

**Maharashtra State Electricity Distribution Co. Ltd.'s
Consumer Grievance Redresses Forum
Nagpur Zone, Nagpur**

Case No. CGRF(NZ)/14/2019

Applicant : Dew Medicare and Trinity Hospital,
Plot No. 80-81, House No. 845,846
Hindustan Colony, Wardha Road,
Nagpur.

V/s

Non-applicant : Nodal Officer,
The Executive Engineer,
Congress Nagar Dn., M.S.E.D.C.L.,
Nagpur.

Applicant represented by : 1) Dr. Shailesh Pitale In Person,
2) Dr. Sudhakar Dhondge, CEO of Dew
Medicare and Trinity Hospital,
3) Shri. Niranjan Deshkar, Consultant

Non-applicant represented by: 1) Shri .K.P. Bhise Exe. Engr.
Congress Nagar, Dn., Nagpur.
2) Shri. U.P. Faraskhanewale AEE
, Regent Sub-Dn
3) Shri M.S. Ghanote, Dy. M, Congress
Nagar Dn, Nagpur.

Quorum Present : 1) Shri Arvind Jayram Rohee,
Chairperson.
2) Mrs. V.N. Parihar,
Member Secretary
3) Mrs. Asmita Avinash Prabhune,
Member(CPO)

ORDER PASSED ON 30.03.2019

1) This grievance application is filed on 12.02.2019 under clause 6.4 of the Maharashtra Electricity Regulatory Commission (Consumer Grievance Redressal Forum & Electricity Ombudsman)

Regulations 2006.

2) The Non- applicant filed reply on 02.03.2019 and denied the applicant's claim for damages & compensation.

3) Forum heard arguments of both the sides on 06.02.2019 & perused the case record.

4) Brief history of grievance application is that on 19th July 2016 at 09.30 am there was a blast and flashover at the point of commencement of electrical supply due to overvoltage at the premises of applicant which has caused huge damage to the properties, instruments, chemicals etc. of DEW Medicare and Trinity Hospital with LT consumer number 410018476073. They also suffered pain and mental agony for loss caused. The matter was informed to MSEDCL immediately. Investigations were carried out from Transformer end to Current Transformer Meter in their premises. The details of damages, loss and expenses incurred by owner Dr. Shailesh Pitale towards repairing, reinstallation of burn equipments of electrical installation at DEW and TRINITY Hospital due to fault in MSEDCL system on 19.07.2016 and 24.07.2016, by applicant were furnished to the Superintending Engineer of Nagpur Urban Zone MSEDCL, Nagpur on 21st March 2018. However, they did not receive any reply from them regarding the compensation for the damages due to blast and flashover. This compelled them to lodge grievance for necessary redressal firstly to IGRC and then to this forum.

5) The applicant further added that their electrical installation at above location was charged in September 2015. Their Sanctioned load is 90 KW. NA sanctioned the estimate for 200 KVA, Double pole mounted Transformer vide letter No. EE/CNDN/T /ESTM/ Supply/Non-DDF CCR&F/2014-15/60 dated 27/11/2014. Complete LT installation was functioning satisfactorily till 19/07/2016.

6) On 19th Jul 2016 at 09.30 AM, one 11 KV conductor on top of Double Pole structure was found disconnected and tripping also occurred from 33 KV substation. After meggering it was observed that one pin insulator on top of DP structure failed, causing earth fault between 11 KV and pole i.e. earth. Pin Insulator was replaced and conductor was reconnected. Low Tension distribution box near Transformer was opened and status of Low Tension SFU/MCCB and fuses were checked. It was noticed that fuses were intact. Same status was there at the feeder pillar outside the owner's premises from where supply is tapped. Minor indication of flash was noticed between R phase and neutral in feeder pillar. CT meter compartment was opened in presence of NA representative. It was observed that outer plastic cover was damaged due to very high pressure and again indication of flash between R phase and neutral. MCCB in meter box did not trip. They opened the cover of main incoming AMF panel (Vermin proof) consisting of HRC fuse links and four pole contactors. Again, HRC fuses were intact. It was noticed by them that complete

