

USING SNOW IN THE SUMMER

Oslo Airport, part of the Avinor Group

Enova.



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REDUCES CO₂ BY 31 TONNES PER YEAR, HOWEVER THE MAIN BENEFIT IS A REDUCTION IN ENERGY USE OF 2 GWH PER YEAR (OSLO AIRPORT ALREADY PURCHASES 100% RENEWABLE ELECTRICITY).

THE RETURN ON INVESTMENT FOR THE PROJECT IS ESTIMATED AT NINE YEARS.

OSLO AIRPORT AIMS TO ELIMINATE EMISSIONS OF FOSSIL-BASED GREENHOUSE GASES FROM ITS OWN CORPORATE ACTIVITIES ENTIRELY BY 2020.

WHAT DO AIRPORTS DO WITH ALL THE SNOW THAT FALLS ON THE AIRFIELD DURING WINTER? OSLO AIRPORT HAS DEVELOPED A UNIQUE SOLUTION THAT HELPS USE THE SNOW AND CUT ENERGY CONSUMPTION – COOLING THE TERMINAL!

When building a new terminal extension, authorities at Oslo Airport investigated ways to help cool the building during summer as efficiently as possible. They turned to the huge amounts of snow which are stockpiled each winter at Oslo Airport. The snow is divided into two categories, pure and impure (whether it contains chemicals from runway and taxiway de-icing).

The impure snow is treated at a municipal facility and the pure snow has traditionally been allowed to melt naturally into the ground. Now, however, in a world-first system, the pure snow is collected in a large holding basin. When it is full, the basin is covered with wood chips (an excellent insulating material).

The cold meltwater from the snow storage area is transferred to heat exchanges in the terminal through a pipe system, where it helps to cool the building on hot summer days. The water is then returned back to the snow storage area and the process repeated. As the snow and ice melts, clean meltwater is released gradually into the ground, helping to maintain the water balance in the soil.

Oslo Airport is also phasing out the use of fossil fuels in its own vehicles and is testing different technological solutions such as biofuel, electricity and hydrogen. In fact, a hydrogen refuelling station was opened in 2015 and the airport is trialling the use of a fuel cell electric vehicle for airport operations.

