

Power quality monitoring & assessment at customer level

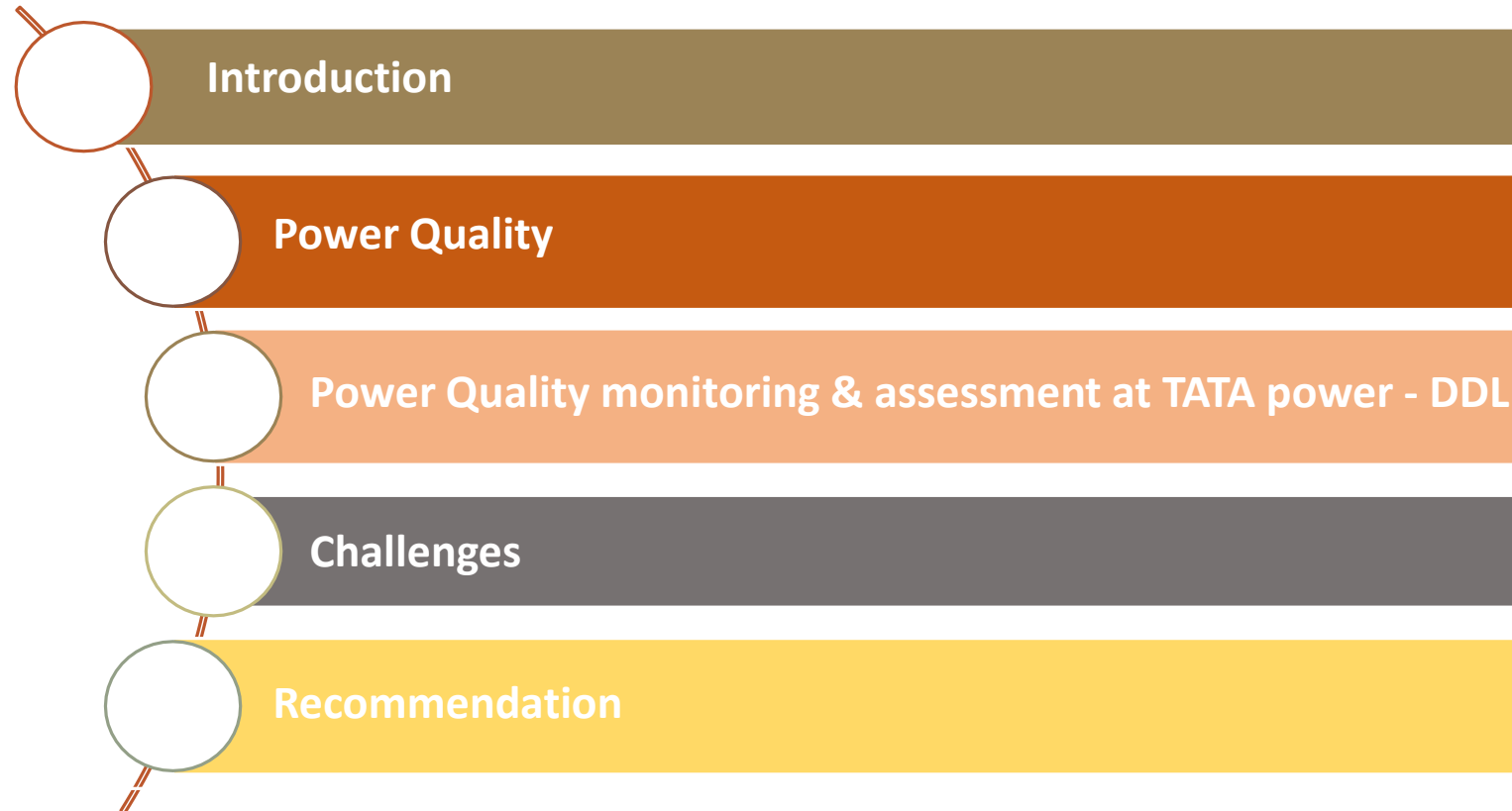
Ritu

Sr. Executive

TATA POWER-DDL



Agenda



Introduction



AT&C – 6.62 %

Based on Tata Power-DDL data up to Jan-22

SAIDI – 12.969

Based on Tata Power-DDL data as on 27.Feb.2022

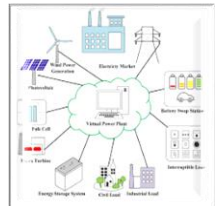
SAIFI – 19.773

