Abstract: It is found that there are four kinds of intrinsic charges in the thermally wet grown SiO₂ electret. They are positive mobile ionic charges, fixed oxide charges, interface trapped charges and oxide trapped space charges. Our experimental results and theoretical analyses point out that these four kinds of charges in the thermally wet grown SiO₂ electret affect the structure of the energy levels of the SiO₂, change the trapping and detrapping conditions of the electrons which are injected into SiO₂ by means of negative corona charging. In this way they influence the stability of the space charges in the electret remarkably.