Geomagnetic storms have dramatic effects on the geospace in general and in the ionosphere in particular. Their effects have been extensively studied by various means and instruments. What is less reported though is the ionospheric response to the flare sometimes preceding the coronal mass ejection responsible for a geomagnetic storm. In this presentation, we report a couple cases of flares that had a clear impact on the electron density measured by the EISCAT incoherent scatter radars. The large EUV fluxes of the flares are seen to have an immediate response in the E- and F1-regions of the dayside ionosphere: the electron density increases by a factor up to 2.5 at 110 km altitude. Only X-class flares seem to affect the high-latitude ionosphere sufficiently so that their effect is visible in EISCAT data.