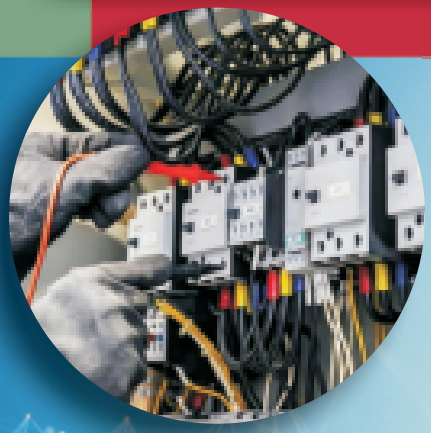
TECA

NEWSLETTER 2023



Tamil Nadu Electricity Consumers' Association

Regd. No. 181 - 8524/1998 - CIN No. U37102TZ1998GAP008524
1st Floor, SIEMA Building, 8/4, Race Course, Coimbatore - 641 018
E-mail : teca@tecaonline.in Web:www.tecaonline.in
Phone : (0422) 4351400 Mobile No. 97872 99000

BUILDING A SUSTAINABLE FUTURE
A Turnkey Solution for All Your Solar Energy

NGE green energy

WHY US ?

- 25 Years of Successful experience in the engineering industry
- A one stop solution for solar energy
- Having trusted relationship with our customer on our product & service
- Highest quality delivered with 0% compromise
- Strong Technical team with Young & Experienced , skill , knowledge & Latest Technology
- Launch & Commissioning of the Project On Time

YOUR TRUSTED SOLAR PARTNER FOR NEXT 25 YEARS

Tamilnadu's 1st 10/1 (private) Pooling SS For Solar Project

OUR COMPLETED WORKS

25 MW — 25 MW solar power park at Tiruppur district, Dharapuram under 10/ 1 SS with **110 KV** evacuation was commissioned on March 2023

8 MW — A 8 MW plant at Tiruppur District, Vellakovil as CAPEX model commissioned on March 2022

OUR ONGOING PROJECTS

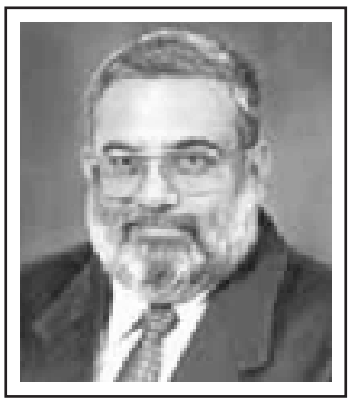
50 MW — 50 MW solar power park at Dharapuram, Tiruppur district with **110 KV** evacuation is on the works

50 MW — 50 MW solar power park near Madurai district with **110 KV** evacuation is on the works

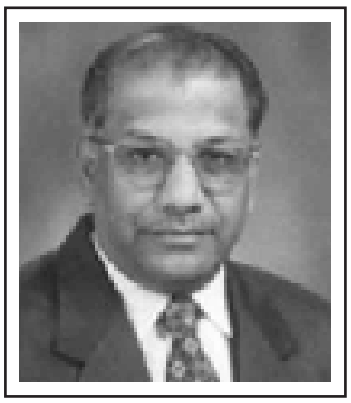
Natrinai Ventures Pvt Ltd,
1740/1B, Haven Radhakrishnan Enclave,
Trichy Road, Ramanathapuram, Coimbatore - 641045

+91 84899 16589
info@ngegreenenergy.com
www.ngegreenenergy.com

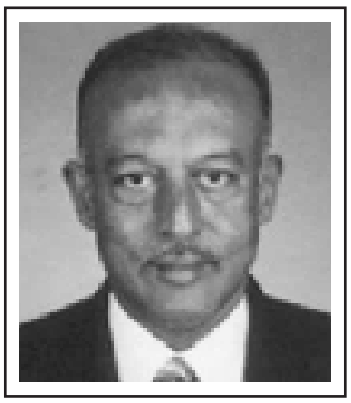
PAST PRESIDENTS



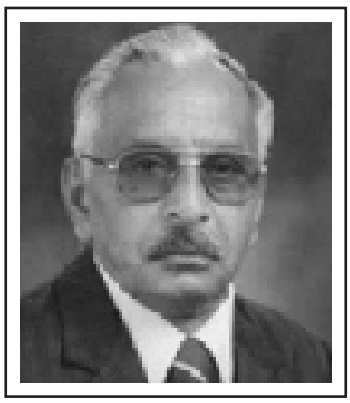
C R Swaminathan
Founder President, 1998 - 2003



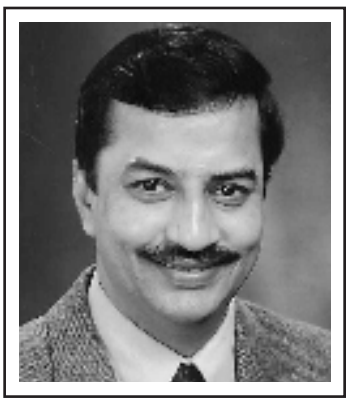
R Palaniswamy
2003 - 2005



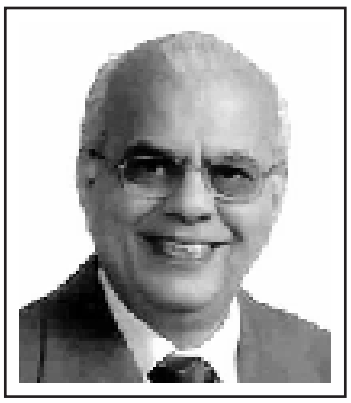
S V Arunachalam
2005 - 2007



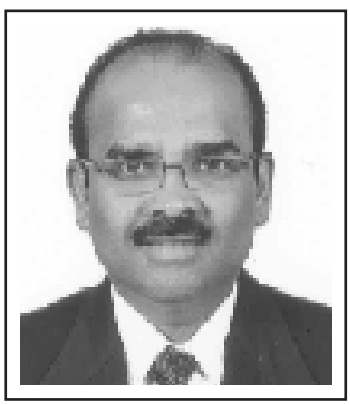
A V Varadharajan
2007-2010



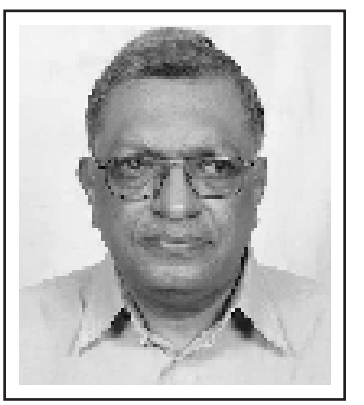
Mahendra Ramdas
2010-2012



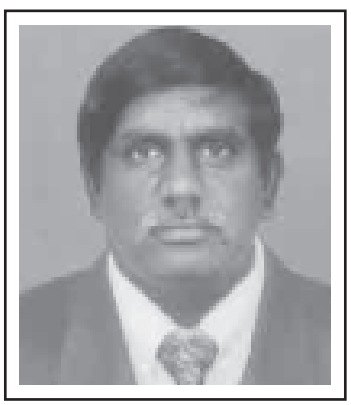
D Balasundaram
2012-2015



S Dinakaran
2015-2017



S R Rabindar
2017-2020



S Ashok
2020-2022

TAMIL NADU ELECTRICITY CONSUMERS' ASSOCIATION (TECA)
First Floor, SIEMA Building
8/4, Race Course
Coimbatore - 641 018
Phone : 0422 435 1400
E-mail : teca@tecaonline.in
Web : www.tecaonline.in

CONTENTS

Presidents' Message 3

Visible Benefits of Maintaining Lagging 0.97 PF at Industry's EB Incoming 5

Central Government Amends Electricity (Rights of Consumers) Rules, 2020 by Introducing Time of Day (ToD) Tariff and Simplification of Smart Metering Rules 11

What is Power Quality 16

Address and Contact Details of Distribution Circle's Superintending Engineers in Tamil Nadu 18

Tamil Nadu's Solar Power Generation Hits a New Record 21

Tamil Nadu Electrical Inspectorate : Procedure for issue of safety certificate Competent Authority 22

President's Message

Respected members,

It is noteworthy that our association, the Tamil Nadu Electricity Consumers' Association (TECA), has now reached a membership count of 699 individuals. On this occasion, I extend my sincere gratitude to each and every member for their invaluable support and unwavering trust in TECA's endeavors."

