

ISSUE: 05. OPERATIONAL APPROACHES, EQUIPMENT AND PRODUCTS FOR WINTER CONDITIONS

SUB-ISSUE: Snow melting methods

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Room: C

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Presentation title:

STUDY ON THE INTRODUCTION OF ROAD HEATING SYSTEMS USING RENEWABLE ENERGY IN HOKKAIDO

Summary:

After the ban on the use of studded tires in Japan in 1990, extremely icy road surfaces have emerged in Hokkaido probably because of prevailing use of studless tires which buff icy roads, and make them smoother. As countermeasures against such slippery road surfaces, road heating systems have been rapidly introduced. However, to melt road snow by gas or electric road heating system in severely cold, snowy environment like in Hokkaido, the system requires high snow melting performance which is quite costly. The intensive introduction of high performance snow melting systems has resulted in financial difficulties of local governments. Further, they are facing issues such as the increase in the maintenance cost of old road heating systems and limited electricity due to the shutdown of all nuclear power plants in Hokkaido from the nuclear accident in Fukushima in 2011. To investigate solutions for such issues, this study discusses the feasibility of road heating systems using renewable energy in Hokkaido.