Based on Tata Power-DDL data as on 27.Feb.2022



Application of modern process controls

Distributed power generation



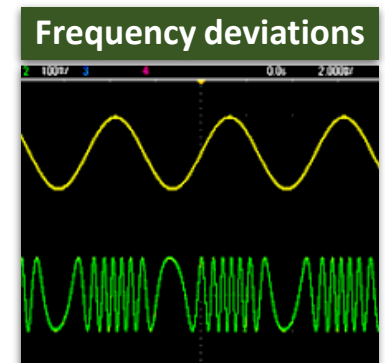
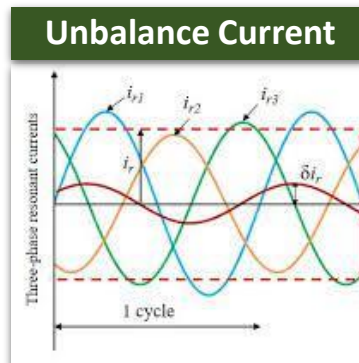
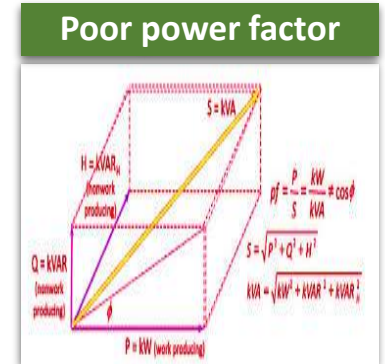
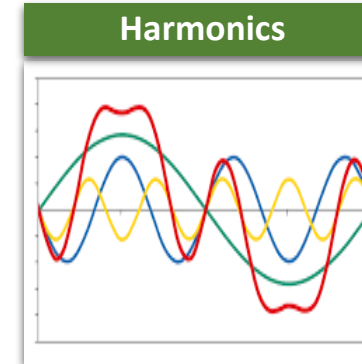
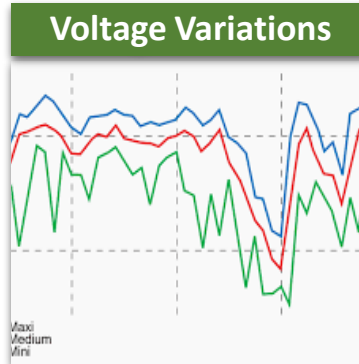
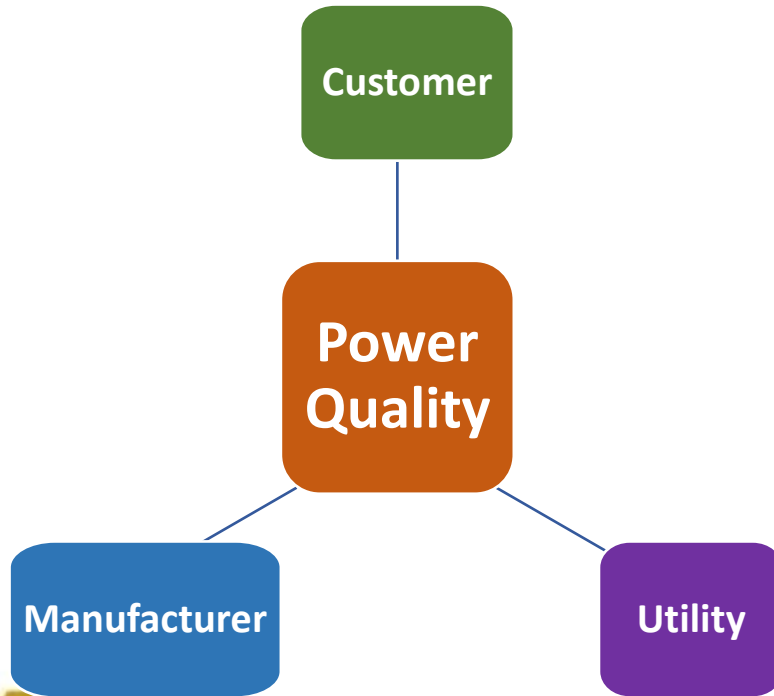
Power Quality



