



Centre for Green Transport

Road Safety and Transport Agency

# CENTRE FOR GREEN TRANSPORT

– promoting sustainable transport



## CONTENTS

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- 04 Introduction
- 05 The transport sector's impact on climate
- 06 Many areas of initiative
- 07 Energy, air pollution and noise
- 08 Energy efficient transport solutions
- 09 Aerodynamic trucks
- 10 Ecodriving saves money
- 11 Energy labelling of light commercial vehicles (vans)
- 12 Green certification
- 13 Network, research and development
- 14 Focus on dialogue and innovation
- 15 Facts about Denmark's CO<sub>2</sub> emissions

Published by: Centre for Green Transport

Text: Centre for Green Transport

Design: Rumfang ApS

Front cover photo: Jørgen Bausager/Scanpix.

Published: September 2009

Print run: 2,000 copies





## **THE CENTRE FOR GREEN TRANSPORT – PART OF THE DANISH ROAD SAFETY AND TRANSPORT AGENCY**

DEVELOPING THE NEXT GENERATION OF GREEN TRANSPORT TECHNOLOGIES HAS BEEN PUT ON THE AGENDA WITH THE ESTABLISHMENT OF THE CENTRE FOR GREEN TRANSPORT BY THE DANISH ROAD SAFETY AND TRANSPORT AGENCY. IN CONNECTION WITH THE POLITICAL AGREEMENT ON "A GREEN TRANSPORT POLICY", A TOTAL OF DKK 284 MILLION HAS BEEN ALLOCATED IN THE PERIOD 2009-2013 TO IMPLEMENT SPECIFIC INITIATIVES THAT CAN HELP REDUCE CO<sub>2</sub> EMISSIONS IN THE TRANSPORT SECTOR.

# INTRODUCTION

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With the establishment of the Centre for Green Transport, the framework has been created for a Danish centre of excellence in the field of sustainable transport. The Centre's role is to create synergy between specific initiatives and to promote knowledge gained, and research results achieved, for new forms of transport with a view to reducing CO<sub>2</sub> emissions in the transport sector.

We will collaborate with other players in both the private and public sectors, as well as conducting ongoing test and demonstration projects in energy efficient transport solutions. In this way we will become the driving force behind the goal to position Denmark as a laboratory in sustainable technologies, especially in the road transport area. We will network and knowledge share with the players involved in the development of energy efficient vehicle technologies.

The Centre for Green Transport was established as part of the agreement on "A Green Transport Policy" which was made in January 2009 by the majority of the political parties in the Danish Parliament.

The Centre is part of Denmark's Road Safety and Transport Agency, which ensures a synergy between research and knowledge and creates an optimal basis for influencing legislation both in Denmark and the EU.

This electronic brochure provides information about which focus areas and initiatives the Centre for Green Transport is planning in the period 2009-2013, as well as the financing of them.

We hope you will enjoy reading it.

Niels-Anders Nielsen  
Centre Manager



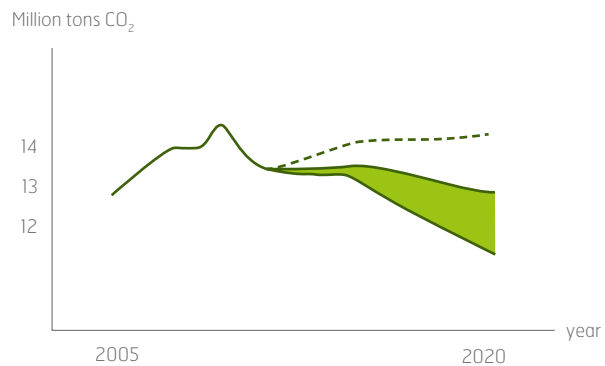
# THE TRANSPORT SECTOR'S IMPACT ON CLIMATE

Today, the transport sector accounts for approximately 1/5 of Denmark's CO<sub>2</sub> emissions. This is why it is extremely important for this sector to be in focus when the time comes for Denmark to ensure a sustained reduction in CO<sub>2</sub> emissions.

Danish companies and research institutes have a wealth of knowledge at their disposal in terms of environment and climate friendly transport technologies. This knowledge base can create significant growth opportunities in the light of the global focus on the reduction of CO<sub>2</sub>.

The Centre for Green Transport considers that one of its foremost tasks is to help create green growth through specific development projects and in network collaborations.

## Reduction in CO<sub>2</sub> emissions



■ The reduction in CO<sub>2</sub> emissions will be achieved as a result of a range of measures, including the initiatives for which the Centre for Green Transport is responsible. The size of the reduction depends on how quickly the new energy efficient technologies make an impact – the green area.