control wiring was damaged, insulting sleeves on bus bar peeled off and clear indication of strong flashover between R phase and neutral incoming terminals of four pole contactor with complete burning of R and N pole (photo attached). Physical clearance between two poles for LT line voltage was 25 mm as per safety norms. The panel was removed and sent to panel fabricator for cleaning and repairs. They installed manual changeover in place of removed AMF panel. Till this time NA's persons informed them that repairing work on DP was over and resumed the supply up to outer feeder pillar. Applicant also paid the demand note for fresh CT meter. Damaged meter was taken away by NA. They started out investigation down the line up to last point of utilization to assess the severity of damage. It was observed by them that the load on R phase was the most affected load. After isolating damaged loads, they tried to resume supply on existing DG set and complete load was running satisfactorily for about 6 hours. At 9 PM on same day, they planned to change over to NA supply. Voltages were measured for Line to Line and Line to neutral. While switching the loads on normal supply, it was observed that neutral to earth voltage in their premises was increased over and above prescribed normal limit. As situation was alarming, they again switched the load to DG supply and measured Neutral to earth voltage which was found to be below 1 volt. Thereby they visually checked the T/F neutral connection using torch since it was dark. It was observed by them that neutral earthing

of T/F was burnt and disconnected. This connection was done with 8 SWG GI wire. The NA was apprised about situation who rushed to the site immediately at 9.25 PM. Neutral was again connected to neutral earth with ACSR conductor and the problem of neutral shifting was solved. After this instant, officials of the NA were busy in identifying the damaged equipments, gadgets and their replacement. Within two days AMF panel was reinstated and electrical installation was switched to normal mode. List of damage caused and inconvenience to patients and doctors is slated to be beyond tolerable limits.

7) Above arrangement worked in normal mode till 24.07.2016 and at 9 PM on same days, similar event occurred damaging the new CT meter due to flash over. Following were the observations made by the officials of NA this time.

a) This time also there was tripping from 33 KV substation and same events occurred on DP structure outside. Supply was disconnected, their system switched to DG for complete night, critical patients were shifted to other hospitals, Chemicals and Medicines were shifted to other safe places.

b) Next day morning on 25.07.2016, all officers from NA visited the site. Everybody witnessed the aftereffects of event. This time post insulators of AB switch failed and same type of fault concurred.

c) It was suggested by NA to shift the supply to hospital from other nearby T/F from where supply is given to other consumers. Anticipating the problem in T/F, the T/F was sent to manufacturer for testing.

d) Again, inspection was carried out in same manner as before. T/F was replaced by 100 KVA T/F which is still installed on DP structure. After seven to eight days supply to hospital was shifted to 100 KVA T/F.

e) This time also contacts of main contractor were damaged and they replaced the same. But DG contactor was in good condition as it was not in use.

f) Supply was shifted to DG for complete night.

e) Inspection carried out to again check damages. Outdoor unit of VRF system was damaged this time which caused inconvenience to patients and doctors also.

g) All over current protective devices did not operate making clear that the problem is due to high voltage surge transferred from external fault as mentioned.

8) Applicant therefore seeks relief as follows to compensate for the losses.

A) Financial losses incurred due to damages to the properties, instruments, chemicals etc. of Rs.21,71,050/-.

B) For mental and physical harassment caused to me due to loss of interest and unnecessary correspondence in this matter for such a long period – Rs.10,00,000/-.

9) The Non-applicant filed their written reply and therein stated that the estimate for providing supply to Dr. Shailesh Umakant Pitale, Dew Medicare Trinity Hospital, Nagpur was sanctioned vide No.EE/CNDN/T/ESTM/Supply/NON-DDF-CC&RF/2014-15/6 Dt. 27.11.2014. Accordingly consumer's contractor completed the work of erection of a 200KVA Distribution Transformer (DTC code 4682444) and allied equipments. The Work Completion Report was submitted to this office on dt. 07.08.2015 & the installation was charged in the month of Sep-2015. As per Non applicant:-

