

SUMMARY

This investigation understood the study of feasibility for the implementation of an electrical Substation of distribution in the Northeastern area of EMELNORTE's concession, For which there was realized the raising of the technical, electrical and structural parameters of the feeders in study in order to deposit this information in the program Cymdist and to realize bullfight of flows to level of primary, obtaining hereby the technical losses, Voltage drops and the profile of load of each one of the feeders, additional measurements were realized in strategic points of every feeder using the equipments of the Qualit department of Energy of EMELNORTE, which registered information on voltages, currents, Fp, etc., In every point of measurement, measurements that helped to confirm the results obtained in the program; with all this process the current situation of the system decided in study. With the analysis of the different obtained information and by means of the projection of demand to future one sees the need to implement a Substation in this zone. For which the freight centre calculated by means of the application of the method of mike areas, giving like proved the sector of Mines as base for the respective location, without leaving aside such aspects as local geography, meteorology, accessibility; etc. The load that will feed the new Substation, will include the demand of the feeder G1, it departs from the feeder G2 of the Substation San Gabriel and part of the feeder L3 of the Substation Tulcán, Relieving of this form the load of these Substations and at the same time improving the quality of the service. The new Substation that will be fed to a level of voltage of 69KV taking advantage of a point of exit of the Substation TRANSELECTRIC of Tulcán's city, the capacity of the new Substation of agreement to the projection of load must be 5 MVA, sufficient to cover with the demand of the zone including the demand projected to future.