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No. BPAC/REG/2015

Dt. 16. 01. 2015

To

**Shri. M.R. Sreenivasa Murthy, IAS (Rtd.),  
Chairman,  
Karnataka Electricity Regulatory Commission,  
No.9/2, 7<sup>th</sup> Floor, Mahalaxmi Chambers, MG Road,  
Bangalore – 560001**

Sub: Recommendations for better performance of BESCO and enhanced safety of citizens

Dear Sir,

At the outset, let us utilize this opportunity to convey our earnest thanks for your valuable time extended to us, to hear the concerns of citizens of Bangalore, during our meeting on 14<sup>th</sup> Jan 2015.

Based on our detailed discussions, we are submitting here a few recommendations which if implemented would certainly pave the ways for enhanced performance of BESCO and will improve the safety standards in the urban power supply distribution system.

**A. Unsafe high tension structures on busy streets**

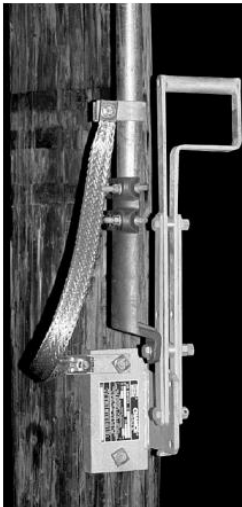
The pictures below are self-explanatory on the following aspects of high-voltage overhead distribution system in Bangalore city;

1. The area is unfenced (and not conforming to IE Rules).
2. The handle of Gang Operated Disconnect Switches (GODS) is invariably on the road side, projecting over the bituminous surface of the road, making it prone to be hit by moving vehicles.
3. Ideally, the position of GODS should be on the rear side of the structure. It is very much feasible to make it so, as you can see from the pictures.



***Our recommendations:***

1. All HT overhead structures to be made safe, conforming to IE rules and standards.
2. The handle of GODS either to be got rid of or to be positioned on the rear side of the structure.
3. Modern GODS provides both pump handle and swing handle mechanism (along with the operating rod) to be installed on the pole itself, without any protrusion. Please see the pictures below.



4. A onetime safety auditing of the HT distribution system to be made done by the Central Electricity Authority (CEA) and the recommendations to be implemented.

## **B. Pole mounted transformers and bare conductors in public areas**

As you can see throughout in the Bangalore city, the pole mounted transformers and bare live conductors are accessible to the passerby, making it highly risky and again violating the IE standards. The bare wires, exposed distribution transformers and outdated switchgears are becoming death traps on footpaths and streets, causing death and disability of many citizens. The death on electrocution (5 per one lakh population) is on rise year on year, if we rely on media reports and research papers.



### ***Our recommendation:***

All transformers on public places to be installed above 8 feet height, preferably plinth mounted as done in modern cities, without any exposed live parts, with proper chain linked fencing all around.

## **C. Exposed transformer structures for residential power supply:**

In residential areas, particularly for the power supply to apartments, the existing overhead structures and transformers to be replaced with cubicle type Compact Substations or RMU cum Transformer Units which enable “loop in – loop out” cabling, without any exposed live parts.



#### **D. Mandatory energy rating for new commercial buildings in the city**

Compliance to energy rating system to be made mandatory for all new commercial buildings coming up in the city with immediate effect. No building plans to be approved unless the building design satisfies the desired energy rating system.

##### ***Our recommendations:***

All future commercial buildings to be designed to fulfil the GRIHA or LEED energy rating system as follows:

1. Maximum demand (MD) 100 KW-500 KW – Silver rating
2. MD exceeding 500 KW but not exceeding 1000 KW – Gold rating
3. MD exceeding 1 MW – Platinum rating

#### **E. Mandatory usage of solar power for common area lighting in apartments**

All apartments and housing colonies having more than 25 residential units, the usage of solar power for common area lightings (street lighting, garden lighting, corridor lighting, pool area lighting etc.) to be made mandatory. Those societies who fail to do so, to be either penalized or to be charged with commercial tariff instead of residential tariff for common area meters.

