

Interactive comment on “Projected changes to extreme freezing precipitation and design ice loads over North America based on a large ensemble of Canadian regional climate model simulations” by Dae Il Jeong et al.

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We thank anonymous referee for reviewing and providing comments on this manuscript. RCP8.5 was selected as it is an appropriate scenario for business-as-usual and non-climate policy conditions, which has closely matched recent decade emissions. This has been addressed in the revised manuscript. Please see lines 7-10 on page 4. There is a confidence that future freezing precipitations and associated atmospheric ice accretions will be less frequent in a future warming climate, particularly over most of mid ($< 50^\circ$) latitude regions, as they generally occur when surface

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temperatures are near freezing point (e.g., $-10 \sim 0^{\circ}\text{C}$). However, increases in those frequencies are also projected over high latitude regions due to increases in future upper level and surface temperatures and associated poleward shift of the surface 0°C isotherm. Therefore, the changes in the freezing frequency are highly dependent on global warming levels and associated increases in upper level and surface temperatures at each region as shown in Sections 4.3 and 4.4.

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