Supporting information for:

**Integrated Impacts of Nitrous Acid and Nitryl Chloride on Ozone: New Module Developments for Reactive Nitrogen in WRF-Chem and Applications in summertime over China**

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**Figure S1.** Spatial distributions of the (a) observed daily-averaged NO2 concentration and modeled ones in (b) the Base case and (c) ReNOM case during the simulation period.
Figure S2. Regional averages of NO\textsubscript{y} partitioning over eastern China in (a) BASE case, (b) ReNOM\_Cl case, (c) ReNOM\_HONO case, and (d) ReNOM case.
Figure S3. Vertical distributions of daytime ozone enhancements in (a) ReNOM_HONO case, (b) ReNOM_Cl case, and (c) ReNOM case in the domain intercepting the northern China and central China. Vectors present the average v-w wind components (m s$^{-1}$), dash lines the temperature (°C), and black line the simulated planetary boundary layer height during daytime.