The theory of quantum driving of parametric driven Hamiltonians is presented and reformulated using the language of differential geometry. The general fidelity driving in a two-level Hamiltonian system is then analyzed with the particular importance of fidelity time dependence. For the Lipkin-Meshkov-Glick model, the geometrical structure of its energy state manifolds is calculated with an aim to analyze adiabatic and close adiabatic drivings.