TECA' Latest Endeavor

Appeal before APTEL in the matter of Retail Tariff order dated 09.09.2022

TECA filed Rejoinder on behalf of Appellant in the matter of Appeal filed before The Appellate Tribunal for Electricity in the matter of Retail Tariff Order dated 09.09.2022.

Communication sent to

1. The Hon'ble Chief Minister,
2. The Hon'ble Minister for Industries
3. The Hon'ble Minister for Electricity

Subjects Specified

Proposal to Reduce Maximum Demand Charges for HT Consumers

The appellant urges the reduction of maximum demand charges for high-tension (HT) consumers, recommending a revision to only 20% of their sanctioned demand or up to the recorded demand, diverging from the existing threshold of 90%.

Elimination of Networking Charges for Solar Rooftop Consumers

The appellant advocates for the elimination of networking charges applicable to solar rooftop consumers.

Extension of Banking Privileges to 20/25-Year-Old Windmills

The appellant seeks the authorization of banking privileges for windmills that have been in operation for 20 or 25 years.

Representation sent to

1. The Chairman and Managing Director (CMD) - TANGEDCO,
2. Chief Engineer - Commercial (CE-Commercial),
3. The Director - Distribution

Subject Specified

Withdrawal of instruction made to Concern official to insisting to install Power Quality Meter at Metering Point with respect to the Central Electricity Authority (CEA) Regulations in the CEA (Installation and Operation of Meters) Regulations 2022, effective from 28.02.2022, the appellant emphasizes that the responsibility of providing consumer meters, even within the Advanced Metering Infrastructure Services, solely rests with the Distribution Licensee. Consumers are not

bound to supply such meters, as advised by the Chief Engineer - Commercial in accordance with the memorandum dated 01.07.2023.

Daily whatsapp updates on windenergy forecast, tamilnadu power position, TANGEDCO shutdown details, latest technology introduction in market like hydrogen cell, solar panels, wind energy, battery, any other related information and information regarding cea regulation, notices and comments are shared as you see. If anyone have not updated the number kindly share with our offices to get timely guides and information.

Circulars have been send on below subject's

1. Request to send email for enabling the OA Software to permit to allow the Wind Energy Generated by WEGs completed 20/25 years absorbed urgently in pursuance of the sustainable Court Orders-Regarding.
2. The Tariff Revision for FY 2023-24 as per the Following TNERC Tariff Order
    1. Tariff for Generation & Distribution for FY 2023-24
    2. Tariff for Intra-State Transmission for FY 2023-24
    3. Non-Tariff Miscellaneous Charges for FY 2023-24
3. Electricity (Rights of Consumers) Rules 2023- GoI notifies the Amended Rules for implementation relating to Meters-Regarding.
4. Measures relating to Safety and Electric Supply
5. TANGEDCO Notice issued to install PQ meter.

TECA Membership Application

Please find the enclosed TECA Membership application. We kindly request our esteemed members to facilitate the distribution of this application among their respective industrial networks. Should you require any further assistance or clarification pertaining to the application process, please do not hesitate to contact us.

I sincerely thank all our members for reading our newsletter. I take this opportunity to request you to visit our website www. tecaonline.in.

I hope to see you in person at one of our future events or join us soon as a new member or partner!

Sincerely

Mr. **Pradeep Natarajan**
President

Tamil Nadu Electricity Consumers' Association

Formerly (Tamilnadu Electricity Consumers Association)
Regd. No. 181-8524/1998 **CIN.** U37102TZ1998GAP008524
1st Floor, SIEMA Building, 8/4, Race Course, Coimbatore - 641 018
Phone : 0422 4351400 E-mail : teca@tecaonline.in Web : www.tecaonline.in

APPLICATION FOR MEMBERSHIP

1. Name and Address of the Company : .....

.....

.....

PIN Code : ☐☐☐☐☐☐

Telephone : STD Code ..... Number .....

Fax : STD Code ..... Number .....

E-mail Address : .....

2. Constitution of the Organisation : ☐ Sole Proprietorship ☐ Company ☐ Partnership ☐ Society

Others (Specify) .....

3. Name of the ☐ Proprietor ☐ Mg. Partner ☐ Mg. Director : .....

Telephone : STD Code ..... Number .....

Fax : STD Code ..... Number .....

E-mail Address : .....

Mobile : +91 .....

4. Name of the Applicant's representative in TECA : .....

Designation : .....

Telephone : STD Code ..... Number .....

Fax : STD Code ..... Number .....

Mobile : .....

E-mail Address : .....

5. Membership in Other Trade / Industry / Association : 1. .....

2. .....

3. .....

6. Type of Industry

☐ Textiles ☐ Chemicals & Fertilizer ☐ Engineering
☐ Paper & Pulp ☐ Iron & Steel ☐ Flour Mills
☐ Plastics ☐ Ferro Alloys ☐ Food Processing
☐ Cement ☐ Mining & Minerals ☐ Hosiery & Garments

Others (Specify) .....

7. Year of Establishment : .....

8. **GST No.** : ..... PAN No. .....

9. Particulars of Electric Power Supply : .....

Service Connection No. : .....

Sanctioned demand : ..... KVA / HP

Grid supply Voltage : ..... KVA

Electricity Distribution Circle : .....Electricity Region .....

Please enclose the first page of recent Electricity Bill

10.Declaration

I / We agree to abide by the Articles of Association and the decisions of Tamil Nadu Electricity Consumers' Association.

For the Applicant

Seal & Signature

Place : ..... Name : .....

Date : ..... Designation : .....

Particulars of Entrance fee and Annual Subscription

1. Fees

(a)	Entrance Fee	:	Rs. 2,500/-
(b)	Legal Fund	:	Rs. 2,500/-
(c)	Newsletter Fund	:	Rs. 1,500/-
(d) (I)	**The Annual subscription @ Rs. 4.50/- per Sanctioned Demand of KVA or HP (Subjected to a minimum of Rs.1500/- and maximum of Rs. 18000/-) GST @ 18%**	:	Rs.
	Total	:	**Rs.**

2. Particulars of Payment - Cheque in favour of "Tamil Nadu Electricity Consumers' Association".

Cheque No. ..... Dated ..... Amount .....

Drawn on .....(Bank) Branch .....

FOR OFFICE USE

Date of receipt of Application : .....

Membership Request : Accepted / Rejected

Directors' Signature : 1. ..... 2. .....

Date of Admission / Rejection : .....

Membership Number : .....

Date of Communication of the decision to the Applicant : .....

Regional Affiliation : .....

Administrative Officer President

VISIBLE BENEFITS OF MAINTAINING LAGGING 0.97 PF at INDUSTRY'S EB INCOMING

Er. ASHOK SETHURAMAN
BEE Accredited ENERGY AUDITOR, Coimbatore
ashok@energymeasuretosave.com

Presently, many of the industries are having a mixture of linear and non-linear loads, this leads to current unbalance at the EB Incoming distribution feeder practically and hence their Automatic PF control malfunctions, pumping back to grid, more PF values from Lagging to Leading region in any of the 3 Incoming phase feeder lines, coming from the grid.

