Last year (2020), Taiwan set a record of no typhoon landing for the first time in 56 years, facing a water shortage crisis. As a result, this study would focus on the impact of water shortage event in Taiwan on surface energy balance, through comparing the differences in energy budget characteristics between normal year and drought year at Chilan, Xitou, Pinglin station. The results indicated that the **Temperature** increased slightly between 2019 and 2020 summer, the Net radiation values of the three stations increased by 10%-20% during the drought period, and the values of sensible Bowen ratio indicated that the proportion of the sensible heat flux increased significantly ( increased by 3.57% at Pinglin station, by 29.1% at Chilan station, by 138% at Xitou station) , while the latent heat flux decreased in the dry year. Therefore, it can be speculated that dry conditions would affect the energy budget, and the degree varies between different surface types.