#### **F. Green power capacity addition and its better usage**

State's RE policy need a review, to make it more tempting for the private investors and corporate sector, ensuring hassle free capacity addition, with simplified norms for wheeling and distribution within the state and between states.

##### ***Our recommendations:***

1. Wastelands for RE investments to be identified, notified and proposals to be called for setting up plants under PPP projects
2. RE open sale policy with probable incentives for buyers
3. Long time incentives for bulk consumers for investing and setting up own RE plants
4. Long term incentive for roof top PV generation (for commercial and domestic consumers)
5. Common grid access to all RE investors with liberal wheeling norms
6. Wheeling of RE from other states to be made possible through bilateral agreements

#### **G. Other recommendations to improve the efficiency of BESCO and to reduce the cost burden on citizens**

The following recommendation are made by us considering the fact that the citizens of Bangalore are compelled to shoulder the burdens of inefficiency of BESCO in the manner of increased electricity tariff time to time. The BESCO may be made accountable for its inefficient functioning and the citizens may be spared from bearing the brunt of failure of the distribution company in fulfilling its commitments in effective manner.

1. The below table indicates the extraordinarily disproportionate ATC losses incurred by 105 divisions under BESCOM.

ATC losses	5% or less	6-10%	11-25%	26-45%
No of Divisions	6	22	56	21

The above data (based on the info from BESCOM website) is alarming and demand for a thorough investigation. A reward system for reduction of losses YoY in a systematic manner to be introduced for all divisions. The official should be made accountable for high losses incurred by the divisions and for the negative variations from the targeted figures.

2. Ineffective usage of SCADA data: Despite the huge investment in adopting a SCADA (supervisory control and data acquisition) at 11-kV distribution level, the enormous data generated by the system is unused effectively by BESCOM for identification of power theft and for predictive management in distribution system. BESCOM need to engage a professional agency for continuous monitoring and scientific evaluation of data to identify and arrest all pilferages and leakages in the system.

### 3. Energy sale category in comparison with other states

State	Domestic	Commercial	Industrial	Agriculture	Others
Karnataka	19%	13%	22%	37%	9%
Andhra Pradesh	20%	7%	40%	26%	7%
Tamil Nadu	24%	9%	43%	18%	6%
Gujarat	13%	6%	59%	19%	3%
Maharashtra	21%	13%	43%	18%	6%

The above data suggests that the figures against the agricultural usage (unmetered IP Pump sets) are anomalous and indicate probable misuse/inefficient use of power in the sector. In the absence of measured data of consumption in the sector, the claims of BESCOM for government subsidy need a thorough scrutiny. We recommend that without the measured figures, BESCOM should not be permitted for claiming subsidies.

4. The meaning of 'electrification' need to be redefined shedding the present concept of physical wiring of the consumer's load with the distribution system, by including the right norms on quality of power and proper SLAs.
5. Time of Day (ToD) pricing to be extended to all consumers with better attractive tariff and incentives.
6. BESCOM to be insisted for establishing hotline call centers for complaints and reporting accidents for all divisions and monitoring through a centralized control center.
7. BESCOM to be asked to set up multiple mobile service units (zone wise) for attending faults and emergencies (AEC of Ahmedabad could be a right model).

Sir, as an independent regulator, the citizens of Bangalore has enormous faith and hope in KERC, in setting up high standards and protecting the consumer interest on top priority. The citizens of Karnataka are upset and have almost lost their ability to tolerate the inefficiencies and bureaucratic approach of the power distribution company and hence, we once again request your immediate intervention in bringing the obvious changes as suggested, to ensure that the city gets high quality power (safe and reliable at right cost), 24/7, enabling the citizens to lead a productive life.

Thanking you,  
Yours faithfully

**T.V Mohandas Pai**  
Vice President

**Revathy Ashok**  
Chief Executive Officer

**Dr Hari Parameshwar**  
Head – Regulatory Affairs