# COUNCILS ICE RINK EXCEEDS SAVINGS EXPECTATIONS
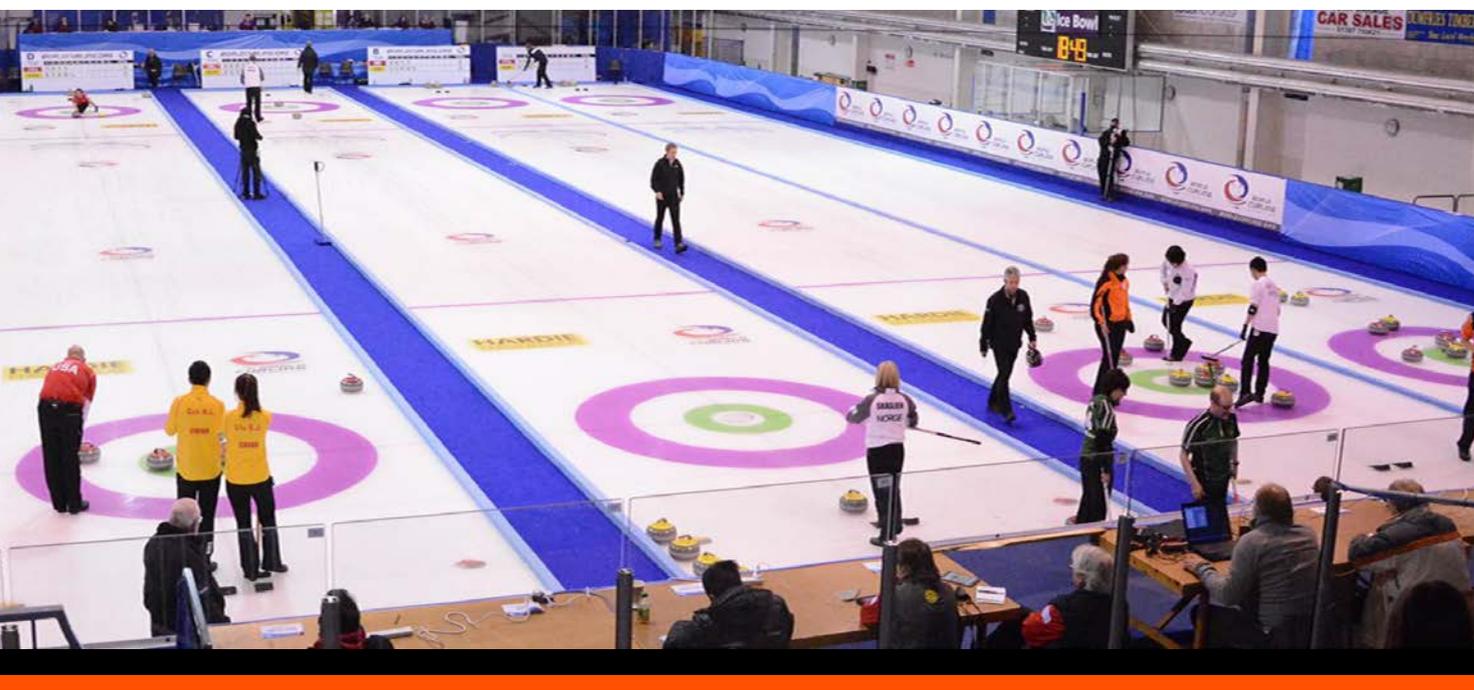


Choosing iVolt®'s unique voltage stabilisation technology, Dumfries Ice Bowl, managed by Dumfries & Galloway Council, are set to save up to 250,000kWh's per year.

Having opened in 2010, Dumfries Ice Bowl has a dedicated Ice Hockey / Ice Skating rink and Curling rink used by local and regional clubs, which are home to the Solway Stars (ice skating) and Solway Sharks (ice hockey) and host both national and international competitions. The Ice Bowl is open 7 days a week offering a number of ice activities from curling to ice skating and through their development schemes look to encourage participation by introducing under 5's onto the ice.

In 2015, the Dumfries & Galloway Council were looking to make savings across all government buildings and the Energy Manager, John Currie, was approached by iVolt® to explore the option of voltage stabilisation. The Dumfries Ice Bowl was selected as a trial site, overseen by the councils MIET Principal Engineer Stuart Martin, to prove that voltage control would help lower the sites kWh consumption and reduce $CO_2$ emissions.

Voltage control works by stabilising the supply voltage to 220V, the level at which CE marked equipment operates most efficiently; by reducing the incoming supply using auto tap settings within the stabilising equipment. One of the benefits of iVolt's award winning voltage stabilisers is its ability to verify kWh savings performance through the patented IRT™ energy monitor and to stabilise within +/- 1.5% of the set voltage.

iVolt®

Intelligent Power Optimisation

## DUMFRIES & GALLOWAY COUNCIL DUMFRIES ICE BOWL

**1,665,000**
TOTAL ENERGY SAVED (kWh)

**3x1200A**
IVOLT SIZE

**19/01/2015**
INSTALL DATE

**25**
ROI ACHIEVED (MONTHS)

**902,423**
$CO_2$ EMISSIONS REDUCED (kg)

**9.16**
ENERGY SAVED (%)

iVolt® undertook a comprehensive survey to record all associated electrical loads and the voltage levels throughout the site. By recording the sites voltages iVolt identified the average reduction % and volt drop – the difference between near and far point.

What makes the iVolt® different from other voltage control technology is that the voltage settings can be increased or decreased in single volt increments without the need for the site to be shut down again. The Ice Bowl's average voltage was recorded at 246V, in excess of the UK average of 242V, and established that 99.4% of the load would benefit when supplied with 220V and attribute to a substantial, determinate reduction in CO2 emissions and kWh consumption. With a review of the electrical billing data also completed a 1,200A unit was selected, which also matched the sites supply.

A proposal was submitted for commercial and technical evaluation and subsequently accepted by the council. With energy savings proposed at just over 8.5% – 187,000kWh per year, the council were able to immediately see the energy savings being achieved by the iVolt unit and since installation in 2015, the iVolt has saved, on average, 9.16%. These savings and performance of units can be viewed through a secure cloud-based portal with live date streaming via the integrated GPRS modem and IRT™ monitor.

iVolt® offer a vast range of product sizes, ranging from 63A to 3,000A and above in both single and three phase, with a number of installations having been completed throughout the commercial, retail, manufacturing, leisure and public sectors.

*At the Council we have adopted a strategy to identify and implement the best available technology across our estates that will allow us to realise the greatest level of energy savings possible, whilst improving our own green credentials. We have achieved this result with iVolt®.*

*Stuart Martin*
*MIET Principal Engineer*

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For more information on iVolt:
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The iVolt® was designed in the UK and production takes place at its facility near Heathrow Airport. The company is part of the global Sollatek group and is accredited to ISO9001:2008

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