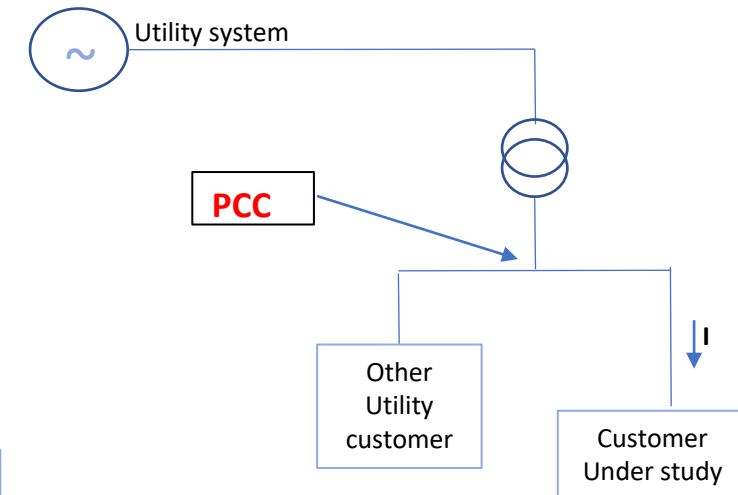
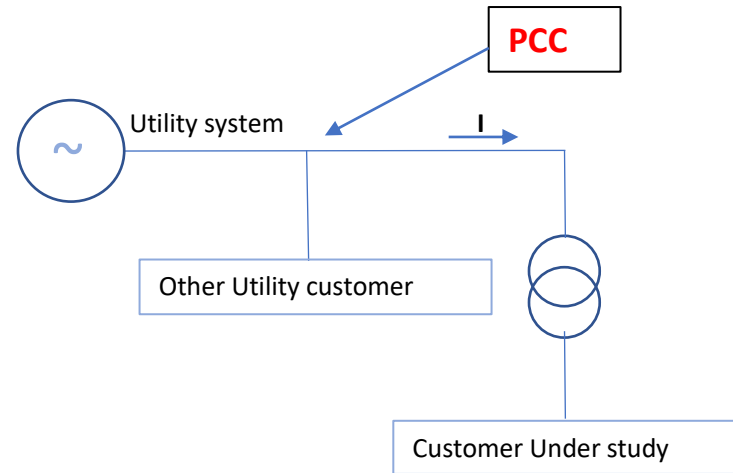
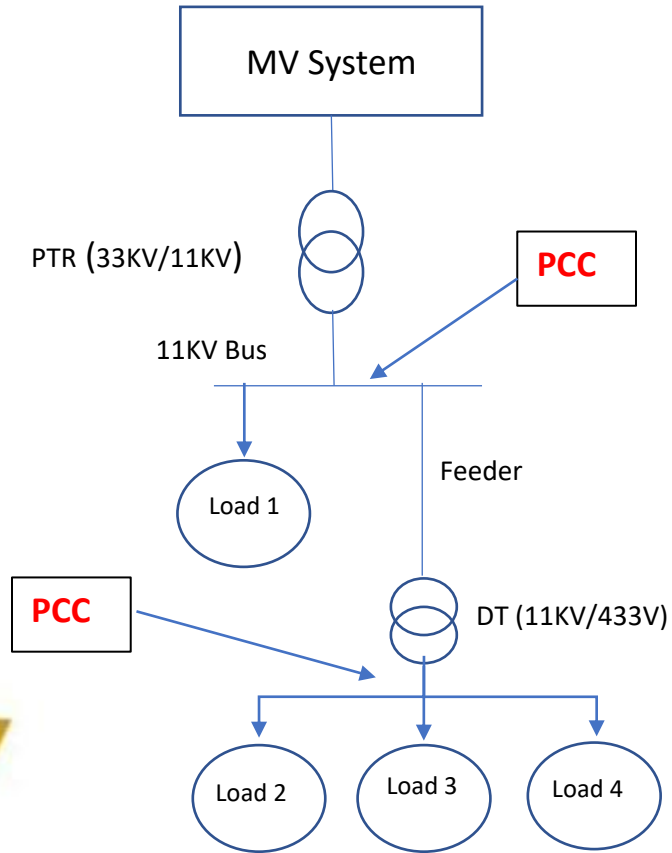
Consumer Awareness



