

VI. CONCLUSION

Interconnection of MHP to form mini-grid provides an improved power quality, higher reliability of the distribution system but the result found that the system is sufficient for power transfer and regulation of the transmission line consideration that only 0.02kW losses. The voltage limit is found to be 0.395kV-0.4kV and 10.95-11.00kV in the buses when the load is varying from minimum to maximum.

For power system protection, most of the protective relays are considered but Loss of mains is not considered and this impacts the system if the grid suddenly turns OFF or ON and this has an impact on the generation system as well.

The size of MCCB is not appropriate and it is found that it will not trip as main protective device when a 3-phase fault occurs into the system it will give hazards to the system if the other backup protection device does not work properly. Here contactor is the backup protection device to clear the fault to safeguard the system.

The contactor that is used in mini-grid is not the proper size and appropriate for protection from the fault current and it is found that it will not be able to withstand the fault current. This is not the proper device for the protection for the generator or mini-grid system.

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