1) On 19.07.2016 ,11KV Navjeevan feeder emanating from 33-11 KV Chhatrapatinagar Sub-station tripped along with tripping of 33 KV Pardi-Chhatrapati Line on 3 phase Overcurrent and EartFault indication. After restoring 33KV supply patrolling of above said faulty feeder was carried out wherein 11KV pin insulator at above said Distribution Transformer location was found punctured. The same was replaced and feeder was charged. During the patrolling as said above earlier the staff from Dr.Pitale's Dew Trinity Hospital reported burning of Current transformer meter installed in their premises hence inspection of consumer installation was carried out where it was

observed that 4 pole contactor, wiring and control panel and CT meter were burnt. The burnt CT meter was replaced after consumer paid the cost of meter with Genus make 40-200A meter. The rectification of problems on consumer side installation as said above was carried out by their consultant.

2) The similar incident as stated in point No.1 occurred on Dt.24.07.2016 wherein the post insulator of Airbreak (AB) Switch installed at above said DTC DP was found punctured along with breaking of 11 KV jumpers at the said location. The feeder was charged after carrying out rectification work. However, the above said transformer was kept off position. On the next day inspection of consumer installation was carried out in presence of SE(NUC) &NA.. During inspection it was observed that the plastic cover of CT meter was found open during the above said visit of SE(NUC), the electrical consultant of the applicant Shri Deshkar (Technodeal) and the Applicant's Electrical contractor Shri Jain (Adinath) were present. The contractor of the applicant was asked to test the said transformer from the transformer manufacturer as the same was installed by them against Non-DDF scheme and the said transformer was well within the guarantee period. Applicant was also asked to replace the transformer if found faulty during testing. Thereafter the load of the above said transformer was shifted to nearby transformer as an immediate

alternate arrangement. A 100 KVA transformer was issued by circle office as a stop gap arrangement. After installation of 100 KVA transformer the load of the consumer was again taken back on the above said 100 KVA transformer. The contractor of the applicant submitted the fitness certificate of the original transformer of the same location from the manufacturer. In the mean time the contractor of the consumer also carried out other rectification as suggested by the consultant of the applicant for avoiding any complications in future which were as follow:-

- a) Providing of separate earth electrode for transformer neutral by connecting to separate CI earth pipe.
- b) Replacement of AB Switch new smooth working AB Switch.

10) The tested 200 KVA transformer was again installed at the same location and there is no complaint received from the applicant thereafter. The applicant is granted refund of expenditure incurred by him through NON-DDF Scheme. Moreover, Insulation Resistance (IR) values and earth testing results were taken by NA after both the above said occurrences i.e. on Dt.19.07.2016 and 24.07.2016. The copies of the same are submitted for record.

11) Hence it is to submit that the break down occurred on 19.07.2016 and 24.07.2016 was due to failure of pin insulator and post insulator respectively. Moreover, the above said faults occurred on the

DP structure that was installed by the applicant's contractor and all the material used by him was purchased by him only. The major equipments like Distribution Transformer installed against NON-DDF-CC&RF Scheme is guaranteed for 5 years & other materials like Cable, Conductor, Insulator etc. are guaranteed for 2 years. At the time of both above said occurrences the material & equipment were well within the guaranty period.

12) Forum heard the argument of both sides and carefully perused the record.

13) During the hearing the Non-applicant contended that severe short circuit might have developed on applicant's LT side causing developing of High voltage resulting in the breakage of Pin and post insulator and eventually snapping and breaking of 11 KV conductor.

14) During the course of arguments, Non-applicant also argued that it is due to sub standard work done by applicant's contractor by way of utilizing inferior/poor quality of material which resulted in breakage of pin insulator and conductor due to high voltage causing tripping at their 33 KV sub-station. It was also contended that there might be improper earthling related with of Distribution transformer and said work has been done by Applicant's Electrical contractor. Work of providing of separate earthling to Neutral of the Distribution Transformer has been carried out by Applicant after rectification of fault occurred on 24.07.2017 as a safety measure.

15) Forum observes that, If Distribution transformer LT neutral is loose or disconnected then there may be unbalance LT voltage depending on the unbalance in load distribution on consumer side. Due to unbalance in one of the Phases may have voltage higher than normal which may cause failure of sensitive electrical and electronic equipment. However, the severity of burning will be low.

