

## Supplementary information

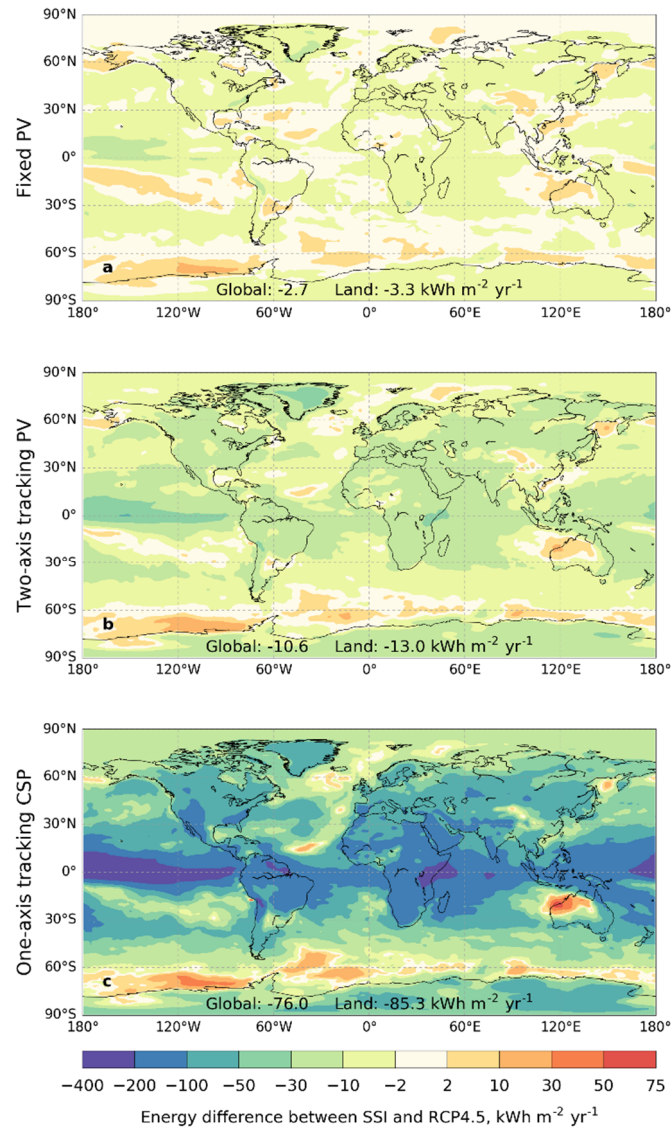


Figure S1: Absolute annual energy differences between the SSI and RCP4.5 scenarios in HadGEM2-CCS for (a) fixed PV, (b) two-axis tracking PV and (c) one-axis tracking CSP. It should be noted as CSP efficiencies tend to be higher than PV efficiencies the absolute differences are generally greater in regions where relative differences are similar.

