



**SUCCESSFUL DUTCH PROGRAMME FOR CONTAINMENT OF REFRIGERANT GASES (STEK) CONTINUES TO PROVIDE A SOUND BASIS FOR FUTURE REGULATION OF F-GASES IN EUROPE.**

Brussels 24<sup>th</sup> June - The European Partnership for Energy and the Environment (EPEE)<sup>1</sup> welcomes the successful and significant reduction of F-Gas emissions, achieved through STEK in the Netherlands and argues that it remains a firm basis for future regulation of F-Gases in Europe. Since 1991 this important programme has reduced refrigerant leakage from 30% in the early 90's to average levels of 4.8 % in 2000. This is a remarkable achievement from the industry that is not undermined by the recent publication of a paper by The Institute for European Environmental Policy titled "Is STEK as good as Reported?"<sup>2</sup>.

Without a dialogue with the STEK organisation, the author has inadvertently misrepresented the potential of containment to reduce the emission of greenhouse gases from refrigeration and air-conditioning, across Europe. In the IEEP report a leakage rate of between 6.9 to 12.7% is calculated but, by its own analysis, all rates above 6.9 % should be excluded because they are all based on selective or incomplete information.

"The report acknowledges that emissions have considerably reduced through the implementation of STEK" commented Friedrich Busch, Director General. EPEE. "In addition it accepts that log book records, a legal requirement under STEK, clearly show that emission rates are around 4.8%."

At issue is the difference between 4.8% and 6.9% cited in the report. An obvious explanation is that the report fails to take into account the impact of recovery and recycling, due to conversion of existing equipment from CFC/HCFCs to HFCs or equipment replacement. In these circumstances refrigerant would be recovered and recycled or destroyed, with some being replaced by new sales, which clearly should not be counted as an emission. Any expansions to existing equipment would similarly reduce sales to be categorised as emissions.

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<sup>1</sup> The European Partnership for Energy and the Environment (EPEE) represents businesses involved in the development and manufacture of refrigerant and air-conditioning equipment which relies on hydrofluorocarbons (HFCs), a fluorinated gas, as a refrigerant.

<sup>2</sup> Jason Anderson Research Fellow [janderson@ieeplondon.org.uk](mailto:janderson@ieeplondon.org.uk)



As far as the cost effectiveness of STEK is concerned Jason Anderson bases his assessment on the Enviros report<sup>3</sup> analysis, which does not take into account the benefits of STEK. It is widely recognised that under STEK there has been an increase in efficient and dependable installations, which have fewer breakdowns. Consequently there are now fewer repairs, which costs the operators less and on average outweigh the costs of the programme, such as for mandatory inspections. In addition the Enviros report states: "There is some debate as to whether this element of cost is too high since the business receiving the training is gaining extra value from the training itself. We have taken the view that this is the "highest" marginal cost and could be lower."

The cost effectiveness of STEK in reducing emissions is not in doubt. It is clearly recognised that it leads to systems that are more reliable, operating more efficiently, with lower energy consumption and lower refrigerant emissions.

"Producing a report of this nature without fully accounting for the dynamics of the refrigeration and air-conditioning industry is unhelpful, at a time when discussions should be based on facts and sound assessment," commented Friedrich Busch. "In coming to decisions based on containment regulators should be cautious if applying the findings of this report. An existing body of work including the recently published indicates that containment is working and delivering significant environmental benefits. STEK has been proven in practice to be working with emission rates of around 4.8% a fact that is not discredited by this report."

**ENDS**

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<sup>3</sup> Enviros Consulting, 'Assessment of the Costs & Implication on Emissions of Potential Regulatory Frameworks for Reducing Emissions of HFCs, FCs & SF6,' 2003.



**European Partnership  
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*Note to editors follows:*

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**Note to Editors:**

The STEK programme focuses on three core areas:

1. Competence and registration of personnel  
Since the technicians in practice have to realise the emission reduction goals, it was foreseen as an important precondition that the competence of all personnel in the market should be brought to a higher level of awareness and skills. Therefore an education and examination programme was set up. Professional examination organizations carry out the examination of the personnel, which is required as a part of the certification of the companies operating in both stationary and mobile markets.
2. Reduction of leakage through technical improvement and preventive service  
Technical measures were formulated after scientific studies to determine the reasons for leakage from refrigeration and air-conditioning installations. These causes for emissions were translated into regulations focused on the improvement of design e.g. no flared joints, transition joints or hard soldering; and the handling of installation and maintenance e.g. mandatory inspection regime for systems dependant on charge size.
3. Improved data and reporting  
Every installation in the Netherlands, which contains more than 3 kilograms of refrigerant, has a logbook. In this logbook the handling of refrigerant is recorded, both by the amount used as well as the nature of the repair or service carried out. The owner of the installation is responsible for his logbook. The amount of refrigerant is recorded in the service engineer's own records as well. Because of the administration and reporting of refrigerants it is possible to generate figures on actual emission rates to help deliver improved policy decisions for the future.

The following results of the programme have been identified:

- In 2000, over 92% of installations were now leak tight
- The overall leakage rate across the stationary refrigeration and mobile air-conditioning industry at that time was around 4.8%
- By sector:
  - Air conditioning = less than 1% leakage
  - Process refrigeration = less than 1% leakage
  - Industrial refrigeration = less than 5% leakage
  - Fishing industry = between 80 and 200%
- Consequently there has been more than a 50% reduction in refrigerant use, despite economic growth and an increased demand for refrigeration and air conditioning.

As a result of the STEK programme there has been an increase in levels of competency across the Refrigeration and Air-conditioning industry. Whilst costs did increase initially for end users these have been compensated for by lower running costs and reduced down-time through equipment failure.

Many of the elements of the STEK programme are reflected in the F-Gas regulation and it is anticipated that many of the significant benefits that have been achieved by the Netherlands will be repeated across the European Union.

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