminar series is:

"SAVE ENERGY-SAVE ENVIRONMENT"

This special seminar series is organised in two stages, the first stage comprise of various district level competitions among nominees from students of selected Engineering colleges. The second phase state level competition would be held among the winners of various district level competitions to select the state level winner. This notification is for the first stage competition for Thiruvananthapuram District.

Venue :

Institute of Management in Government (IMG)

Vikas Bhavan PO, Thiruvananthapuram - 695 033

Date &Time:

15th February 2012, From 09:15 hrs to 15:30 hrs

Programme

09:15-09:30	:	Reception
09:30-10:00	:	Inaugural Session
10:00-13:00	:	Seminar Presentations-Forenoon Session
13:00-13:30	:	Lunch Break
13:30-15:30	:	Seminar Presentations-Afternoon Session
15:30-16:00	:	Concluding Session

How to Apply:

Applications are invited from the students from selected Engineering Colleges of Thiruvananthapuram District. Applications may be send by post or preferably by e-mail in the prescribed format in the following address. Applications can be sent by a single applicant or a team comprising of one primary applicant and a co-applicant, where both shall be students of the same college. There will be no application fee for the competition. The selected candidates will be intimated by letter/ e-mail. ⇨

Address for sending applications:

The Chairman, KSEBEA Thiruvananthapuram Unit, Engineers' House, TC 26/1300, Panavila Junction, Thiruvananthapuram -695 001., Phone: 0471- 2330696, FAX: 0471- 2330853, **E-mail: ksebea@gmail.com**

The closing date for receipt of applications is 13th February 2012

Presentation

Each of the selected applicant /team of applicants shall present a paper in the subject topic, and each presentation shall be limited to a duration of 15 minutes. The presentation may be accompanied by a digital slide show if the applicant prefers. One Laptop computer, LCD projector and Screen for projection will be arranged by KSEBEA at the seminar hall for this purpose. The applicants may use their own laptop computers for the presentation. Copies of the seminar documents & presentations in digital form (down loadable through CD/ USB drive) shall be handed over to the officials before the commencement of the programme.

Intimation of Results

The result of the district level presentations shall be announced after the evaluation of all the presentations by the jury and will be intimated later on to the winners by letter/ e-mail. The winners will be eligible for participating the state level seminar on the same topic, the venue and date of which will be intimated later.

Contact us

For further details and clarifications, the applicants may contact:

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CONGRATULATIONS

KSEB Engineers Association
Trivandrum Unit Congratulates

Er. Gayatri Nair. R
On her promotion as Chief Engineer
(Commercial & Tariff)

Edited, Printed and Published by Er. Santhosh E. for and on behalf of KSEB Engineers Association, Thiruvananthapuram unit and printed at Bhagath, Pattom # 4017097