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Benefits of net-zero policies for future ozone pollution in China

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Figure S1. Differences in annual mean surface emissions in anthropogenic and biomass burning NO\textsubscript{x}, VOCs, and biogenic VOCs (BIO) between the present day (PD) and the scenarios of Net Zero (NZ; a, b, c) and SSP3-7.0 (d, e, f).

Figure S2. Changes in seasonal (JJA and DJF) surface O\textsubscript{3} mixing ratios between the scenario of Net Zero and SSP3-7.0 (SSP3-7.0 – Net Zero). Influences of higher emissions in different individual sectors, (a, e) power, (b, f) industry, (c, g) transport and (d, h) residence on surface O\textsubscript{3} changes are shown separately. Mean O\textsubscript{3} changes over China are given in the top right corner.
**Figure S3.** Annual mean biases in surface O$_3$ simulations (ppb) from (a) UKESM1, and the predicted biases in (b) the present day (PD), (c) the Net Zero (NZ), and (d) the SSP3-7.0 scenarios.

**Figure S4.** Seasonal mean changes in surface O$_3$ mixing ratios from the present day to the future under SSP3-7.0 in China. Changes from UKESM1 and the corrected UKESM1 by the deep learning model in (a, b) summertime and (d, e) wintertime are shown. Mean latitudinal O$_3$ change between UKESM1 and the corrected UKESM1 are shown in (c, f), with one standard deviation of O$_3$ changes in latitude shown in shaded areas.