

EMFO

EMISSIONSFORSKNINGSPROGRAMMET

EMFO

- a research programme on emissions



What is the EMFO?

The emission research programme, EMFO, is a sector-wide research competence to develop vehicles and vehicle components with emission levels that are sustainable in the long term.

The programme is to contribute to producing knowledge and making this knowledge available for use in research, development and education. This knowledge will then help Swedish industry and Swedish authorities to develop programme in the field of emissions from road vehicles, tractors and large machinery. Both industry and authorities are taking part in the programme.

The aim of the EMFO is to offer academia industry and authorities access to necessary knowledge pioneering solutions that are necessary if vehicle technology is to develop in the desired direction. One important task is to coordinate activities within the programme with both national and international research in the field.

An agreement was reached about the programme autumn 2002 between the partners from the Swedish Vehicle Research Council, PFF. Members of this programme include: Saab Automobile AB, Scania CV AB, AB Volvo, Volvo Car Corporation AB, Scandinavian Automotive Suppliers AB, the Swedish Energy Agency, the Swedish National Environmental Protection Agency, VINNOVA (Swedish Agency for Innovation systems) and the Swedish National Road Administration.

Research on emissions from road transport and machinery

The programme includes research into emissions generated by vehicles in use, such as air pollution and noise. This incorporates emissions from both vehicles that use public roads and also tractors and larger machinery. Research on air pollution also covers exhaust fumes or vaporisation and the spread of particulate matter caused by tyre and road surface wear. Noise can be both noise from engines or drive systems and the noise of tyres on the road surface.

Research areas include private cars, lorries and buses, and also motorcycles, mopeds, tractors and larger machinery. For the purposes of this document tractor refers to the vehicle type described in the directive 2000/25/EC. Larger machinery means vehicles included in the directive 97/68/EC, i.e. with an engine power of at least 18 kW.

The programme targets research into issues relating to emissions and the development and demonstration of technologies. The development of prototypes and new products is however not financed by the programme.

One important task for the programme is to coordinate activities within the programme with both national and international research in the field.

Objectives in the short and long term are to

- through national coordination create a strong research environment that meets the future needs from industry and society for knowledge and skills create a meeting place for representatives from different interests and disciplines
- strengthen the interaction between institutes of higher education, research institutes, authorities and industry.

Objectives for the EMFO in the long term, 5-10 years, are to

- achieve results that lead to a quantifiable improvement in emissions from road transport
- create an improved platform of knowledge based on scientific principles within the field of road traffic emissions, that is common to different parties in society
- safeguard the provision of qualified personnel within the field of road traffic emissions required by the business community and society
- provide basic data required for decision making on issues relating to road transport emissions, that are of both good quality and socially embedded

- coordinate national emissions research, so that Sweden has research facilities in some subsidiary areas that are at the forefront internationally.

Strategy

The EMFO's strategy is to create access to unique knowledge and competence in Sweden, which is shared and used in research, development and education. Through this, Swedish industry and Swedish authorities will develop the pioneering solutions necessary to achieve a good environment with regard to emissions. Research should also provide scientifically-grounded data for decisions on issues concerning road transport emissions.

Internationally leading R&D and educational facilities in the field of emissions should therefore be created in Sweden. These should be maintained through a coordination of investment in R&D and in R&D bodies by public authorities and the business community. The expected result of this is that Swedish R&D bodies will also receive commissions from foreign authorities and companies.

Through its financing of research in the field of road transport emissions, the EMFO will create a meeting place for representatives from different interests and disciplines. These meeting places will also gather, package and disseminate knowledge in the field.

The EMFO will contribute to a sustainable growth by supporting research and development in the Swedish vehicle industry.

Focus Areas

The programme will comprise seven different focus areas, i.e. R&D areas where there is greatest potential to contribute to the objectives of the programme. These seven focus areas are:

1. Diesel – knowledge for future emission requirements
2. Emission statistics
3. Interaction between road surface and vehicle (in particular noise and particulate matter)

4. Alternative fuels and drive systems
5. System studies
6. Environment and health
7. Vehicle and intelligent transport systems

Subsidiary Programmes

The focus areas have been divided into 12 subsidiary programmes:

1. Functional solutions to achieve future emission requirements for diesel engines
2. Future requirements and standards for diesel engines
3. The occurrence of different types of emissions from different sources and conditions
4. Reliable emission statistics and basic data for this
5. Reduced road dust and noise emissions
6. Future alternative fuels and drive systems
7. Alternative fuels for the existing vehicle fleet
8. Knowledge about different emissions and their sources (also from a life-cycle perspective)
9. Socio-economic evaluation of the health and environmental impact of different emissions
10. Health and environmental impact
11. Emission-optimised traffic and transport management
12. Optimal range of socio-economic measures.

All of these subsidiary programmes will not begin at the same time. Applications were invited for six subsidiary programmes in autumn 2003. The aim is that all subsidiary programmes will begin during 2004.

Detailed descriptions are available for the subsidiary programmes that are underway, offering information about the research aims in each respective subsidiary programme, its financial frames etc. A description of these subsidiary programmes can be found at www.pff.nu (Swedish only).



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