Power Quality



Power Quality Monitoring at TPDDL

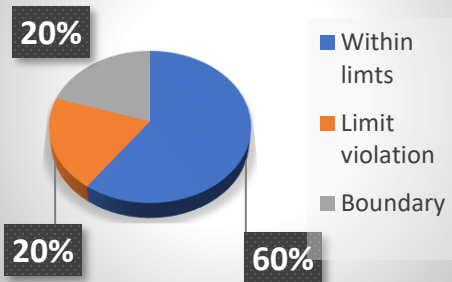


Power Quality Monitoring at TPDDL

Harmonic Analysis for industrial and commercial customers

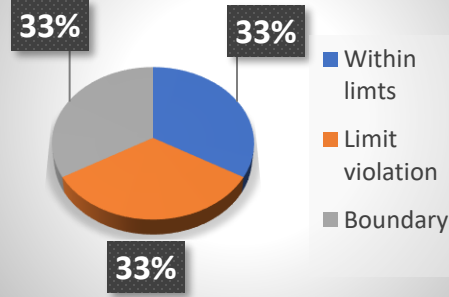
Commercial Hub

Current Harmonics



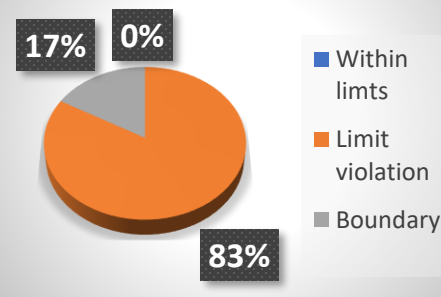
Food Industries

Current Harmonics



