



The wet-snow storm of 10 September 2012

Hálfdán Ágústsson (1,2,3), Haraldur Ólafsson (2,3,4), Árni Jón Elíasson (5), and Egill Þorsteins (6)

(1) Institute for meteorological research, Iceland, (2) University of Iceland, (3) Icelandic Meteorological Office, (4) Bergen school of Meteorology, University of Bergen, Norway, (5) Landsnet, national transmission line operator, Iceland, (6) Efla Consulting engineers, Iceland

On 10 September 2012 an extreme wet-snow storm occurred in Iceland in relation with the "first" autumn low of 2012. Very strong northwesterly winds, high precipitation and temperatures close to 0°C caused widespread damage in North and Northeast-Iceland, disruption to traffic and loss of livestock. At sea level the precipitation fell as rain and the damage was limited to that caused by the high winds. At an elevation of up to a few hundred metres, the precipitation fell as very wet snow, causing extreme and well documented accretion on the electric transmission and distribution system in the region as well as on other structures. Up to 40 masts of the transmission system and about 150 poles of the distribution system broke or were damaged in other ways, causing a widespread electric outage of up to 48 hours. Furthermore, thousands of sheep still out for summer grazing were lost and in many cases buried under metres of snow. The storm was reasonably well forecasted several days in advance but the greatest error was associated with an overestimated temperature. Hence, rain instead of heavy wet snowfall was expected by many. The event has been successfully simulated at high resolution using an atmospheric numerical model and we present an analysis of the event based on the simulations and observational data. Similar events have happened a few times in the last decades.