16) In case if there is prolonged short circuit on applicant's side and if the fuses are not blown or LV side protection is not operated, then the effect would have been seen on the LT network from the LT equipment where short circuit has occurred, towards the source of LT power feeding (i.e. from LT equipment to Sub LT distribution panel, Sub LT distribution panel to main LT panel and main LT panel to distribution box). Heavy short circuit fault damages the specific LT circuit i.e. feeding power to short circuit fault. And reflections of melting/sparking/burning can be seen at the fuse casing, ACB termination, HRC fuse termination, cable termination and cable insulation. Further severe short circuit may cause blowing of HT side horn gap fuses. And may also affect the termination of transformer LV winding. But all above events may not cause a high voltage on HT side causing failure of insulator.

17) Probable reasons for failure of insulator or flashover across insulator are stated as under:-

a) Poor quality of material.

- b) Dampness of dust accumulation on insulator surface due to weather condition causing breakdown electrical stress
- c) Miniature puncture
- d) Loose connection HT circuit causing uneven voltage stress across the insulators
- e) Poor/improper earthing of the hardware of DP structure
- f) High voltage surge due to lightening impulse and weakening of insulator due to such impulse voltage.

18) Non-applicant squarely blame that on dated 19.07.2016, the line-ground (L-G fault) at DP structure occurred due to failure of pin insulator which resulted in raising the voltages of other phases (technically which is due to fault impedance up to fault point and impedance of neutral point at source) beyond the sustain limit of the equipment for particular duration of time. As far as technical aspect of power system is concern, under normal or safe operating conditions, the electric equipments in a power system network operate at normal voltage and current ratings. Once fault takes place in a circuit voltage, current values deviates from their nominal ranges. The fault in power system causes Over-current, under-voltage, unbalance of the phases/reversed power and high voltage surges. This results in the interruption of the normal operation of the network failure of equipments, electrical fires etc. Fault due to failure of overhead lines i.e.

broken conductor has effects such as exceeding the voltages beyond normal values in certain part of network which leads to insulation failure. If these faults are allowed to persist over for a short period, it leads to the extensive damage to the equipments. The operating voltages of the system can go below or above their acceptance value that create harmful effect to the service rendered by the power system network. When the fault occurs in any part of the system, it must be cleared in a very short period in order to avoid greater damage to the equipments. The fault checking system has protection devices such as relays and Circuit breakers to detect and clear fault. Relays detects the fault and initiate the operation of circuit breakers so as to isolate the faulty circuit, Although single phase to ground faults are most common faults if not checked in due time these faults may prove most severe.

19) When the Line to ground fault occurs at the DP of applicant, the 11KV Navjeevan feeder was required to be tripped at 33/11KV Chhatrapati Nagar Sub-station instantly, but it seems no VCB tripped such as 11KV outgoing VCB, 11KV incoming VCB, 33KV transformer VCB, 33KV Line VCB at an appropriate time but as per from submission of NA 33KV Pardi-Chhatrapati line tripped which is a upper end station. This itself confirms that fault is fed for longer

duration of time which resulted in feeding of higher voltages for considerable duration of time. As per principle of transformer, transformer only transforms the voltage. This high voltage appears across the secondary LV side, which is confirmed as per applicant's grievance while inspecting his LV side equipments, it was found that flash over happened on R-phase to neutral, but the entire current operated device like fuse MCB not operated. This R-phase to neutral flash over is due to over voltage which resulted in insulation failure at LV side causing burning of transformer earthing due to flow of high fault current. As this high voltage appears across all the LV equipments connected on R-phase and crosses a particular duration beyond withstand limit results in failure of equipments.

20) The severity of fault depends upon how much you have exceeded the rated voltage and for how long you have applied it. Usually over-voltages leads to insulation break down in appliances which eventually has its own detrimental effects. However, most devices can tolerate a short duration over voltage (upto more than 10% of rated). The effect of over voltage on an appliance depends upon the nature of appliance. Two things determine how severe over voltage effects will be on an electric appliances. First is the difference between the applied voltage and Rated voltage. 5-10% change in rated Voltage is tolerable but when the difference between these two increases,

possibility and severity of the danger will increase. Second thing is duration of high voltage, for longer the high voltage will appear across the devices, the dangerous it is for the devices. When above mentioned two effects join up they cause damage to device mainly by Heat effects due to which electronic circuits burst and electrical equipment which have some sort of winding in them, when face Heat effect their enamel Insulation burns leaving the winding short circuited which eventually burns the equipments.

