ഊർജ്ജ സംരക്ഷണം ശീലമാക്കുക.
വൈകുന്നേരം 6 മുതൽ 10 വരെ വൈദ്യുതി
ഏറ്റവും കരുതലോടെ ഉപയോഗിക്കുക.

Words of Wisdom

"Life is 10 % what happens to us and
90 % of how we react to it."

UNIT OFFICE BEARERS FOR 2015-16

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Vice - Chairman :	Er James George	Ph : 9447956527
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	Er Viji Prabhakaran	Ph : 9446007899
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	Er Dennis Joseph T.	Er Joby Zachariah
Lady Coordinators	Er Aritha Krishnan G	Er Shymol C Mathen

Members are requested to give articles to the Power Scene either to the Editor or the Area Representatives. Articles from family members are most welcome. Articles may also be mailed to **ksebeakottayam@gmail.com**

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POWER SCENE KOTTAYAM

K.S.E.B. ENGINEERS' ASSOCIATION, KOTTAYAM UNIT

Volume III No. 1

CHAIRMAN's COLUMN

Er C.P.George, DyC.E., Electrical Circle Pala

Dear Engineers,

Electrical power is the backbone of modern society and the dependency on electricity to lead a normal life is expected to remain so for the foreseeable future. With the urbanisation of the Kerala Society during the past decades, even the domestic consumers in state cannot afford to have few hours of supply interruptions in their home and the engineers in the distribution wing is under tremendous pressure to maintain the supply at any cost.

In spite of the APDRP & RAPDRP programs, the most of the available distribution network in the state is aged and obsolete and evolved according to the requirement of the service connection application from the consumers and not according to the electrical engineering principles or statutory construction standards. In the end, the electricity is being supplied through a distribution network which is compromised

with safety standards and construction standards and this has resulted in compromising the quality and reliability of electricity supplied to the consumer.

In addition to the substandard network issues, we have terrains and vegetations which enjoy its interference with the normal delivery of electricity through the distribution network…! Add to the woes of the field engineers, the natural calamities and undisciplined drivers have prioritised their first target as KSEBL Lines and poles…..!!

In spite of all these ground realities, State Government, KSERC & KSEBL offers 24 x 7 electricity to all the consumers in the state @ subsidised rate..! The field engineers are left to face the wrath of the public with incompetent & unskilled field staff & scarcity of resources……

With the declaration of the 100% electrification of the state, KSEBL have practically achieved the major goal and target of providing **access to the electricity for all**. Now it is time to think & plan about the quality and reliability of electricity supplied to the consumers. Quality and reliability means heavy investments in the network and for the financial viability of the sector, the level of quality and reliability requirement need to be linked to the energy charge and make the consumer accountable for the cost.

It is for the engineers in the sector to go for innovative ideas with appropriate tech-

Transfer and Postings- Orders Issued

1.Transfer and posting of **Chief Engineers(Ele.)** and promotion and posting of Deputy Chief Engineers(Ele.) to the cadre of CE(Ele.) -orders issued- B.O. (FTD) No. 1378/2015(Estt.III/25/2015). Dated, Thiruvananthapuram, 05.06.2015.

2. Transfer and posting of **Deputy Chief Engineers(Ele.)** and promotion and posting of Excutive Engineers to the cadre of D.C.E(Ele.) -orders issued-

A) B.O. (FTD) No. 1379/2015 (Estt.III/1390/2015). Dated, Thiruvananthapuram, 05.06.2015.

B) B.O. (FTD) No. 1383/2015 (Estt.III/1390/2015). Dated, Thiruvananthapuram, 06.06.2015.

C) B.O. (FTD) No. 1419/2015 (Estt.III/1390/2015). Dated, Thiruvananthapuram, 10.06.2015.

3.Transfer and posting of **Executive Engineers(Ele.) -**and promotion and posting of Assistant Executive Engineers to the cadre of E.E(Ele.) -orders issued-

A) B.O. (FTD) No. 1485/2015 (Estt.III/1611/2015). Dated, Thiruvananthapuram, 17.06.2015.

B) B.O. (FTD) No. 1498/2015 (Estt.III/1611/2015). Dated, Thiruvananthapuram, 19.06.2015.

C) B.O. (FTD) No. 1611/2015 (Estt.III/1611/2015). Dated, Thiruvananthapuram, 02.07.2015.

3. Transfer and posting of **Assistant Executive Engineers(Ele.)** -orders issued-

A) Endt. on EB.1/AEE(E)/T&P/GT/2015 Dtd., Tvpm., 26.05.2015

B) Endt. on EB.1/AEE(E)/T&P/M&C-1/2015 Dtd., Tvpm., 29.05.2015

C) Endt. on EB.1/AEE(E)/T&P/M&C-3/2015 Dtd., Tvpm., 09.06.2015.

D) Endt. on EB.1/AEE(E)/T&P/M&C-5/2015 Dtd., Tvpm., 25.06.2015.

