
Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Perishable Foodstuffs****10 October 2011****Sixty-seventh session**

Geneva, 25-28 October 2011

Item 8 of the provisional agenda

Energy labelling, refrigerants and blowing agents

Refrigeration and sustainability: environment challenges facing refrigerated transport

Development of an environmental programme of work

Note by the secretariat

The following note is submitted for discussion by WP.11 on the possible development of a programme of work aimed at addressing the environmental challenges facing the refrigerated transport industry.

The environmental challenge

Why do WP.11 and the European refrigerated transport industry have to be concerned by environmental considerations? Well firstly, there is pressure from all sides, from within the United Nations, from Governments, from the European Union. Taking environmental considerations seriously not only reduces the long-term threat of climate change but it can also save money and lead to more efficient operations.

What are the environmental issues involved?

The ozone “hole”— the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer has lead to a dramatic drop in the consumption of ozone depleting gases and chemicals. Scientists agree that the ozone layer has begun to recover, but there is still pressure to reduce production and consumption of HFCs

Carbon dioxide (CO₂) is a greenhouse gas which contributes to global warming effects and is associated with climate change. Transport contributes some 30% to total CO₂ emissions. There is a widespread move to reduce CO₂ emissions from transport by a minimum of 50% by 2050.

Pollutants from transport are many: carbon monoxide which reduces the blood's ability to carry oxygen and exacerbates heart conditions; hydrocarbons which can cause liver damage and even cancer; nitrogen oxides can be an irritant to the lungs, and particulate matter causes respiratory health effects.

And finally, noise, which is harmful to sleep and psychological wellbeing.

Pressures to reduce the impact of transport on the environment

WP.11 is one group of many serviced by the Transport Division. The Inland Transport Committee, WP.11's parent body has established a Group of Experts on climate change impacts and adaptation for international transport networks for two years. It also has an ongoing project on climate change, which aims to introduce a standard monitoring and assessment tool for CO₂ emissions in inland transport.

More distant, but driving the global agenda for the United Nations, a series of environmental conferences has been held every decade since 1972. Perhaps most well known of the outcomes is Agenda 21 adopted in Rio de Janeiro, in 1992. A fourth 10-year review - also referred to as '*Rio+20*' - will be held in 2012.

In addition, Governments have agreed to Millennium Development Goals to be achieved by 2015. Goal No. 7 - Ensuring environmental sustainability - has indicators which include reducing CO₂ emissions and ozone depleting substances.

What can be done?

These are just some ideas - we expect the real proposals to come from the industry and from Governments.

The industry has to continue to develop new insulating foams and blowing agents that are both safe for the ozone layer and highly effective so that energy can be saved in maintaining the desired temperature;

Energy efficiency has to be maximized by reducing the harmful CO₂ emissions released, including through enhancements by bodybuilders;

Introduce energy labeling schemes or minimum efficiency standards for refrigerated transport equipment which push the market towards more energy efficient products;

Recovery, recycling and reclaiming of all refrigerants;

Reducing the number of simplified renewal tests (pull-down tests) allowed before K value has to be measured. Higher K values caused by ageing of the equipment lead to increased fuel consumption to compensate;

Improving logistics to ensure that all refrigerated transport operations are as efficient as they can be;

Equipment sizing to match the specific need, thereby minimizing the amount of fuel and refrigerant used;

Reducing the noise from compressors.

What tools are at the disposal of WP.11?

The ATP Agreement itself, although traditionally it has not been concerned with energy efficiency - this is a legally binding instrument but all Contracting Parties have to agree on changes to it.

The ATP Handbook, which provides guidance and interpretation of the ATP but which is not legally binding. A procedure proposed by the Czech Republic for determining the fuel consumption of vehicle-powered refrigeration units has recently been added to the ATP Handbook.

WP.11 has an interest in keeping abreast of these issues and in developing an environmental programme of work in close cooperation with the IIR and other interested groups such as Transfrigoroute International.

WP.11 may wish to establish an informal working group of interested Governments to work on this issue, possibly in the first instance by email. Otherwise, WP.11 could request the secretariat to send a questionnaire to members of WP.11 asking them to outline the areas they think are important to address and propose ways they could be dealt with in the context of WP.11.