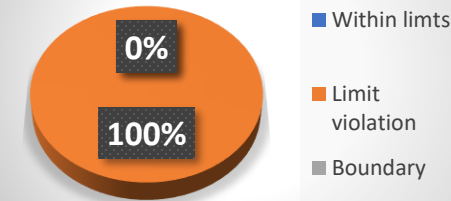
Plastic Industries

Current Harmonics



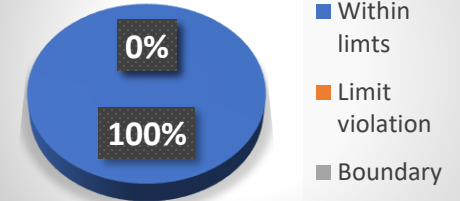
CNG station

Current harmonics



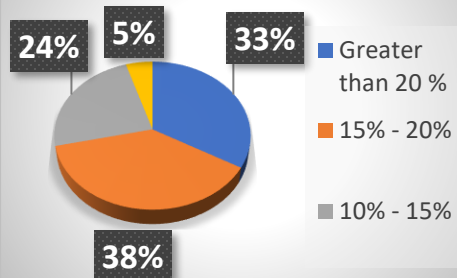
Cold Storage

Current Harmonics



Distribution Transformer

Current Harmonics



EV charging station

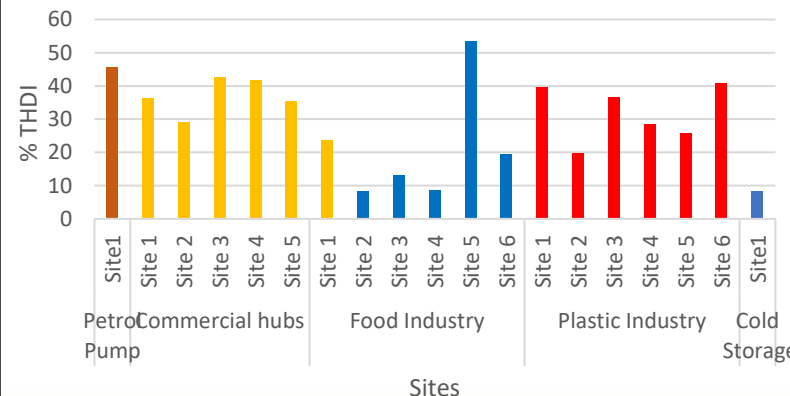
Super harmonics

