

A B S T R A C T

The Trinidad and Tobago Electricity Commission is a small public utility with a generation capacity of 1171 MW, and a peak load of 480 MW, supplying the twin island state of Trinidad and Tobago. Generating capacity in Tobago is 9MW, but under normal conditions it is fed from Trinidad via a 33 KV submarine cable.

The author looks at the protection practices in T & TEC on the generation, transmission and distribution systems, with particular emphasis on the 12 KV distribution network. A computer program has also been developed for grading time overcurrent relays, instantaneous overcurrent relays and power fuses. A curve fitting technique was used to develop the equations for the distribution fuses. The relay equations were obtained from the manufacturers' specifications which conformed to BS 142: 1966. The computer program developed has not been taken to its limits but further work can add features such as grading of ground fault relays and graphic display of the results.

Recommendations were made for improving the safety, and reliability of the distribution circuits so that consumers can obtain a better and more reliable supply

of electricity. The Electricity Commission would receive increased revenue as a result.
