

**WEBINAR**  
**kVAh Billing – The 4 things you must know to  
optimize Energy Bills**  
**Thursday | 30<sup>th</sup> July 2020**  
**3.30 pm 5.30 pm**

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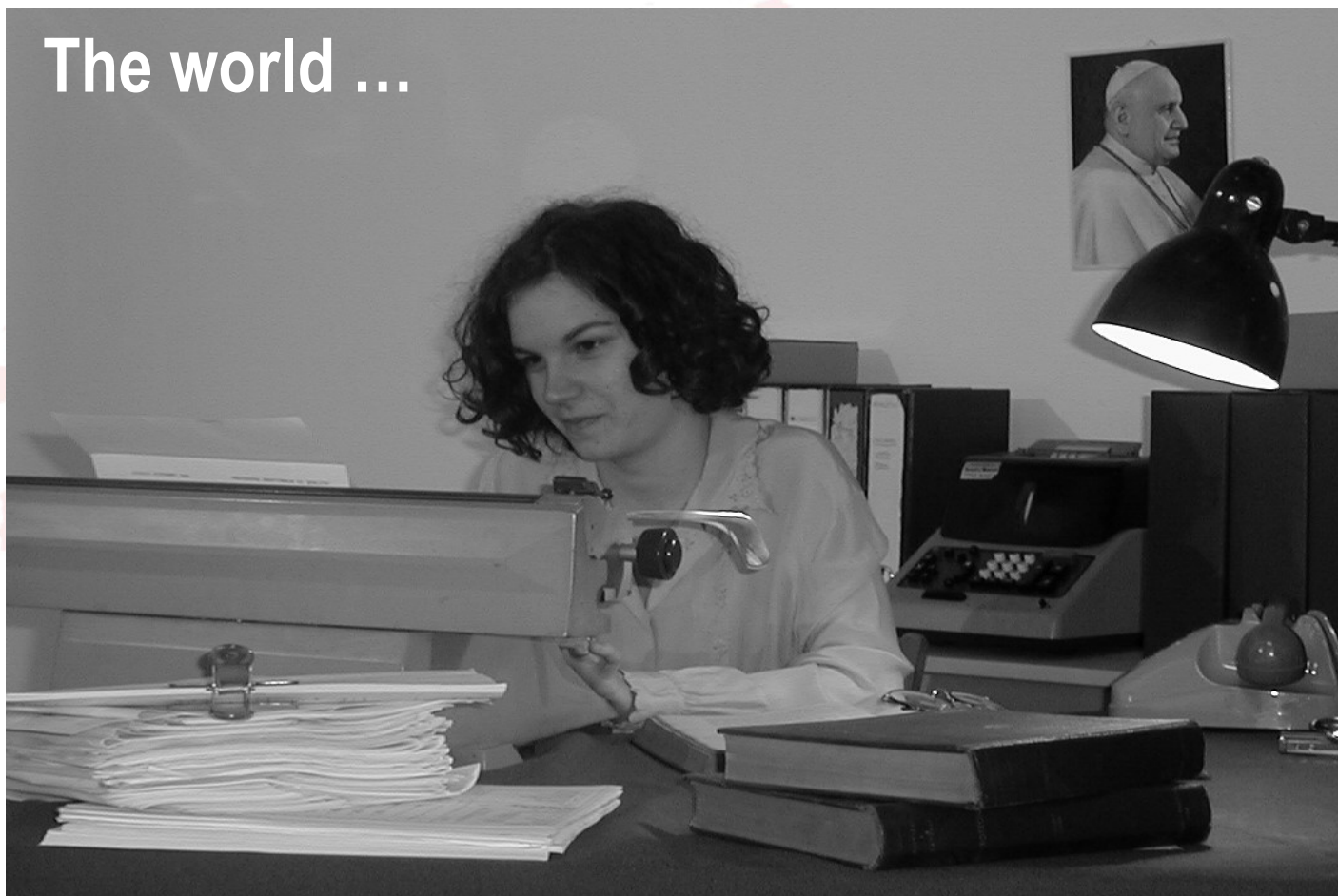
**Moderated by | Manas Kundu**

**Cu**

**International Copper  
Association India**  
Copper Alliance

**apqi** ASIA  
POWER  
QUALITY  
INITIATIVE

# The world ...



**Cu**

**International Copper  
Association India**  
Copper Alliance

... changed forever!