Solar

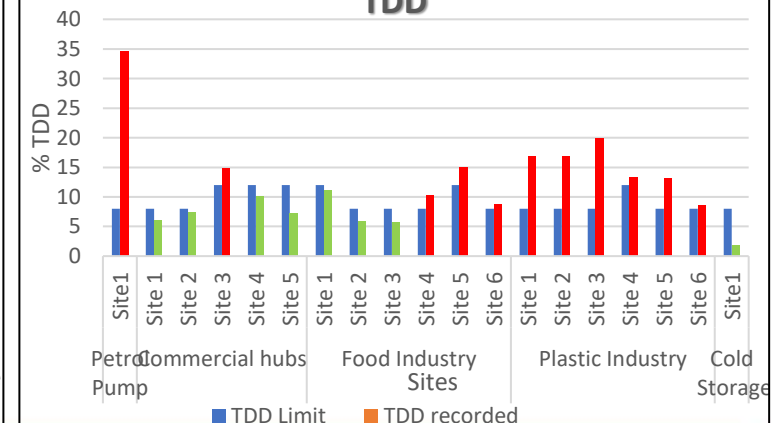
Harmonics

Voltage variation

THDI



TDD



*Data Based on Findings of Internal Study



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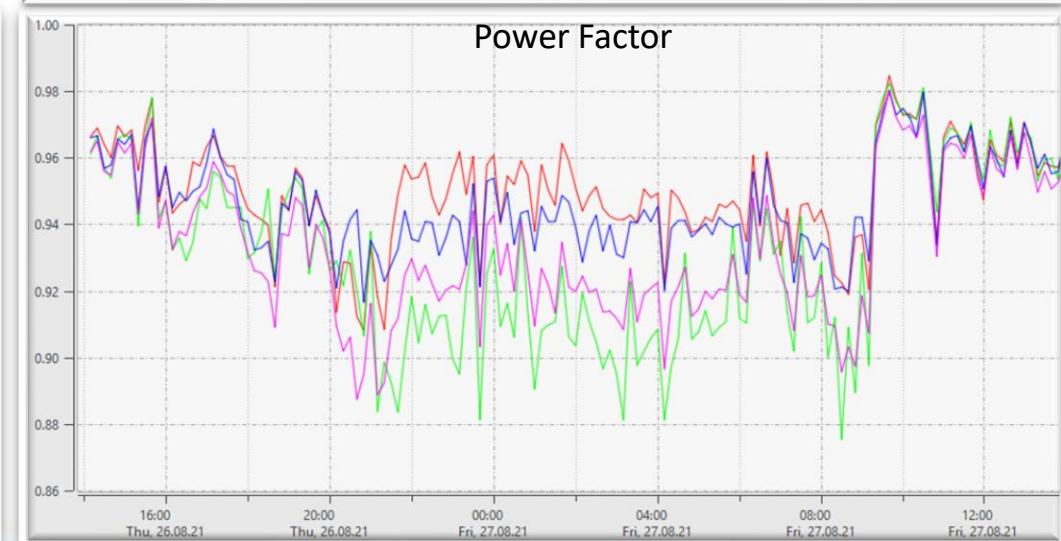
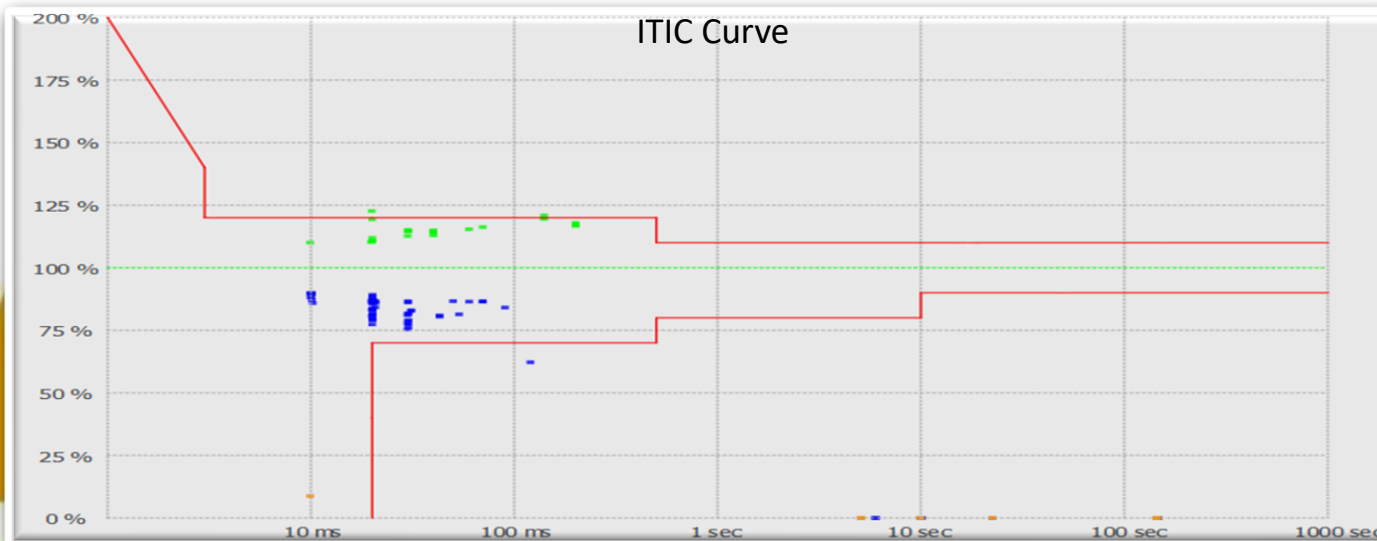
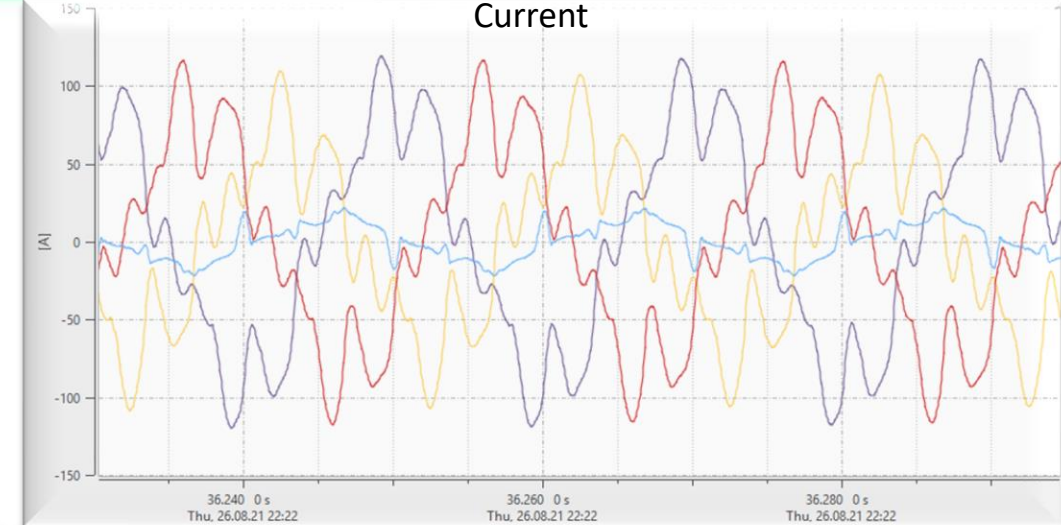
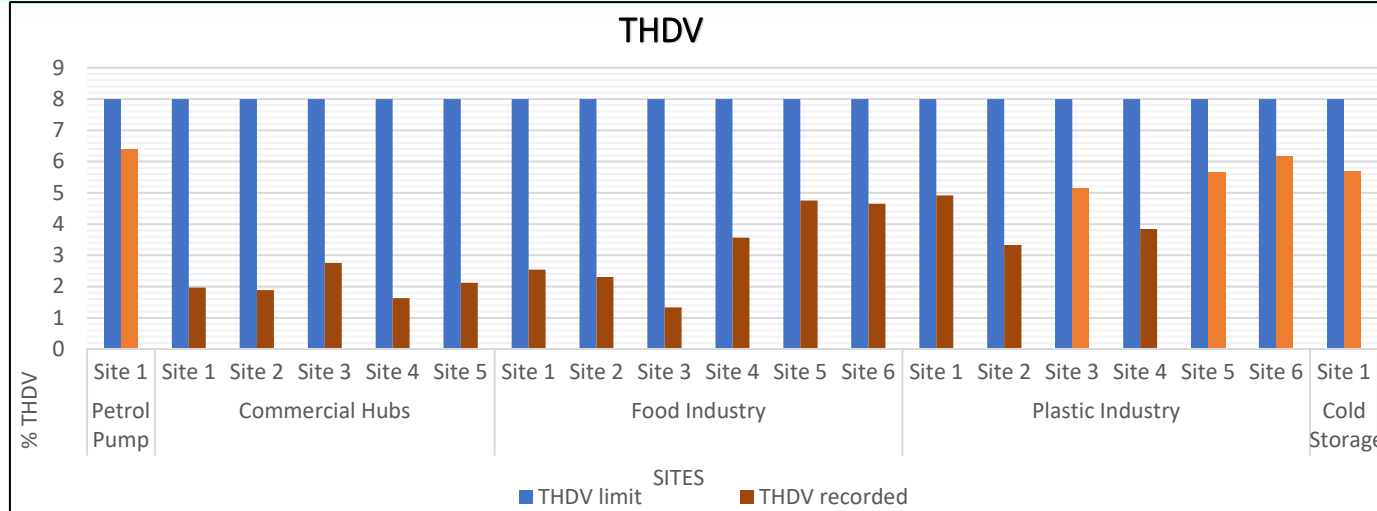


