

Press release

8th May 2018



CryoHub attracts interest at international events



The EU CryoHub project ran a workshop in Sofia (Bulgaria) on 27 March 2018, as part of the 14th South-East European Conference and Exhibition on Energy Efficiency & Renewables. The event was opened with welcome speeches by Krasimir Zhivkov (Bulgaria's Deputy Minister of Environment and Water), Yoana Hristova (Deputy Mayor of Sofia Municipality), Didier Coulomb (Director General of the International Institute of Refrigeration), Alberto A. M. Trueba (Argentinean Ambassador to Bulgaria), Ulrike Straka (Austrian Commercial Counsellor) and Traian Chebeleu (Deputy Secretary General, Black Sea Economic Cooperation Organization). Over 140 delegates attended the opening ceremony and they were split into smaller groups to attend either the CryoHub thematic panel or the industrial exhibition on efficient and renewable energy technologies conducted in parallel.

The CryoHub session was carried out under the motto “Cryogenic Energy Storage for Renewable Refrigeration and Power Supply” and was co-chaired by Judith Evans (CryoHub Project Coordinator, London South Bank University, UK) and Kostadin Fikiin (CryoHub Team Leader, Technical University of Sofia, Bulgaria). The first speaker was Rémy Dénos (Directorate General for Energy, European Commission) who analysed the energy storage projects in the EU's Horizon 2020 Research and Innovation Programme and outlined the role of the BRIDGE initiative in this context. Afterwards, Didier Coulomb (Director General, International Institute of Refrigeration) spoke about the energy implications and perspectives for the refrigeration sector worldwide. Mohammed Youbi Idrissi (R&D Group Manager, Air Liquide, France) familiarised the audience with the principles of cryogenic energy storage, with emphasis on the relevant engineering and socio-economic issues. Furthermore, Judith Evans (CryoHub Project Coordinator, London South Bank University, UK) presented the main features and objectives of the EU's CryoHub project. In addition, Paola Mazzucchelli (Secretary General, Association of European Renewable Energy Research Centres) spotlighted the CryoHub prospects in Europe by reporting consortium's results on refrigerated warehouse and renewable energy mappings.

The role and significance of cryogenic energy storage from a policy perspective were then deliberated by Jonathan Radcliffe (Policy Director, Birmingham Energy Institute, University of Birmingham, UK). Finally, Stefan Sulakov (Head of 'Energy Regimes', Electricity System Operator EAD, Bulgaria) spoke about the energy storage in the Bulgarian power supply system, with a focus on today's and future technologies and resorting also to the achievements of the EU's CROSSBOW project.

Relevant promotional info packs (memory sticks with presentations, thematic folders with documents in English and Bulgarian language, etc.) were distributed amongst interested stakeholders. As a whole, CryoHub gained a number of new friends and supporters.



A dedicated audience of 50-60 experts continued their active discussion until the very end of the workshop, regardless the numerous highly attractive events going concurrently in the Inter Expo Centre.

Workshop at International Cold Chain conference in Beijing, China. The International Institute of Refrigeration organised a well-attended CryoHub workshop at the 5th International Cold Chain Conference in Beijing China on April 7th 2018. The delegates heard a range of talks from experts from the CryoHub on the EU Horizon 2020 funded project developing liquid air energy storage as a means to store energy at cold storage warehouses.

At the workshop several teams from the CryoHub project presented information on what the CryoHub project will achieve, information on the design of the liquid air energy storage demonstrator that will be one of the main outputs from the project and also information about the economics of liquid air energy storage. In addition Professor Haisheng Chen from the Institute of Engineering Thermophysics, Chinese Academy of Sciences gave a very interesting presentation on the state of energy storage in China.

You can download a presentation introducing the CryoHub Project from the Project Co-ordinator Prof Judith Evans of London South Bank University at www.cryohub.eu/downloads. Register at the website to receive project progress reports and invitations to future events.

The CryoHub project which commenced in 2016, investigates and extends the potential for large-scale Cryogenic Energy Storage. It is a forty-two month EU co-funded project under the Horizon 2020 programme and it includes a team of 14 partner organisations from 5 EU countries. See www.cryohub.eu for more information about the project and to register for regular updates.

How CryoHub works

An important effect of generating power from liquid air is the ability to absorb heat at low temperatures. This is what a cold store does and therefore there appears synergy between cold store warehouse facilities and cryogenic energy storage. Atmospheric air can be liquefied by employing renewable energy and then stored and used to generate electricity (via a turbine) at periods of peak grid demand. At the same time, refrigerated facilities can be cooled and waste heat can eventually be recovered to improve the efficiency of the cryogenic expansion process. The success of such technologies to date has been rather limited due to poor round trip efficiency (ratio of energy out to energy in). The CryoHub project explores the potential to maximise efficiencies by means of a synergistic operation of the cryogenic energy storage and the existing refrigeration plants of food storage warehouses.

