The manuscript by Gao et al. studies the climate responses to emission reductions in air pollutants over China due to clean air actions from 2013 to 2017, investigates both aerosols and ozone changes and their climate impacts by conducting several experiments using CESM2 model. The topic has wide implication for emission reduction policy decision making over China and fits the scope of the general ACP readership. This paper is overall well written, but there are several issues need to be addressed before the manuscript can be accepted for publication.

Major:

1. The model results significantly underestimate the PM2.5 decrease compared with observation （Fig.2）, which contributes to the uncertainty of this study. It would be interesting to quantify to what extent the model bias influences the estimated climate impacts.
2. The authors investigated the climate response by conducting simulations with fixed SST at the climatological mean. I wonder how much does the slow and fast response contribute to the total climate response respectively? Though the authors stated that they will revisit this issue using a fully coupled model configuration with both fast and slow climate responses included in future studies, it is suggested to discuss the uncertainties due to neglecting the slow climate response in this paper.
3. I would suggest the authors to provide an in-depth discussion in the discussion section on these uncertainties, including the model bias, the neglect of slow response, the neglect of nitrate and ammonium, etc. It is better to have error bars on the simulated results or at least discuss the possible bias ranges. In addition, as stated in L215, different chemical and physical schemes contribute some uncertainties, leading to the differences compared to previous studies. Thus it is better to list the specific parameterizations of different models in Table S3.

Minor:

1. L79, 'A comprehensive consideration of aerosol/O3-radiation and aerosol-cloud interactions are included in the model.' How are these processes considered specifically in the model? I suggest authors to introduce these schemes in detail, or at least show some references.
2. L83, it is better to list some reference about ozone simulation in GEOS-Chem here.
3. In section 2, please add some introductions about observations used in this study.
4. L133, change 'other sub-regions' to 'over other sub-regions'.
5. L136-L137, better to list some references here.
6. Figure 1, better to mention the MEIC inventory in figure caption.
7. Figure S1, the color bar is not shown.