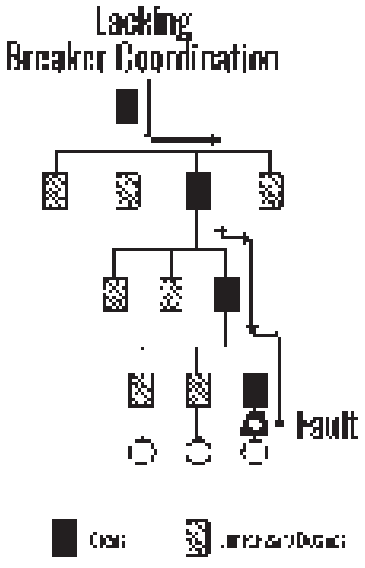
The industry faces nuisance trippings sometimes and Harmonic Distortion is more at Incoming EB feeder due to UPF and leading PF situations. The purpose of this article is to share case studies here and invite the user-feedbacks and their similar experiences to share back, and this will benefit many industries that face these similar situations of Power Interruptions and the PQ issues.

I am pleased to share below the two visible benefits achieved by two textile mills recently by reducing PF at their EB Incoming feeder in Tamil Nadu and the billing is in KWH. The textile mill's Electricity consumption's loading is a steady & slowly varying gradually. Nowadays, most of the latest textile spinning mills have loading around 75 % VFD as Non-Linear loads only.

CASE STUDY OF AVOIDING THE NUISANCE TRIPPINGS DUE TO PF at 0.97 at Industry EB INCOMING :-

This is a case study of nuisance tripping of the loads due to maintaining the Unity Power Factor in the textile spinning mill. This is a textile spinning mill running in Tamil Nadu. This mill's Sanctioned Demand is 2800 KVA. The mill was maintaining Recorded Demand around 2470 KVA monthly.

The mill has two distribution transformers, one old transformer and the other new transformer. The mill has a major portion of VFD loads in both the transformers. The mill has APFC at its EB Incoming, and it is maintaining a overall average EB Incoming PF of 0.995 & above as UPF always and their APFC is single CT sensing type. The mill's daily Electricity consumption is around 52000 units per day. The plant's KWH vs KVA load factor is 88 % KWH consumption with respect to 2470 KVA recorded demand.



In the 2 months of March and April 2023, this mill faced frequent nuisance trippings of the VFD loads in the old transformer distribution, say 3 to 4 times a day. But the VFD loads in the new transformer did not trip. The mill had tried to find the root cause of the breakdowns and monitored all the power & quality parameters from the loads to the Incoming Transformer upto the EB, but their exercise did not work out and the trippings were happening still till first week of May 2023.

So they contacted us in May 2023 first week, the mill was suggested by us to maintain 0.97 PF only and observe for two weeks. By the end of May 2023 after three weeks, the mill gave a positive feedback to us

that their loads did not trip in their old transformer distribution feeders, thanks to this new setting of o.97 PF and that they are relieved of their problem of tripping.

Because mill PF had reduced to 0.97, the mill's Recorded Demand went up by around 50 KVA now and the mill is recording around 2540 KVA, say around 91 % of the sanctioned demand KVA. The mill management took a wise decision to maintain hereafter at 0.97 PF only and that they are ready to pay the Actual KVA recorded even if it is above 90 % of sanctioned demand. They felt this is a better and safer alternative for them at this 0.97 PF condition, instead of their mill facing the frequently nuisance tripping of loads in their one of the two transformers. And their nuisance tripping issue got solved by this PF resetting.

Now for the past three months from May, June and July 2023, the mill did not face that issue at all ie the tripping of their loads. Also their Current THD % reduced considerably on reducing PF from unity to 0.97. This is a focus from a different angle on the industry's electrical distribution, about the visible benefits of maintaining around 0.97 PF at their Incoming, instead of unity PF always which often leads to leading PF & voltage unstable region.

CASE STUDY OF HARMONICS REDUCTION BY LAGGING PF AT THE INDUSTRY EB INCOMING :-

We have recently conducted energy audit in this mill. This is a textile spinning mill based in Tamil Nadu. This mill has SD Santioned Demand is 3850 KVA and its Recorded Demand is 2970 KVA as on May 2023. The mill consumes around 60,000 units per day and has 5 distribution transformers. During our monitoring and recording of the EB Incoming parameters, our Energy Audit team observed deviations of current Harmonics THD % by switching on and off the capacitor banks in Mill's power house. The plant's KWH vs KVA load factor is 84 % KWH consumption with respect to 2970 KVA, the Recorded Demand.

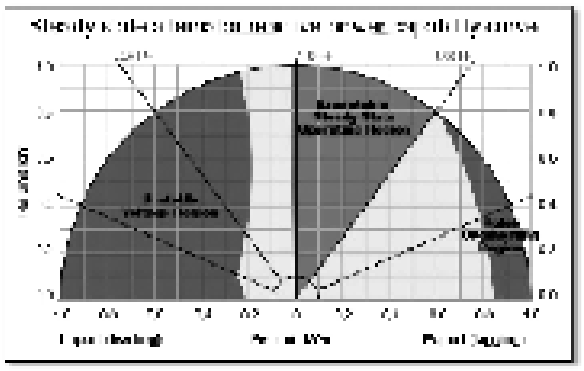
Our Energy Audit team has been conducting energy audits in hundreds of textile mills since many years and as part of our energy audit study, we always put our PQ analyzer on trend for hours at their EB Incoming and record the EB Incoming Basic, power and Energy parameters including the PQ parameters.

When our Energy Audit team conducts this PQ monitoring and recording, we ask the mill Electrical to switch OFF & ON their running capacitor banks one by one at the Power house including the APFC panel and record the change in the trends in the PF, KVAR, KVA, KW, in each phase and the Current THD % & the voltage THD %.

When the PF was at 0.993 say Unity Power Factor at the EB Incoming the current THD % was 11.7 % and when we selected some of the capacitors in different transformer feeders and asked them to switch OFF, the size of 550 KVAR capacitor bank, we observed the PF came down to 0.977 PF and the current THD % came down from 11.7 % to 8.1 %

Naturally this increased their KVA demand by 50 KVA from 2870 to 2920 KVA. The mill's 90 % of the Sanctioned Demand is 3465 KVA and now they are only 2920 KVA and we have asked them to reduce another bunch of capacitor banks and maintain a healthy lagging PF band, thereby expecting another 80 KVA increase say upto 3000 KVA in the Recorded Demand.

PRACTICAL OBSERVATIONS BASED ON MAINTAINING THE LAGGING PF



Thanks & Kind Courtesy to the above CUMMINS DG PF Spectrum Image Illustration:- Normally as an analogy, we visualize the EB's electrical distribution is like the SEA whereas DG's electrical distribution is like a POND, for better understanding of the steady reactive power at the lagging of 0.80 pf lagging to Unity PF.

We see the borders of the green healthy PF band is between lagging 0.8 PF and 1.0 Unity PF. Practically to achieve a healthy PF regulation, PF set point needs to be at the central green region of healthy PF border points. But the user needs to reduce the KVA demand as well and reduce the line losses from the load to the EB Incoming. So the PF set point is conveniently set at the midpoint of 0.95 lagging PF & 1.0 PF say at 0.975 lagging PF.

We have to allow the APFC - PF controller to regulate the PF accurately in all the three phases RYB which have varying individual not-equal line currents in three phases and the PF compensation is achieved if the set point and measured value are in the healthy middle band at 0.97 PF of the safe PF zone and not at the border of safe PF zone say at 1.0 UPF point.

Every industry has step wise control in their APFC. Invariably say 8 out of 10 industries where we had conducted many hundreds of energy audits, we observed and measured all capacitors, but the lower value PFC capacitors failed silently inside the panel and gone un-noticed. Electrical crew is aware of mal-functioning, but their other breakdown priorities delayed corrective action.

So the PF band regulation got broadened due to the step switching of bigger size capacitors inside the APFC panel & due to not working of the smaller size capacitors. Also most of industries don't replace the capacitor when the capacitor charging current drops say by half the value say healthy 50 KVAR capacitor reads 63 Amps current whereas the de-rated capacitor reads say 40 to 50 Amps or single phasing SPP happens in 3 phase capacitor bank. A SPP capacitor consumes much more Watts, is bigger loss.

