In this study, an integrated energy system with concentrating parabolic dish solar collector series has been tried to be designed for multigenerational production, including the liquefied hydrogen generation. This investigated solar energy based integrated plant is consisted of the solar cycle, biomass gasification system, gas turbine cycle, hydrogen production and liquefaction system, Kalina cycle and single effect absorption cooling system with ejector. The main useful outputs from integrated solar plant are the power, liquid hydrogen, heating-cooling and hot water. To investigate the performance of integrated solar plant, the energetic and exergetic analyses of this plant are given. The energetic and exergetic performances of whole system are calculated as the 51.93% and 47.14%, respectively. Also, the parametric study is given to investigate the effects of reference temperature and solar radiation flux on the system performance. Keywords: Integrated system, hydrogen production, solar energy