E) Endt. on EB.1/AEE(E)/T&P/M&C-6/2015 Dtd., Tvpm., 26.06.2015.

4. Transfer and posting of **Assistant Engineers(Ele.)** -orders issued-

A) Endt. on EB.1/AE(E)/T&P/2015 Dtd., Tvpm., 26.05.2015

B) Endt. on EB.1/AE(E)/GT-AN-2/2015 Dtd., Tvpm., 09.06.2015

C) Endt. on EB.1/AE(E)/GT-AN-3/2015 Dtd., Tvpm., 26.06.2015

D) Endt. on EB.1/AE(E)/GT-AN-4/2015 Dtd., Tvpm., 27.06.2015

Materials; Elevating substations; Relocating facilities to areas less affected by deterring weather and by creating redundant transmission line routes to provide operational flexibility, as they offer ability to bypass damaged lines which contribute to prevention of cascading failures.

The grid can be made smarter as a smart grid provides the system operators with monitoring and control assets for dealing with unfolding disaster in a timely and efficient way, thus saving the grid from a collapse or catastrophe. Smart intervention strategies can be Distributed Energy Systems & Decentralized Control, Microgrid Implementation, Deployment of Advanced Grid Visualization and Situational Awareness Systems, Adoption of faster Disaster Response System and Risk Management etc.

Co-existence of large interconnected traditional grids and smaller balancing areas, with distributed and decentralized control, that could be operated as micro-grids, if need be, contribute to the robustness of the grid and it increases operational flexibility and grid security.

UNIT MEETING NOTICE

- On 7th July 2015 (Tuesday)

- At Bestotel Kottayam

- 4 PM

Invitees :

Er George Mathew, General Secretary, KSEBA

Er Anil , Secretary(S), Benovolent Fund

Technical Presentation :

Mr Sreejith, ABB

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nolgy in the distribution network to minimize the supply interruptions and make consumer accountable for the additional investment required for improving quality and reliability of the distribution network.

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GRID RESILIENCE

Resilience, we know, as one of the properties of rubber - when rubber is subjected to physical deformation by the application of a force or pressure on it, it adjusts to the pressure/ force temporarily and regains its original shape on withdrawal of the external pressure/ force. The dictionary meaning of the word 'resilience' is the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress. Resilience comes from the Latin word, "resilio", which is literally the ability of an object to rebound or return to its original shape or position after being stressed (example bent, compressed or stretched).

In the context of Power Systems, resilience refers to the ability of power system to recover quickly following a disaster or more generally, to the ability of anticipating extraordinary, high-impact, low-probability events; rapidly recovering from those disruptive events and absorbing lessons for adapting its operation; and make structural modifications to prevent or mitigate the impact of similar events in the future. Adaptation thus refers to long-term planning and operational measures taken to

Reduce the vulnerability to external sudden shocks.

Due to climate change issues, the weather disaster plays havoc with electric power distribution and cause a catastrophic situation resulting in power outages affecting thousands and crores of customers. With increasing dependence on electricity for most daily activities including life saving equipment and vital services like transportation, water supply, health care, communications, emergency services etc. are affected and an urgent need exists to enhance the resilience of our nation's electricity delivery infrastructure to reduce the impact from natural disasters and climate change events on quality of life, sustained economic activity and national security. Resilience includes the ability to withstand and recover from deliberate attacks, accidents or naturally occurring threats or incidents involving man-made disasters.

Contributions from RESs and Micro-grids

Renewable Energy Sources (RESs) will displace energy produced by conventional plants, but their ability to displace conventional generation capacity shall be very limited. Micro-grids, with appropriate enabling technologies will facilitate the paradigm shift required in delivering resilience and security of supply from redundancy in assets. Preventive control measures to achieve more intelligent operation through corrective control actions also shall be supported by micro-grids with the aid of a host of enabling technologies

Including Information and Communication Technology (ICT).

Micro-grids can disconnect from the traditional grid, operate autonomously, help mitigate grid disturbances, serve as a grid resource for faster system response and recovery, and hence strengthen grid resilience. Thus the micro-grids are self-healing and self-organizing miniature grids capable of flaw less operation and deliver power to the designated areas in a catastrophe.

How to quantify Resilience?

Resilience is a multi-dimensional dynamic concept with several intrinsic complexities. However, it needs to be quantified for evaluating the effectiveness of the strategies aimed at achieving resilience and to make amendments thereupon. Resilience is quantified based on the degree of robustness to initial shock to the power grid, the functionality achieved during the event or post-event recovery duration.

The resilience assessment method should be capable of quantifying the frequency and duration of customer disconnections due to severe disasters and also the number of customers disconnected.

Boosting Resilience of Power System

Networks and Components hardening measures can be undertaken to achieve high resilience. Hardening measures include converting the overhead Distribution and Transmission lines underground; upgrading poles and structures with stronger and more robust