This type of de-rated capacitors or SPP is silently left out in that condition, due to maintenance priority issues. Now you visualize your APFC at 1.0 PF set point could not achieve precise control at 1.0 UPF but gives zig-zag output and thereby leading PF issues creep in over weeks to months adding damage to the existing PQ issues and due to this, your industry faces penalty bills too.

A quality APFC panel is a MUST with built- protections to the Heavy-duty capacitors & capacitor-duty contactors for long life of panel. But we need to be aware that capacitors are also consumable based on its quality, working or switching patterns. So Monitoring of capacitor currents monthly and routinely check they are delivering / compensating PF in the TEE connection of EB Incoming at one leg of TEE, opposite leg of TEE is the load and central leg is the capacitor & switching the Cap ON & OFF.

We observe that in 7 out of 10 industries, they have excess capacitor banks silently switched ON only in Powerhouse, and pumping more than Unity PF from powerhouse to EB grid & leading KVAR situations. It is not monitored & hence not controlled.

All along the years, the HT consumers maintained Unity Power Factor with their limited PF controls at power house. But maintaining a strict UPF with non-linear VFD loads is practically difficult in the running industry and the cross over from lagging to leading is happening intermittently and this cross over peaks more frequently during the various plant loading conditions.

Few industries are only running their loads with neck-to-neck supply demand KVA position above 90 %. And these industries also can concentrate on the reduction of KVA demand at their field load ends by the load end PF compensation for all their linear loads, and scope is there definitely. They can maintain around lagging 0.97 PF for their healthy EB grid conditions.

Practically the industry either keeps excess capacitors at its Incoming of MCC manually or thro the APFC sensing on single CT from only one phase out of the three phases, this is what is observed in industry. (First they have to change this to 3 CT sensing). This results in excess PF & shift to leading PF region from Lagging to Leading PF at the Incoming of their industry. This results in unstable voltage parameters and the feeder grid gets weakened gradually by this fluctuating voltages.

Hence the PF is not maintained steady at the Incoming in the averaging time cycle. Here the consumers are recommended to maintain around 0.97 PF lagging precisely so that they can achieve pinpointed PF control at the set point to 0.97 PF (and not to maintain unity PF) at their EB Incoming always during the monitoring & billing cycle over a month.

USEFUL POINTERS TO THE INDUSTRY & BUILDING SEGMENT :-

1. You need to categorize the linear loads and non linear loads for the premises. For linear load motors above say 3 HP or 5 HP and above, depending on industry loading pattern, you have to plan for Load End PF compensation with plain capacitors. Many of the Air conditioning AHU in the buildings HVAC circuits are partly or under-loaded and operating at poor PF only.

2. Plan to optimize your plain capacitor banks at the SSB to suit the linear load and their loading capacity. Ensure that you are not allowing the excess capacitors at load end, SSB and at theMCC at any point of time.

3. Your industry for decades had followed only the PF compensation at Power house with fixed and APFC type panels. By this you had incurred line losses all these years and you were forced to put excess capacitors at power house as per PF triangle.

4. This is the time you can plan to have capacitors in each stage so that the PF is compensated and improved from load end, to the SSB and to deliver around say lagging average PF 0. 85 to 0.90 at the power house.

5. From lagging 0.80 to 0.90 pf from the field to 0.97 lagging PF at the transformer secondary, your APFC needs to improve and maintain the PF precisely in all the three not-equal currents in 3 phases, and modulate to maintain always at narrow PF band at 0.97 lagging.

6. Swap your APFC control relay to 3 CT operated relay and this exercise will allow you to keep your lagging PF at narrow band around 0.97 and check for your APFC fool proof operation to maintain the strict average PF & not allowing zig-zag PF band.

7. For the same industry, on its non-linear loads like the VFD etc drives, you have to retrofit AC Line Reactance choke at the Incoming of each of your VFD so as to house arrest or curb the current Harmonics partially there, ie arrest at Source itself.

8. Though your VFD OEM says that their DC link choke will take care of Harmonics reduction, please retrofit the sized AC line choke after discussing with them. This will reduce your current Harmonic distortion by one-third in each of your VFD's input feeder by retrofitting the AC Line Reactance choke.

9. Each VFD needs its own AC Line choke, do not compromise to bulky line choke for a batch of VFDs and locate the same at SSB, this will mal-function. Like a capacitor to the motor, AC line choke to VFD is a MUST Add-on and will be part of VFD.

10. For your non-linear load SSB, you have to plan for Detuned Reactor coupled Capacitor bank sized to the load end capacity and ensure at every point of your power distribution net work the Harmonic distortion is mitigated in stages from the load end to the SSB to the MCC at the Power House.

11. Please don't' keep plain capacitor at the input circuit of VFD to SSB, this will only amplify the Harmonics from VFD to throw big distortion & back to Incoming feeder. VFD is like a variable capacitor, if you look at this, from LCR network point of view.

12. Visualize Any Inductor in the electrical distribution circuit, you always pair it with a Capacitor for balancing the PF at the same step of electrical network. Each step of the network will have LC "Inductor + Capacitor" combo to keep the circuit PF healthy or optimum at any point of network and at any given loading of the motor.

13. Here transformer is the Biggest Inductor and that too needs Secondary-standby small capacitor or RCC at the ACP Incoming at your power house. Motor is a small Inductor which always tries to pull your network PF. Here the matching capacitor size to maintain say around 0.9 lagging PF needs to be coupled at the motor end only as part of Best Operating Practices.

14. BEE always recommends monitoring your electricity consumption daily in KWH & KVAH and averaging the same shift wise, day versus night and peak and off-peak times. This can be done by you in parallel to the EB's Incoming meter. This monitoring will prompt and guide you to optimally maintain your Electrical basic, power and energy parameters daily.

CONCLUSION :-

Firstly when this PF regulation exercise is implemented by the all the HT consumer industries down the line from the same EB feeder, this will also reduce the Current & voltage Harmonics Distortion starting from the industry to Substation EB feeder line. This will also address the Voltage Harmonic Distortion issues in the EB Incoming feeder from substation to all industries.

The industries in the above case study are able to reduce the Harmonics at their Incoming, they could stop the Nuisance Trippings of their loads, and their exercise also makes their Incoming EB grid safe and healthy for them and for the others in the same EB network coming under the same feeder from the Sub-station.

If the above recommendation of maintaining the monthly average PF around 0.97 lagging, then it will be a win- win situation for the consumer industry and avoidance of voltage related breakdowns in your feeder segment, as this will also contribute to the overall health improvements in your EB grid. Any outage in your EB grid causes heavy losses for all industries that day.

Till date your industry's Electrical team has maintained over-PF compensation safely in most of the industries and it is time now to revisit to your APFC control systems of Capacitors, Reactors so as to operate them with their healthy self-parameters. Also this APFC monitoring can become part of the industry's IOT sensing & ENMS monitoring of power & PF parameters as well.

If the PF automation at your Power House is mal-functioning in your industry, you lose control of your PF but you are not aware because you are pumping more & leading PF to the grid with your excess capacitors this will lead to PF or Harmonic Penalties.

The author has expressed his views based on his practical observation & experience after conducting around 500 Energy Audits in various industry segments. His views are purely technical; do not carry any bias or profit motive. The objective of the article is to make the user to revisit & optimally maintain Precisely, lagging PF (and not unity PF) regulation at his EB Incoming feeder.

Er. ASHOK SETHURAMAN, BEE Accredited ENERGY AUDITOR, Coimbatore,
ashok@energymeasuretosave.com

CONSERVING OUR ELECTRICITY IS OUR COLLECTIVE RESPONSIBILITY TODAY,
FOR A BETTER TOMORROW!

Central Government Amends Electricity (Rights of Consumers) Rules, 2020 by Introducing Time of Day (ToD) Tariff and Simplification of Smart Metering Rules

The Government of India has introduced two changes to the prevailing power tariff system, through an amendment to the Electricity (Rights of Consumers) Rules, 2020. The changes are: introduction of Time of Day (ToD) Tariff, and rationalization of smart metering provisions.

