We would like to thank the anonymous reviewer for the comments that significantly improved the clarity and readability of the manuscript. Our point-by-point responses are found below in blue ink. The revised content is highlighted in yellow.

Editor: I agree with referee #1's further comments that the abstract can be enhanced. Please consider adding some quantitative statements (with specific values) to make your conclusions in the abstract clearer.

Referee #1: This work is of value for effective PM2.5 control in Taiwan. I suggest the authors revise the abstract to make the conclusions clearer and sharper. For example, could the authors spell out what "changes in HNO3 and NH3 partitioning" in lines 15-16?

A: Thanks for the reviewer and editor's comments. The abstract has been revised to include some quantitative statements and to clarify "changes in HNO_3 and NH_3 partitioning" as follows:

"Taiwan experiences higher air pollution in winter when fine particulate matter ($PM_{2.5}$) levels frequently surpass national standards. ... In contrast, nitrate and ammonium are predominantly influenced by local NOx and NH_3 emissions. Reducing SO_2 emissions decreases sulfate levels, which in turn leads to more NH_3 remaining in the gas phase, resulting in lower ammonium concentrations. Similarly, reducing NOx emissions lowers HNO_3 formation, impacting nitrate and ammonium concentrations by decreasing the available HNO_3 and leaving more NH_3 in the gas phase. A significant finding is that reducing NH_3 emissions decreases not only ammonium and nitrate but also sulfate by altering cloud droplet pH and SO_2 oxidation processes. While the impact of SO_2 reduction on $PM_{2.5}$ is less than that of NOx and NH_3, it emphasizes the complexity of regional sensitivities. Most of western Taiwan is NOx-sensitive, so reducing NOx emissions has a more substantial impact on lowering $PM_{2.5}$ levels. However, given the higher mass emissions of NOx than NH_3 in Taiwan, NH_3 has a more significant consequence in mitigating $PM_{2.5}$ per unit mass emission reduction (i.e., 2.43×10^{-5}, and 0.85×10^{-5} $\mu g\ m^{-3}\ ton^{-1}\ yr$ for NH_3, and NOx, respectively, under current emission reduction). The cost-effectiveness analysis suggests that NH_3 reduction outperforms SO_2 and NOx reduction (i.e., 0.06, 0.1, and 1 billion USD $yr^{-1}\ \mu g^{-1} m^3$ for NH_3, SO_2, and NOx, respectively, under current emission reduction). Nevertheless, the costs of emission reduction vary due to differences in methodology and regional emission sources. Overall, this study considers both efficiency and costs, highlighting NH_3 emissions reduction as a promising strategy for $PM_{2.5}$ mitigation in the studied Taiwan's environment.