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India Smart Utility Week

Power Quality Monitoring at TPDDL



Challenges

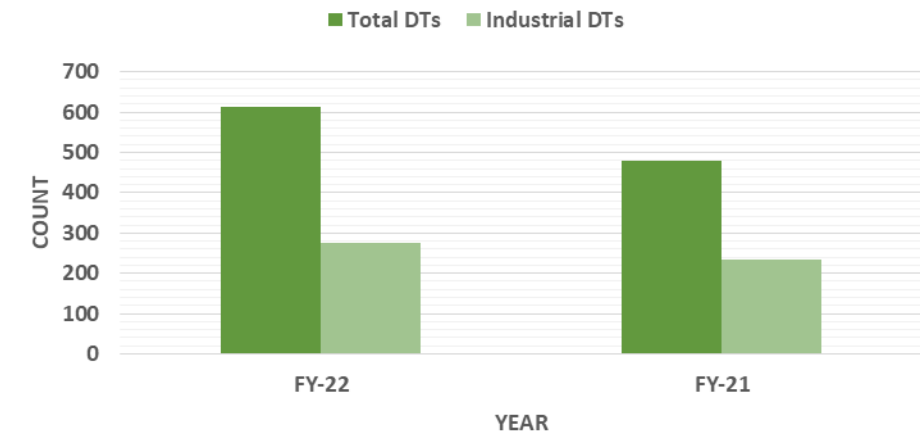
Non-uniformity in regulations for different states and lack of compliance measures regarding Power Quality

Increased Trend in Power Quality Complaints, especially in Industrial Areas

Non-awareness among consumers regarding issues related to supply quality issues

High number of DT failure rates in both residential and industrial areas

Distribution Transformer Faults



Recommendations

Policy Advocacy for strict compliance measure related to Power Quality

Upgraded Metering Infrastructure capable of monitoring relevant Power Quality related Parameters

Regulatory compliance at manufacturing stage of equipment

R&D on Power Quality improving solutions and govt. intervention to reduce cost economy of such solutions

Exploration in the field of : Power Quality as a service model for utilities

Thank You

*For discussions/suggestions/queries email: www.indiasmartgrid.org
www.isgw.in*

India Smart Grid Forum
CBIP Building, Malcha Marg,
Chanakyapuri,
Delhi-110021
Website: www.indiasmartgrid.org