Introduction of Time of Day (ToD) Tariff

Rather than being charged for electricity at the same rate at all times of the day, the price you pay for electricity will vary according to the time of day. Under the ToD Tariff system, Tariff during solar hours (duration of eight hours in a day as specified by the State Electricity Regulatory Commission) of the day shall be 10%-20% less than the normal tariff, while the tariff during peak hours will be 10 to 20 percent higher. ToD tariff would be applicable for Commercial and Industrial consumers having Maximum demand of 10 KW and above, from 1st April, 2024 and for all other consumers except agricultural consumers, latest from 1st April, 2025. Time of Day tariff shall be made effective immediately after installation of smart meters, for the consumers with smart meters.

ToD is a win-win for consumers as well as the power system. "The TOD tariffs comprising separate tariffs for peak hours, Solar hours and normal hours, send price signals to consumers to manage their load according to the Tariff. With awareness and effective utilization of ToD tariff mechanism, consumers can reduce their electricity bills. Since solar power is cheaper, the tariff during the solar hours will be less, so the consumer benefits. During non solar hours thermal and hydro power as well as gas based capacity is used - their costs are higher than that of solar power - this will be reflected in Time of Day Tariff. Now consumers can plan their consumption in order to reduce their power costs - planning more activities during solar hours when power costs are less."

The main features of these Rules are as under :

i. ToD tariff for Commercial and Industrial consumers having maximum demand more than 10 kW shall be made effective from a date not later than 1st April, 2024 and for other consumers except agricultural consumers, the ToD tariff shall be made effective not later than 1st April, 2025.

ii. ToD tariff shall be made effective immediately after installation of smart meters for the consumers.

iii. ToD tariff, during the peak period of the day, for Commercial and Industrial consumers shall not be less than 1.20 times the normal tariff and for other consumers it shall not be less than 1.10 times the normal tariff.

iv. Tariff for solar hours, of the day, to be specified by the State Commission shall be at least twenty percent (20%) less than the normal tariff for that category of consumers.

v. ToD tariff shall be applicable on energy charge component of the normal tariff.

vi. The duration of peak hours shall not be more than solar hours as notified by the concerned State Electricity Regulatory Commission or State Load Despatch Centre and the duration of solar hours shall be eight hours in a day as specified by the State Commission.

The Union Minister said that the ToD mechanism will also ensure better grid integration of Renewable Energy sources thereby facilitating faster energy transition for India. "The ToD tariff will improve the management of renewable generation fluctuations, incentivize demand increase during the periods of high RE generation hours and thereby increase grid integration of larger quantity of renewable power.

Most of the State Electricity Regulatory Commissions (SERCs) have already implemented ToD tariffs, for large Commercial and Industrial (C&I) category of consumers in the country. With installation of smart meters, the ToD metering at domestic consumer level will be introduced as per Tariff Policy mandate.

Time of Day (TOD) tariff, is recognized globally across electricity industries, as an important Demand Side Management (DSM) measure which is used as a means of incentivizing consumers to shift a portion of their loads from peak times to off-peak times, thereby improving the system load factor by reducing the demand on the system during peak period. Various statutory provisions already exist to enable and promote implementation of ToD tariff (i.e. Tariff Policy, 2016, Electricity Act, 2003 and National Electricity Policy, 2005).

Rules regarding amendment made in smart metering provision

Government has also simplified the rules for smart metering. To avoid inconvenience / harassment of the consumers, the existing penalties for increase in consumer's demand beyond the maximum sanctioned load / demand have been reduced. As per the amendment in metering provision, post installation of a smart meter, no penal charges will be imposed on a consumer based on maximum demand recorded by the smart meter for the period before installation date. Load revision procedure has also been rationalized in a way that maximum demand shall be revised upwards only if sanctioned load has been exceeded at least three times in a financial year. Moreover, smart meters shall be read remotely at least once in a day and the data shall be shared with Consumers in order to enable them to take informed decision about consumption of electricity.

The Electricity (Rights of Consumers) Rules, 2020 were notified by the government on December 31, 2020, based on the conviction that power systems exist to serve consumers and that consumers have rights to get reliable services and quality electricity. The Rules seek to ensure that new electricity connections, refunds and other services are given in time-bound manner and that willful disregard to consumer rights results in levying of penalties on service providers and payment of compensation to consumers.

The current amendment to the Rules is a continuation of the measures taken by the government, to empower power consumers, to ensure 24X7 reliable electricity supply at affordable cost, and to maintain a conducive ecosystem for investment in the power sector.

Source : PIB Ministry of power

4,000 MW Renewable Energy Power Project being set up in Tamil Nadu

The Union Minister for New & Renewable Energy and Power has informed that under Green Energy Corridor Phase-II, a project has been approved for setting up of 624 ckm of transmission lines and 2200 MVA capacity substations by FY 2025-26, for evacuation of renewable energy power of approx. 4000 MW capacity in the state of Tamil Nadu. The project has been approved by the Ministry of New & Renewable Energy, at an estimated cost of Rs. 719.76 crore with central government grant of Rs. 237.52 crore at 33% of the project cost. The project is under process of implementation by the state agency Tamil Nadu Transmission Corporation Limited (TANTRANSCO).

Under Green Energy Corridor Phase-I, TANTRANSCO reported completion of sanctioned project for setting up of 1068 ckm transmission lines and 1910 MVA capacity substations on October 31, 2022, for which the Ministry has already released a grant of Rs. 524.30 crore to TANTRANSCO.

This information has been given by the Union Minister for New & Renewable Energy and Power Shri R. K. Singh, in a written reply to a question, in Rajya Sabha today, August 1, 2023.

Source : PIB Ministry of power

Installed Wind Energy Capacity in the country is 43.7 GW, likely to increase to 99.9 GW by 2029-30: New & Renewable Energy Minister

The Union Minister for New & Renewable Energy and Power has informed that the installed wind energy generation capacity of the country was 43,773 MW, as on 30th June 2023. During FY 2022-23, the quantum of electricity generated from wind energy in country was 71,814 million units. The major wind energy producing States for the year 2022-23 were Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Telangana.

The Minister informed that in line with the Prime Minister's announcement at COP26, Ministry of New and Renewable Energy is working towards achieving 500 GW of installed electricity capacity from non-fossil sources by the year 2030, which also includes wind energy capacity. As per the Central Electricity Authority's 'Report on Optimal Generation Capacity Mix for 2029-30 Version 2.0', the likely installed capacity of wind energy by the end of the year 2029-30 is estimated to be 99,895 MW.

This information has been given by the Union Minister for New & Renewable Energy and Power Shri R. K. Singh, in a written reply to a question, in Rajya Sabha today, August 1, 2023.

Source: PIB Ministry of power

Tangedco's fault locater to speed up maintenance

The system will enable swift detection and response to faults in high-tension power lines.

Tamil Nadu Generation and Distribution Corporation (Tangedco) is set to improve power supply maintenance with the implementation of the state-of-the-art Travelling Wave Fault Locator system across the state.

The system will enable swift detection and response to faults in high-tension power lines. The authorities have initiated the process of obtaining a feasibility report for the integration of this new technology.

A senior official told TNIE, "Travelling Wave Fault Locator system is designed to pinpoint faults or disturbances in both overhead and underground power cables.

The conventional fault detection methods are often limited in accuracy, especially when dealing with extensive power lines." Acknowledging the need for a more precise fault-locating method, the official emphasised on the importance of reducing manpower and time spent on searching and identifying trouble spots.

"The power utility is working towards procuring and installing wave fault locators on HT lines in the initial phase," he said. Another official said the Travelling Wave Fault Locator promises unparalleled accuracy.

Until now, the authorities were relying on complaints and visual inspections to tackle power line problems, leading to potential communication delays. "With the introduction of this advanced technology, Tangedco aims to overcome such obstacles, ensuring a smoother and more efficient power supply management," the official added.