... even changing faster!





## OLD AGE



## NEW AGE



Acknowledgement: Mr. B M Jagtap - CTR

## Talking Points:

- Asia Power Quality Initiative (APQI – A Platform for you)
- PQ – End User Challenge
- Reactive Power compensation in Harmonics Rich environment and kVAh billing (Issues and Perception)
- Today's Discourse
- Our Expert Speakers cum NSN partners

# Asia Power Quality Initiative (APQI)

## Learning from APQI : A focus around 3 Missions



### **A reference for all PQ matters in Asia**

- A network of European /Asian PQ experts
- (standardization/certification body participation)
- Leads appropriate PQ study (PQ Survey, PQ Regulation report)



### **Education & training fine tuned for individuals**

- Print publications
- Electronic library

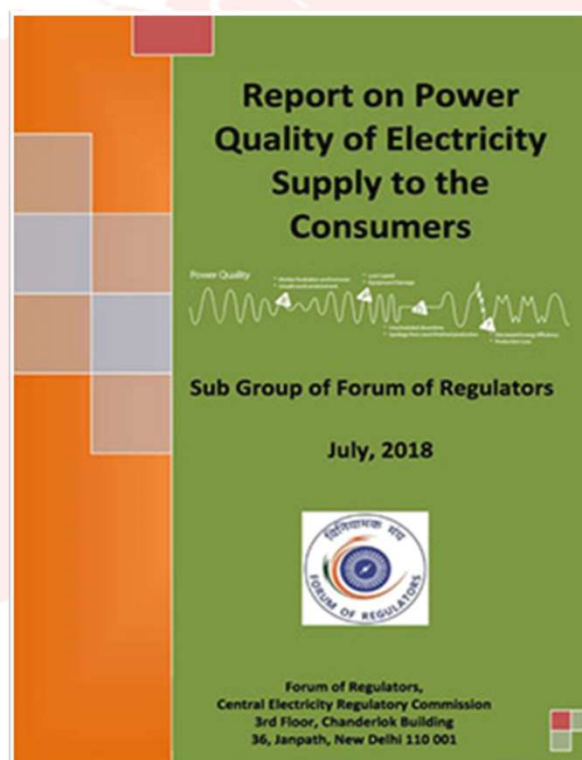


### **Lead the dynamic through adequate knowledge management & E-dissemination**

- Website
- Forums
- Seminars
- Webinars

[www.apqi.org](http://www.apqi.org)

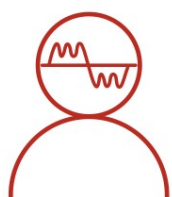
# Changing Standards & Regulations



1. CEA(Grid Standards) Regulations 2010
2. CEA(Technical Standard for Grid Connectivity) Regulations, 2007, amended in 2013 and 2019
3. CEA( Technical Standards Connectivity of the Distributed Generation Resources) Regulation 2013 renamed as CEA(Technical Standard for Grid Connectivity below 33 kilovolts) Regulations, 2019



# The Underlying End User Challenges



## FEELING OF RISK

End users always feel at risk with lack of standard reference



## DARK ART SYNDROME

Harmonics phobia risk the user's money, time and efforts to solve the problem like a dark art