21) As far as NA's contention of improper earthing is concerned, it is stated that during HT fault (phase to earth), if earthing path is not achieved by the earth electrodes or if the earthing of HT DP, LA, Transformer body, neutral is common and improper as is done in the present case (done with 8 SWG wire) then there may be possibility that HT fault occurred on the DP may get earthed through the shortest path it has discovered at that moment on consumer LT installation side and may damage the equipment severely. In this case this has happened as after the fault is rectified by NA when applicant tries to shift their entire load which was running on Diesel generator, on NA's normal supply, uneven voltages were noticed. In this regard NA contented that the said work is carried out by licensed electrical contractor of Applicant and hence they are not responsible. From the record forum observes that NA has recovered 1.30 % supervision

charges, although actual work is carried out by Applicant's Electrical Contractor then question arises what type of supervision is carried out by them. This is sheer callousness and negligence on part of NA.

22) In view of above Technical analysis, it is obvious that rise in voltage over and above prescribed limit led to burning of equipments of Dew and Trinity Hospital. Had relays and breakers been operated timely installed at 11 KV Sub-station itself, there would not have been any damage to the extent caused and the burning of costly equipments of the hospital could have been averted. Responsibility of non-operation of electrical relays and breakers timely and further causality lays squarely lies on NA only. There is callousness and negligence on the part of NA while supervising the electrical work done by electrical contractors of applicant at the time of giving supply at the first instance on 18.09.2015. Once this fact is established, it could not be said that the claim raised on behalf of applicant is without any merit. Therefore, it can safely be said that error has been committed by the IGRC in rejecting the claim of applicant while passing the impugned order without giving any justification. Therefore, it can be seen from the order that contentions of parties only are mentioned. It appears reasonable that the applicant raised grievance about grant of compensation as they have incurred huge loss for no fault on their part. Therefore, relief can be granted by directing that an amount of Rs.10,91,397 calculated

on the basis of Invoices and justification submitted by the applicant as damage to be reimbursed to applicant with interest at the rate of 6% per annum. from 21.03.2018 the date on which the grievance application is first filed, till its realization.

23) It is thus obvious from record that the applicant is successful in establishing the negligence and carelessness on the part of the officials of NA, improperly supervising the working of the relays and breakers which did not detect and clear the fault ,failed to isolate the fault, which has resulted in causing great loss to the applicant, since on account of high voltage appropriate relays VCB's could not be tripped at the appropriate time & many electronic equipments installed in the hospital were damaged.

24) The applicant has given the details of the damage caused and necessity to replace the damaged equipments in order to run the Hospital. It is also shown that for 8 days O.P.D. was required to be closed and many indoor patients who were taking treatment in the Hospital at the relevant time were required to be shifted to other hospitals/discharged from applicant's Hospital.

25) We, therefore, hold that the Non-applicant is liable for payment of damages to the applicant to the extent of Rs.10,91,397/- on scrutiny of the documents produced along with application. For loss caused due to untimely discharge of patients and not

able to admit new patients, Rs.10,00,000/- is claimed. However, details are not given. Hence it can't be allowed. For other losses Receipts/Vouchers/Invoices are produced.

26) The application is therefore, partly allowed. Non-applicant is directed to pay a sum of Rs.10, 91,397/- to the applicant towards the compensation for the damage/loss caused to him, along with interest thereon, at the rate of 6% p.a. from 21.03.2018. The amount be paid within a period of one month from the date of receipt of certified copy of this order.

27) No order as to costs.

Sd/-
(Mrs. Asmita A. Prabhune)
MEMBER(CPO)

Sd/-
(Mrs. V.N.Parihar)
MEMBER SECRETARY

Sd/-
(Arvind J. Rohee)
CHAIRPERSON