(Published in The New Indian Express on 28th July 2023)

Tangedco fails to file GST returns for five years

Since migrating to the GST regime on July 1, 2017,
Tangedco is obligated to file returns once every three months.

The state power utility, Tangedco, has not filed GST returns for five years citing issue with its internal system 'templates' for filing returns. Central authorities have now issued a warning asking it to file the returns at the earliest.

Since migrating to the GST regime on July 1, 2017, Tangedco is obligated to file returns once every three months. However, records accessed by TNIE show that as of June 21 2023, a total of 51 units (wings) of the corporation's headquarters had failed to file returns due to a 'mismatch with GST return details furnished by HQ' and 13 units had failed to file returns due to 'incomplete details'.

A senior official told TNIE, "The GST council had explicitly instructed Tangedco to file returns for financial years 2017- 18 and 2019-20 before May 31, 2023. Unfortunately, none of the units (wings) were able to do it. So, Tangedco's accounts branch had asked officials across the state to submit all necessary details before June 22 but that deadline has also lapsed.

The power utility has now decided to take action against officials and staff responsible for this.

Tangedco already suers from a massive debt of Rs 1.58 lakh crore'

The state government has also not shown any concern. Tangedco already suffers from a massive debt of Rs 1.58 lakh crore, and GST complications will exacerbate its trouble. So, it is important that all pending returns are filed as soon as possible."

64 Tangedco units failed to file returns

As of June 21, 2023, 51 Tangedco units had failed to file returns due to 'mismatch with GST return details furnished by HQ' and 13 units due to 'incomplete details'

(Published in The New Indian Express on 12th July 2023)

Tangedco asks consumers to switch to rooftop solar to cut down on energy bills

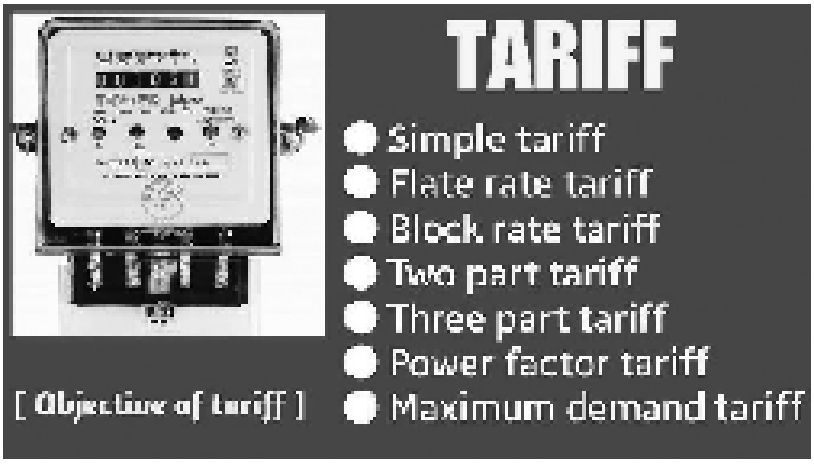
Tangedco put out a tweet promoting solar saying five reasons why you should switch to solar energy. "Switching to solar rooftops is a game-changer.

After being accused of not doing enough to promote rooftop solar among domestic consumers, Tangedco has started a social media campaign to promote solar which will help consumers to cut down

on their energy bills and get a quick return on investment while reducing their carbon footprint. For the first time, Tangedco put out a tweet promoting solar saying five reasons why you should switch to solar energy. "Switching to solar rooftops is a game-changer. It reduces your carbonfootprint, cut utility costs and enjoy long-term savings and takes control of the energy supply. Switch to solar rooftops and make a lasting impact," the tweet reads.

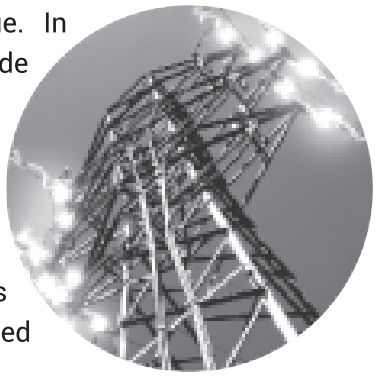
Tangedco pushed for the solar arguing that installation of the rooftop panels would boost the property value and it can be installed on any roof type without the need for extra space. In another tweet, it said a 1-kilowatt rooftop system generally requires 10 square meters of shadow-free area. The utility's solar promotion comes at a time when consumers felt the real impact of the last year's steep hike in energy charges during the peak summer season. A senior Tangedco official said that they started promoting rooftop solar through social media for the benefit of the consumers. The official said that interested consumers can apply for rooftop solar using the utility's portal. "We are also working Bengaluru-based Centre for Study of Science, Technology and Policy (C-STEP) to develop a tool to help the consumer determine the rooftop solar capacity that can be installed on their rooftops. The initial works have begun. In three to four months, the consumers will be able to make use of the online tool, "the official added. As of now, 27,600 LT consumers including 17,072 domestic consumers have installed rooftop solar with a cumulative generation capacity of 193 MW. Tangedco has received online applications for rooftop solar installation from 3600 consumers including 1299 applications from the National Solar Rooftop portal. On the complaints of delay in the installation of net meters for the rooftop solar consumers, the official said that it was there a couple of months back. "All the digital meters procured for the lowtension consumers are bi-directional ones. We are not separately purchasing the bi-directional meters. The same meters setting will be changed and installed," the official clarified.

(Published in DT Next on 23rd July 2023)



WHAT IS POWER QUALITY :

Power quality is the measurement of how close to perfect an electrical voltage is at any given time or point. High quality electrical voltage is a sine wave that measures exactly what is expected in both voltage and frequency. A high quality electrical source is one that can deliver all the electrical energy needed without any change in the voltage. In the past, responsibility for power quality was thought to be the power companies' problem but that isn't really true. In almost every case, the circumstances that impact power quality are outside of the power companies control.

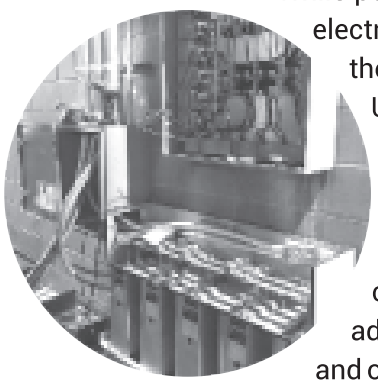


Historically, most power quality problems were considered to be those things that affected the distribution of power. Lightning, line or transformer failures and/or very high electrical demands (brown outs) on the electrical network are just a few. However, most power quality problems are due to technology changes and the way the electricity is now being used by people.

With each decade, the manufacturers of Power Conditioning and Power Quality equipment are faced with a new set of challenges. As technology changes in all industries, so does the need for ensuring the new technology does not impact the older systems and causing electrical problems. Power quality problems caused by this continued equipment improvement and cost reduction have forced large critical power protection systems to look into the reasons for this change in equipment and their function. There are several facts that will force changes in the technology/topology of power protection systems.

POWER CONDITIONING :

The role of **power conditioning** systems in the past was to protect the customer's equipment from power quality problems that occurred external to their facility. Today we must also deal with power quality problems caused by their own equipment.



While power requirements are decreasing for individual pieces of equipment, the electrical distortion caused by the newer, more efficient power supplies degrade the performance of the electrical system both inside and outside the facility. Utilities are unable to provide the high quality and reliability in electrical power required to meet the ever increasing power quality standards of newer equipment.

In the 1970's and 1980's, the problems were most felt in large data centers using sensitive computers. Power quality problems were addressed with Uninterruptible Power Systems, Power Distribution Units, and on site Power Generation. In the 1990's, these problems have increased and moved into factories, offices and anywhere solid-state devices are used. The question now is "Can these systems deal with the new types of critical load?" In many cases the answer is, "Not without minor, and in some cases, major design changes."

