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Wet snow icing upstream of mountains

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A case of wet snow icing observed upstream of mountains is simulated with a high-resolution atmospheric model (MM5). The simulations reveals how an orographic blocking contributes to favourable conditions for wet snow icing. Firstly, the orography contributes to lifting and increased precipitation. Secondly, a low level blocking gives high static stability of the airmasses close to the surface. Thirdly, there is local speed-up of winds where the air escapes the blocking. All these three factors contribute to very rapid wet snow icing on overhead power lines and significant structural damage.