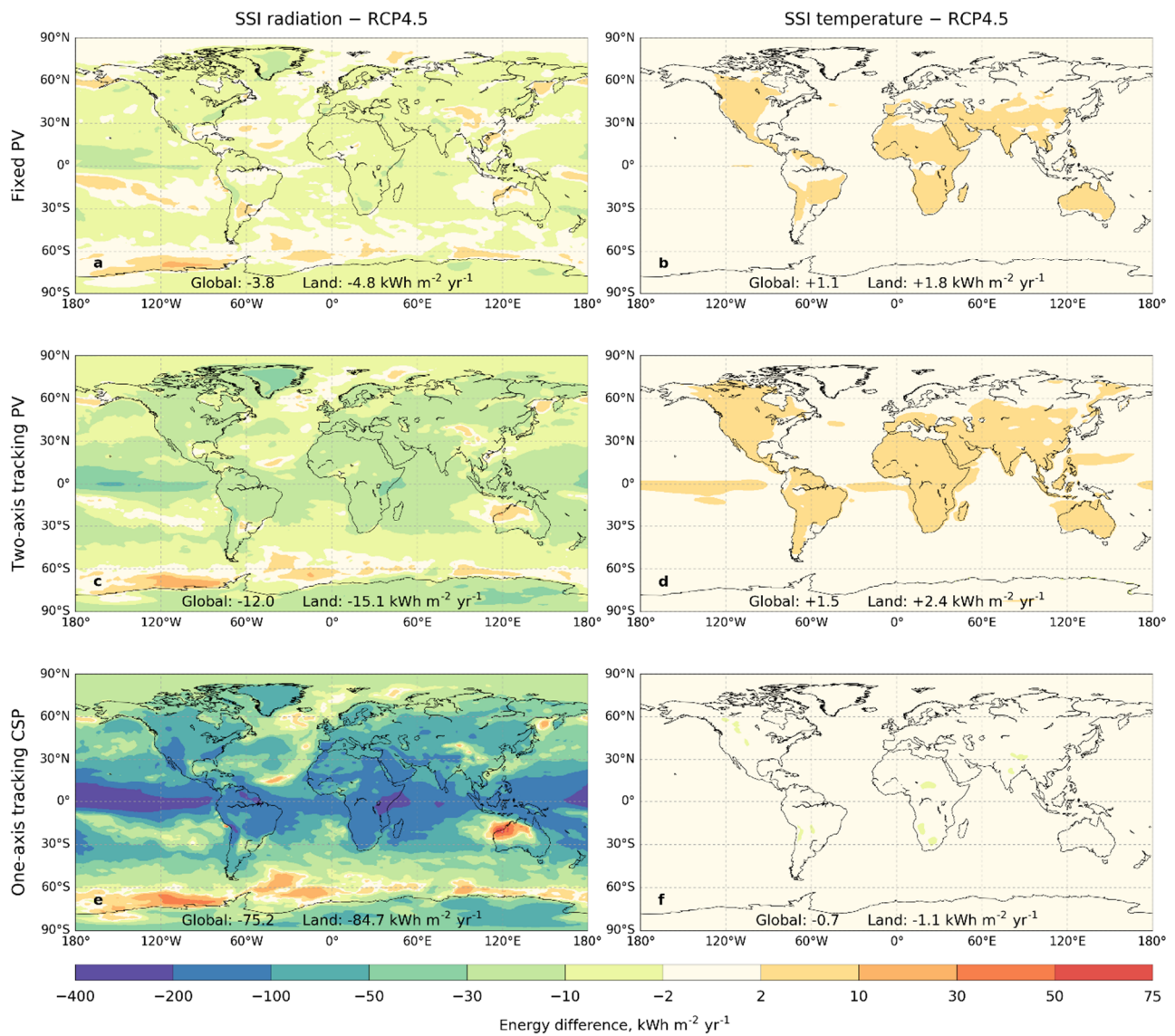


Figure S2: Absolute values of fractional contributions to (a, c, e) radiation change under SSI and (b,d,f) temperature change under SSI, compared to RCP4.5.

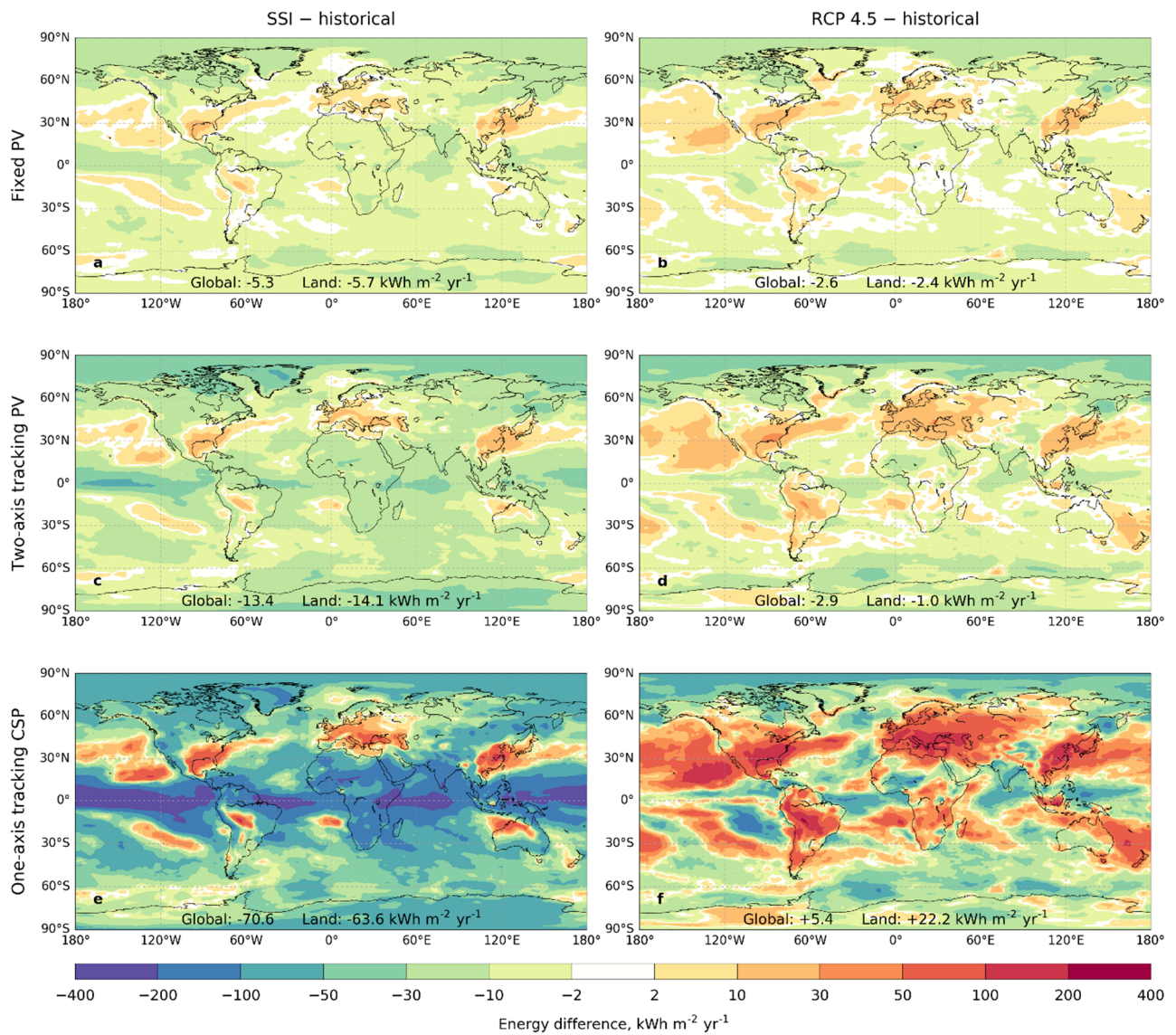


Figure S3: Ensemble mean absolute changes in solar power output in HadGEM2-CCS between (a, c, e) the SSI simulation and historical and (b, d, f) RCP4.5 and historical. (a, b) fixed PV; (c, d) two-axis tracking PV; (e, f) one-axis tracking CSP.