The issues are becoming more technical and much harder to explain to the design Engineers as they are not aware of changes that will occur after the original build. This document will explain the problems associated with harmonics.

EFFECT OF POOR POWER QUALITY :

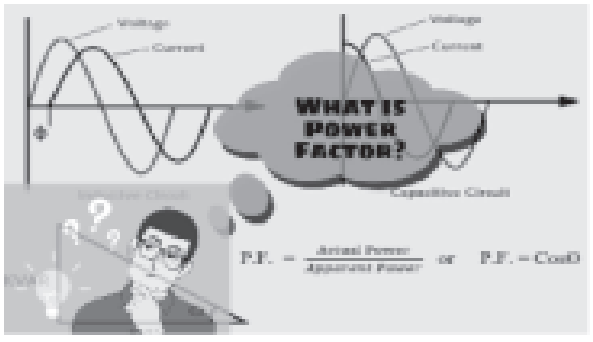
Power quality is a very important issue that should be addressed as poor power quality costs money and in some cases downtime. We will look at some direct and indirect costs attributed to power quality.

Direct cost is the loss of production due to a voltage problem, which trips motor and control devices that stop the manufacturing process. It is the loss of products not produced and the labor charges for removing any damaged materials as well as employee wages paid while waiting for the process to restart.

Indirect cost is the replacement of other equipment that becomes stressed by changing electrical voltages. As an example, a solid-state motor drive fails due to voltage spikes over time. These are commonly caused by power factor capacitors switching on and off line to correct varying power factors. However, the failure and subsequent damage to the machine will be untimely because is not caused by any one spike but by numerous spikes occurring and over a period of time. With this type of power quality damage, it is impossible to avoid the outage.

WHAT IS POWER FACTOR :

Power factor is the difference between the power needed to perform work and the electrical energy needed so the work can be performed. Think of it as water running down a stream and across that stream is a water wheel. The water that pushes the wheel does the work. Now, just because the water that was not pushing the wheel wasn't doing any work, it does not mean it is not needed. If only the amount of water that did work was sent downstream to the water wheel, the stream would not be deep enough for the wheel to turn. In electricity, we call power that does the work real power, and the rest reactive power. The difference between real and reactive power is known as power factor.



We can reduce the reactive power by adding devices to compensate for poor power factor. If we know how much reactive power is needed, we can furnish systems to supply the reactive power and only take real power from the power company. This reduces the power companies' losses and reduces the power bill.

There are different ways to furnish reactive power and different places you can install correction devices. Until recently the most common way to apply power factor correction was to install a capacitor at the electrical load that was causing the problem. Understand that the power factor is only improved from the correction point through to the power source. The motor, or whatever had the poor power factor, still has a poor power factor but now it does not bother anyone. The power factor correction reduced not only the power companies' losses and losses inside the factory when the motor was installed, but also the demand. You pay only for power you use.

ADDRESS AND CONTACT DETAILS OF DISTRIBUTION CIRCLE'S SUPERINTENDING ENGINEERS IN TAMIL NADU

S. No.	Superintending Engineer	Contact Number	Email Id
1	Superintending Engineer / North, Chennai Ground Floor 5B Block, 144, Anna salai, Chennai - 600 002	044-28521833 / 9445850909	sechnn@tnebnet.org
2	Superintending Engineer / Central, Chennai M.G.R. Salai 110 KV, 33KV, 11KV Valluvar Kottam, SS Campus Nungambakkam,	044-2822044 044-2822023 / 9445850707	sechnc@tnebnet.org
3	Superintending Engineer / West, Chennai 33 KV Thirumangalam Complex, Anna Nagar Chennai - 600 040	044-26151133 / 9445850300	sechnw@tnebnet.org
4	Superintending Engineer / South I, Chennai 110 KV Complex, K.K. Nagar, Chennai - 600 078	044-24715121 / 9445850111	sechns@tnebnet.org
5	Superintending Engineer / South II, Chennai 110 KV Complex, K.K. Nagar, Chennai - 600 078	044-24715126 / 9445981258	sechns2@tnebnet.org
6	Superintending Engineer / Chenglepet Office of the Superintending Engineer, TANGEDCO, No.130 GST Road Chengalpattu - 603 001	044-27423293 / 9443343293	secpt@tnebnet.org
7	Superintending Engineer / Kanchipuram EDC, Anna Maaligai, Olimohamedpet, Kanchipuram-631502	044-27277508 / 9445855444	sekcpm@tnebnet.org
8	Superintending Engineer Coimbatore / North TANGEDCO CEDC, North, Tatabad, Coimbatore - 641 012	04222495133 / 9445851051	secben@tnebnet.org
9	Superintending Engineer / Superintending Engineer / Coimbatore, South Tatabad, Coimbatore - 641 012	04222961218 / 9445851151	secbes@tnebnet.org
10	Superintending Engineer / Coimbatore/Metro, Tatabad, Coimbatore - 641 012	0422-2961417 / 9445851251	secbem@tnebnet.org
11	Superintending Engineer / Tirupur, Door. No. 208-650 KRBS Tower, 3rd Floor, Mettupalayam Bus Stop P.N. Road, Tirupur - 641 602	04212470153 / 9445851351	setrprEtnebnet.org
12	Superintending Engineer / Palladam Edc, Tangedco 56B, GT Building, Trichy Road, Palladam - 641664	04255-296444 / 9444099323	sepldm@tnebnet.org
13	Superintending Engineer / Udumalpet, Eripalayam Tiruppur Road, Udumalpet - 642 126	04252224304 / 9445851451	seudt@tnebnet.org
14	Superintending Engineer / Nilgiris, New Diary Complex Coonoor Road, Udhagamandalam - 643 001	04232444382 / 9445851551	senilg@tnebnet.org
15	Superintending Engineer / Erode, No. 948 E.V.N. Road, Erode - 638 009	04242217245 / 9445851900	seed@tnebnet.org

ADDRESS AND CONTACT DETAILS OF DISTRIBUTION CIRCLE'S SUPERINTENDING ENGINEERS IN TAMIL NADU

S. No.	Superintending Engineer	Contact Number	Email Id
16	Superintending Engineer / Thirpur Main Road Vettaikaran Kovil, Gobi 110/11KVSS Campus Nagadevanpalayam (PO), Gobi - 638 476	04285227496 / 9445852100	segobi@tnebnet.org
17	Superintending Engineer / Mettur Mettur EDC Central Office, Mettur - 636 401	04298244177 / 9445852200	semtr@tnebnet.org
18	Superintending Engineer / Salem, TANGEDCO K.N. Colony P.O., Salem - 636 014	04272241310 / 9445852300	seslm@tnebnet.org
19	Superintending Engineer / Madurai / Metro Race Cource Road, K. Pudur, Madurai - 625 007	04522538159 / 9443053767	semdua@tnebnet.org
20	Superintending Engineer / Madurai Race Course Road K. Pudur, Madurai - 625 007	04522537754 / 9443037754	semdu@tnebnet.org
21	Superintending Engineer / Theni T.N.E.B. Complex NRT Nagar Main Road, Theni - 625 531	04546253677 / 9443353670	setheni@tnebnet.org
22	Superintending Engineer / Ramnad Near R.T.O. Office Bharathi Nagar, Ramnad - 623 503	04567230577 / 9443130576	sermd@tnebnet.org
23	Superintending Engineer / Sivaganga Sivaganga Collectorate Complex, Sivaganga - 630 562	04575241600 / 9443341609	sesiva@tnebnet.org
24	Superintending Engineer / Kannyakumari Parvathipuram, Kanyakumari EDC, Nagercoil	0465-230160 / 9443130460	sekk@tnebnet.org
25	Superintending Engineer / Tirunelveli Superintending Engineer, TANGEDCO, Anna Building Thiyagaraja Nagar, Tirunelveli - 627 011	0462-2531981 / 9443155198	setin@tnebnet.org
26	Superintending Engineer / Tuticorin, Tuticorin EDC TANGEDCO, 131, 132, Ettayapuram Road Tuticorin - 628 001	0461-2324150 / 9443141502	setuti@tnebnet.org
27	Superintending Engineer / Virudhunagar, Virudhunagar EDC,TANGEDCO,65, 1, Ramamoorthy Road Virudhunagar - 626 001	04562-244111 / 9443143176	sevdr@tnebnet.org
28	Superintending Engineer / Dindugal Meenakchinaickanpatti Post, Dindigul - 624 002	04512460948 / 9443384960	sedgl@tnebnet.org
29	Superintending Engineer / Pudukottai EDC TANGEDCO Near Old Bus Stand, Pudukkottai - 622 001	04322221853 / 9443121854	sepdk@tnebnet.org
30	Superintending Engineer / Trichy Metro, Kamaraj Building First Floor, Mannarpuram Main Road Mannarpuram Main Road, Trichy - 620 020	04312422216 / 9443370450	setrym@tnebnet.org

