Joint meeting between:
IIR D1/D2 - WP energy labelling in the cold chain and
IIR D1 sub commission on refrigerated display cabinets

Date: 29.03.10
Venue: 1st IIR Conference on Sustainability and the Cold Chain, Selwyn College, Cambridge.

1. Introduction round of participants.
   Presidents; Giovanni Cortella (energy labelling WP) and Sietze van der Sluis (president D1) welcomed participants to the meeting. As there were a large number of people attending the meeting there was insufficient time to allow all participants to introduce themselves.

2. Setting and approval of the meeting agenda.
   The agenda was approved. Rene van Gerwen (Unilever) suggested that in future information on energy labelling initiatives around the world should be included.

   Eric Devin (Cemafroid, France) and Silvia Estrada- Flores (Food Chain Intelligence, Australia) were nominated by Giovanni Cortella and approved as Vice Presidents of the energy labelling working party.

4. EU "FRISBEE" project.
   Sietze van der Sluis presented information on a new EU funded project on the cold chain (FRISBEE). The project will run for 4 years and will start in either June or September 2010. The project will develop new tools and concepts for the food cold chain and will include integrated mathematical models and work on new and emerging technologies. The project is coordinated by Cemagref and Graciela Alvarez is the main contact for further information.

5. Simulations tools for energy consumption in supermarkets, for refrigeration only or full R & HVAC.
   Sietze van der Sluis presented a summary of supermarket models. Generally these models divide into those that cover the supermarket refrigeration system only (including the cabinets and storage cells), and those that cover all HVAC & Refrigeration systems in the supermarket. Jaime Arias presented information on Annex 31, Advanced Modelling and Tools for Analysis of Energy Use in Supermarkets. This covers models that combine supermarket refrigeration systems and supermarket HVAC systems. The models being evaluated include CyberMart (Sweden), EnergyPlus (USA), RetScreen and SuperSim (UK). All these models have varied inputs and outputs that were summarised in the presentation. A final report is being worked and will present a comparison of the models evaluated.

   Eric Devin presented information on work to develop a labelling scheme for transport vehicles. The aim is that the scheme will be used as part of the EU energy labelling initiative. The label will encompass a distributed usage scenario encompassing distribution, long distance and mixed usage to provide an overall energy figure. Inputs will take ATP data, meteorological data and average time of operation to generate the overall energy figure used for labelling. The work still needs to be validated and finalised.
7. EUROVENT Certification programme for RDC.
Ian Butler presented information on the latest Eurovent certification upgrade. The upgrade was in response to a 2009 survey carried out by PWC (Price Waterhouse Coopers) who identified a number of issues to enhance the Eurovent scheme. These have now been implemented and are about to be fully launched. Upgrades include a full bill of materials for all cabinets and in store/field coefficients to enable cabinets tested at climate class 3 to be compared to store conditions. All cabinet testing will take place at TNO to EN23953. Eurovent will fully launch the updated scheme in Q2 of 2010.

As indicated during the presentation the auditor will not only evaluate the BOM consistency from what is sold to declared but also to check visa versa what is declared is sold. They also look at the component supply base, ISO certification and also quality/warranty cost of sales data. During the visit the auditor has the opportunity to visit the factory shop floor to see for their own eyes the standard production build quality. Real unit testing is also conducted in ISO certified laboratories and if any poor build quality is identified during the test then this will be identified on the test report and highlighted to the manufacturer. During the next audit at the factory (undertaken yearly), the auditor will focus on these areas to make sure improvements have been made. These processes are already in place for other Eurovent audit programs and will be consistent for the RDC audit process.

8. EcoDesign requirements for refrigerated display cabinets.
G Artico presented information on WG 14. TEN Lot 12 was completed in Dec 2007. A position paper has now been developed by WG14 that proposes the EN23953 TEC/TDA method to classify cabinets. Data has been collected from 80% of European market to generate minimum performance standards for each temperature class (i.e. M1, M2, L1 etc). Initially the MEPS will not include a label but several countries are already considering labelling (Italy, Germany and Spain). The WUPPERTTAL Institute is the EC consultant for energy labelling. Documents for retail cabinets are due to be available in 2011.

Jonathan Bain from BioIS presented information on Lot 1. The difference between previous lot work carried out by BioIS was explained. Lot 12 was carried out by TREN and the aim was not to generate energy standards. Lot 1 is under ENTR and does have the aim of creating an energy standard. A draft of information from Lot 1 is due to be loaded onto the ecofreeze web site (www.ecofreezercom.org/documents_1.php) in the next few weeks. A stakeholder meeting will also be held in early May and information will be available in the next few weeks.

10. Review article on supermarket refrigeration state of the art.
Sietze van der Sluis outlined a proposed review on research and development of energy labelling and supermarket refrigeration over the world in the last decade. This would include energy, natural refrigerants, product quality, software, in store performance and other items that participants could add. The methodology for creating such a document was discussed. Creating individual documents from a base template was not favoured as this would be extremely time consuming and require extensive work from the editor. Per Lundquist suggested using Google docs. For now, this is the way all participants are invited to add their input to the review article. Alternatively a Wiki based approach was suggested by Silvia Estrada Flores as this would allow the document to always be up to date. It was suggested that the use of such media
streams should be discussed with the IIR to determine whether they could facilitate. Key individuals need to be identified to take responsibility for each area. The aim will be to create a draft document in the next 6 months and to hold a further meeting at around this time.

11. **Other issues brought to the table**
Proposals for the agenda for the next meeting should be sent to either Giovanni Cortella or Sietze van der Sluis. A location for the next meeting (in approximately 6 months) will be identified by the chairmen. A meeting will definitely be held at the IRC in Prague.

12. **Closing**
Giovanni Cortella and Sietze van der Sluis thanked participant for attending the meeting.