In Algeria, now the gas compressor plants are fed with electric power by independant local sources. This type of feeding has many advantages According to the criterion of the reliability (liille climatic influence, independent operation )- level required by their E.F.S., the C.P. with gas turbine However, it requires a qualified maintenance StaB a belong to the second category (3), this is why the rather high frequency Of maintenance and repair and structure of their E.F.S. must has two sources of food additional fuel Costs- Taking into account the independent feeding sources: mine source and storing increasing development of the national electric supply one (figure. 1). network (Sonelgaz), a realpossibility of transfer of the local sources towards centralized sources appears. These latter cannot only be more economic but more reliable than the independent local sources as well. In 1 order to carry out this transfer, it is necessary to work out an optimal strategy to rebuilding these networks taking account of the economic parameters and the indices of reliability