ADDRESS AND CONTACT DETAILS OF DISTRIBUTION CIRCLE'S SUPERINTENDING ENGINEERS IN TAMIL NADU

S. No.	Superintending Engineer	Contact Number	Email Id
31	Superintending Engineer / Perambalur Electricity Distribution Circle, TNEB-230 KV Auto Sub Station Campus, Four Road, Perambalur - 621220	04328224015 / 9445853641	sepblr@tnebnet.org
32	Superintending Engineer / Krishnagiri / 110/33 KV Sub Station, Kattaiganapally, TNHB Phase II Krishnagiri TK & DT, Pin Code - 635 001	9445865102	sekgiri@tnebnet.org
33	Superintending Engineer / Tirupattur 2 4B, Balammal Colony, Tirupattur - 635 601	04179225923 / 9445855500	setpt@tnebnet.org
34	Superintending Engineer / Vellore 10th East Main Road TNEB, Gandhi Nagar, Vellore - 632 006	04162243121 / 9445855222	sevl@tnebnet.org
35	Superintending Engineer / Cuddalore TANGEDCO, CEDC Capper Hills, Cuddalore - 607 004	04142223793 / 9445856222	secud@tnebnet.org
36	Superintending Engineer / Viluppuram No.10 Old Power House Road, Viluppuram - 605 602	04146240371 / 9445856111	sevpm@tnebnet.org
37	Superintending Engineer / Namakkal, TANGEDCO Opp to Kannan Smart Super Departmental Store Tiruchengode Road, Namakkal - 637 001	9445852400	senmkl@tnebnet.org
38	Superintending Engineer / Karur EDC TANGEDCO TNEB Complex, 3, Kovai Road, Karur - 639 002	04324-248778 / 9443366791	sekrr@tnebnet.org
39	Superintending Engineer / Nagapattinam EDC TANGEDCO, Satayiappar East Street Nagapattinam - 611 001	04365-224878 / 9443340723	senpm@tnebnet.org
40	Superintending Engineer / Tiruvarur EDC 73 Durgalaya Road, Thiruvarur - 610 002	04366-244099 / 9445865161	setrvr@tnebnet.org
41	Superintending Engineer / Thanjavur No. 1 Vallam Road, Thanjavur - 613 007	04362230661 / 9443323066	setnj@tnebnet.org
42	Superintending Engineer / Dharmapuri / O/o. Superintending Engineer, TANGEDCO Dharmapuri EDC, Salem Main Road, Opp to Collectorate Dharmapuri - 636 705	04342-230738 / 9445855582	sedpi@tnebnet.org
43	Superintending Engineer/Thiruvannamalai Vellore Road Vengikal Thiruvannamalai - 606 604	04175233122 / 9445856333	setvm@tnebnet.org
44	Superintending Engineer / Kallakurichi Shivaji Nagar Lions Club Building, Kallakurichi - 606 202	04151220574 / 9445855710	sekri@tnebnet.org

Tamil Nadu's Solar Power Generation Hits a New Record

Tamil Nadu's solar power generation hit a new record reaching 4,882 MW on August 16.

This surpassed the previous record of 4,866 MW set on February 26, 2023, Tamil Nadu Generation and Distribution Corporation (Tangedco) said in a tweet.

The State also recorded solar consumption of 36.10 million units on August 16, which is the highest so far this year, it added.

On August 16, the State's peak power demand was 16, 744 MW and daily consumption was 355.050 million units.

According to data from Central Electricity Authority (CEA), Tamil Nadu's cumulative solar generation was 520.70 million units so far in August.

Tamil Nadu has an installed solar capacity of 6,750.62 MW (including rooftop solar).

Tamil Nadu has the highest energy consumption among the southern States. The State saw an all-time high peak demand of 19,387 MW on April 20. On the same day, an all-time high daily consumption of 423.785 million units was recorded.

Courtesy: The Hindu dated August 17, 2023

Tamil Nadu Electrical Inspectorate :
Procedure for issue of safety certificate Competent Authority

Competent Authority

- *Tamil Nadu Electrical Inspectorate (TNEI)*

Stage

- *Pre - Operation*

Approving Authority

- *Upto 630 kVA - Electrical Inspector*
- *630 - 2500 kVA - Senior Electrical Inspector*
- *Above 2500 kVA - Chief Electrical Inspector to the Government*

Procedure & Documents Required

- *Applicant to fill the online form on the Single Window portal and upload the following documents :*
  - *Letter requesting issue of Safety Certificate (in Applicant's Letter Head).*
  - *Contractor's work completion report as per IS 732: 1989.*
  - *Copy of appointment order of SCC holder.*
  - *Copy of consent letter from SCC holder.*
  - *Item wise compliance report as stipulated in the drawing scrutiny report, if any.*
- *Applicant to make the necessary online payment and submit form on the Single Window Portal.*
- *Applicant to submit following original documents, if applicable, along with the application reference number to the respective TNEI Office by Speed Post:*
  - *Test certificate of E.H.V / H.V / cable / equipment manufacturer*
  - *Invoice of H.T. cable.*
  - *D ocument (if any) raised in the drawing scrutiny report.*
- *TNEI Officer confirms receipt of hard copies by speed post.*
- *TNEI Officer shall communicate queries, if any, to the applicant within 7 days of receiving documents.*
- *Notice for Inspection along with inspection date and time will be communicated via e-mail and SMS to the applicant.*
- *TNEI officer will inspect applicant's premise and issue a Defect Report, if applicable to the applicant online.*
- *Applicant shall address defects and upload a Rectification Report, if applicable online addressing all the defects mentioned.*
- *TNEI officer shall review the Rectification Report and issue the Safety Certificate online on the Single Window portal*

Process Time

- *7 days*

Process Fees

- *Based on Equipment*

Zolatec Power
Systems (P) Limited

About us

Zolatec Power Systems is an integrator in the renewable energy solution space. We aim at providing the best possible energy solutions which cater to our customer's apparent and latent needs. We also aim to make energy projects viable and less capital intensive through our attractive funding model. Through our projects we aspire to promote the role clean green energy plays for a sustainable future.

What we do?

- Large scale ground mount solar turnkey projects
- Industrial Rooftop projects

Why Choose us?

- Customized designs to meet customer needs and expectations
- In-house team of experts to design efficient large scale turnkey projects
- Sturdy and long-lasting commissioning
- High emphasis on quality
- Prompt after sale service

Attractive funding options available

Corp. Office : Puliakulam, Coimbatore - 641 045.
Tamilnadu, India. **zolatecpower@gmail.com**
Ph : 0422 2312860 / 861. Mobile : 89460 02528

SUSTAINABLE energy for a future...

SARADHA ELECTRICALS

946, Avanashi Road, COIMBATORE - 641 018.
☎ 4279447, 2235029, 2236581
Email- saradhaelectricals@yahoo.co.in

Distributors for

marathon® electric

BEE BEE® Oil Starter.

radicon

ELECON

TGPL Transtech Gears