## PSEUDO SOLUTIONS

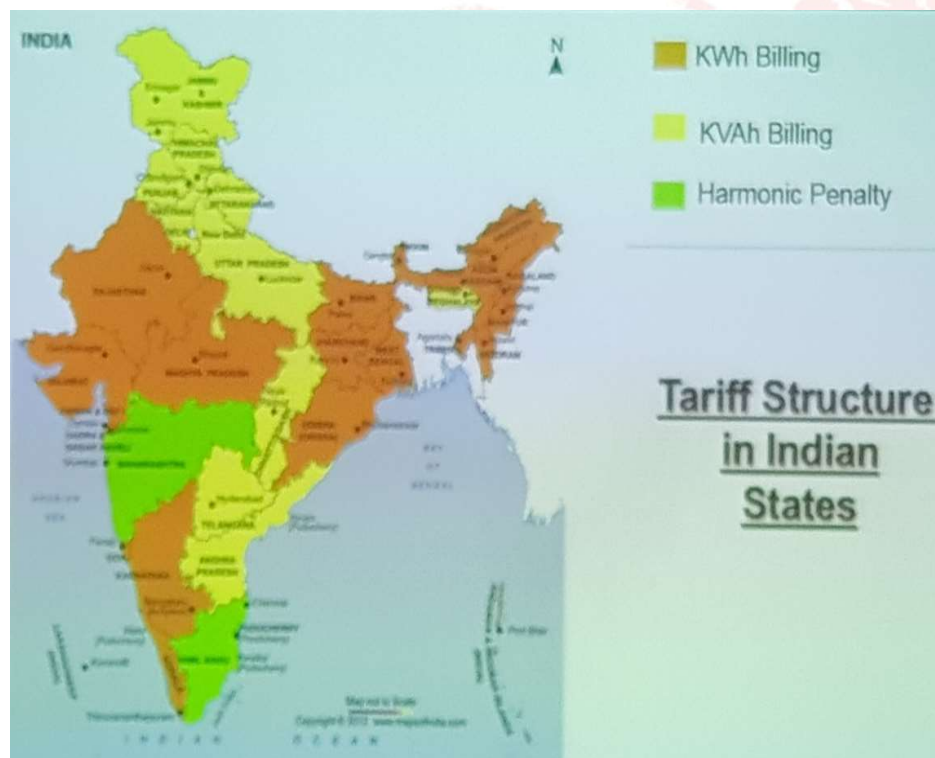
Poor awareness puts end users to risk of investing in pseudo solutions



## PREY TO MARKETING

End users often at the risk of falling prey to overzealous marketing

# Billing Map In India



## KVAh Billing implemented in other states

Category	AP	CG	Delhi	Gujarat	Haryana	J&K
HT						
Industrial	✓	✓	✓	×	✓	✓
Commercial	✓	✓	✓	×	✓	×
Railways	✓	✓	✓	×	✓	×
Agriculture	✓	✓	×	×	×	×
PWW/LIS	✓	✓	✓	×	×	✓
Temporary	✓	✓	✓	×	×	×
Bulk Supply	✓	✓	×	×	✓	✓
Start up	×	✓	×	×	×	×
LT						
Domestic	×	×	×	×	×	×
Non Domestic /Commercial	✓*	×	✓*	×	✓ <sup>s</sup>	×
PWW	✓	×	✓*	×	×	×
Agriculture	×	×	×	×	×	×
Industrial	✓ <sup>#</sup>	×	✓*	×	✓	×
Street Light	×	×	×	✓	×	×

MSEDCL also intends to implement the category wise KVAh billing like other states

Learn about the **4 key issues** which could be driving your energy bills higher due to poor Power Quality

**1**

Reactive power  
& Reactive Energy  
compensation

**2**

Abrupt load  
changes &  
compensation

**3**

Unbalanced load  
compensation  
(fixed & dynamic)

**4**

Harmonics  
in the electrical  
network

## Meet the Experts



**Tushar Mogre, Managing Director of TAS PowerTek Ltd.**

- Developing new and innovative solutions to ensure reliable and efficient electrical power.
- 30+ years of expertise in Power Quality improvement, electrical energy conservation auditing, and providing solutions on Power supply system Harmonics and VAR compensation.



**Rajen Mehta, CEO of Efficienergi Consulting Pvt. Ltd.**

- Foremost expert on Power Quality; on the regulatory committee for BIS, FoR
- Electrical Network Health Assessment Expert with specialization in industrial, commercial and residential facilities
- The man behind secqr® - India's first tool for Harmonics and compliance assessment





**Thank You.**

**Over to the Experts...**