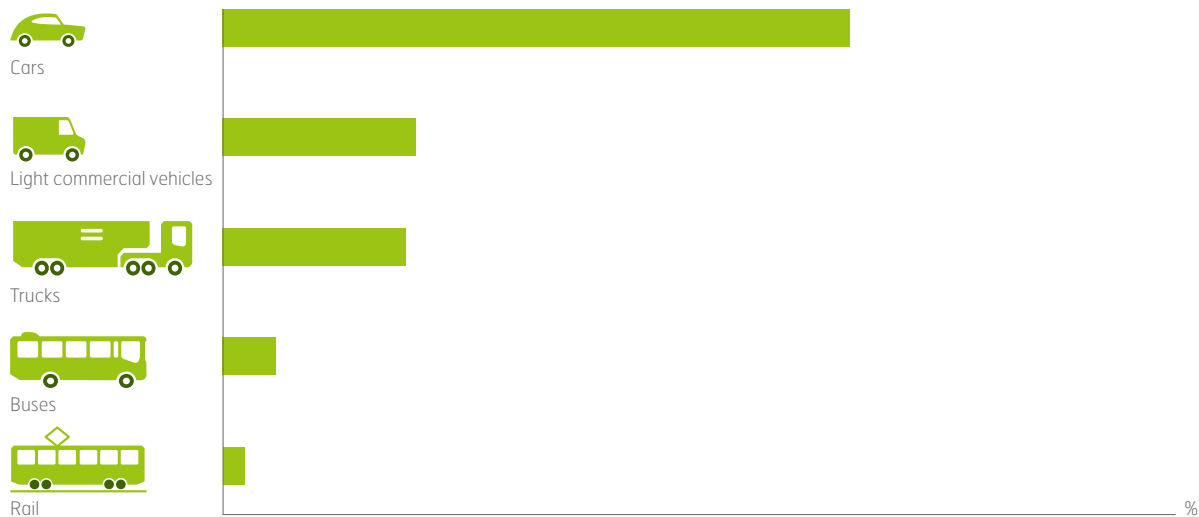
--- Base projection including the government's targets for the use of biofuels.

# MANY AREAS OF INITIATIVE

The transport sector in Denmark is a sector with a large number of players. In terms of CO<sub>2</sub> emissions the figures show that cars are the greatest source, followed by light commercial vehicles, and trucks. On the basis of these figures the Centre for Green Transport is working on a range of issues which influence all forms of transport.

The Centre aims to create an understanding of, and knowledge about, energy efficient measures by all players in the transport sector. Using information campaigns and other activities, we will therefore attempt to influence all the target groups to think and act energy efficiently, now and in the future.

## The transport sector's CO<sub>2</sub> emissions broken down by transport forms



# ENERGY, AIR POLLUTION AND NOISE

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The Centre for Green Transport is part of Denmark's Road Safety and Transport Agency. The Centre is the government's centre of excellence concerning the regulations applying to equipment fitted to cars in relation to energy and the environment, including noise. In this way we create a synergy between the Centre and the Road Safety and Transport Agency's substantial experience in areas covering the environmental properties of cars and energy efficient vehicle technologies.

The Centre also participates in inter-ministerial collaborations on energy efficiency, noise and alternative fuels such as biofuels. In this way we play an active role in the drawing up of regulations covering Low Emission Zones, driving taxes and work on the climate. We are also involved in establishing the requirements for retrofitting of particle filters, as well as administering the regulations based on international standards such as Euro Standards for cars. Last but not least, we are the authority that issues the guidelines for the testing of energetics devices fitted to vehicles.



A car's particle emissions being measured during a periodic vehicle test

# ENERGY EFFICIENT TRANSPORT SOLUTIONS

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**Between 2010 and 2013, the Centre for Green Transport will conduct a number of test projects in order to try out different options within energy efficient transport solutions.**

A total of DKK 200 million has been allocated for this purpose. The funds will be used in connection with projects that promote environmentally aware and energy efficient public transport, including test projects with other types of fuels.

In addition, the Centre will work with measures that increase energy efficiency such as:

- Alternative fuels for buses
- Large fleets of vehicles in collaboration with public and private sector operators
- Partnerships with private sector companies and municipal authorities on transport planning and system solutions

In this context, initiatives such as night distribution, improved fleet utilization and other specific measures will be implemented. We will also be assessing the potential for new and innovative ideas based on how these will influence CO<sub>2</sub> emissions in the future.



The Centre will invite trade organisations, municipal authorities and other players to debate meetings on the improved management of vehicle fleets

# AERODYNAMIC TRUCKS

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**Trucks account for a large proportion of CO<sub>2</sub> emissions. Trucks are both significantly heavier and less aerodynamic than cars.**

The fitting of optimal spoilers and skirts, and the installation of other aerodynamic equipment on vehicles reduce air resistance. In this way a reduction in fuel consumption is achieved with a corresponding decrease in CO<sub>2</sub> emissions.

In partnership with trade organizations we want to contribute to exploiting further the experiences acquired

with aerodynamics. We intend to initiate collaborations through dialogue and meetings involving different sectors and organizations, thereby creating the optimal framework for knowledge sharing.

The Centre for Green Transport has been given the task of administering a subsidy scheme for aerodynamic equipment for trucks and trailers. A total of DKK 42 million has been earmarked for this purpose. Once the technical requirements for the equipment and the supporting documents covering the efficiency have been worked out, the subsidies will be paid out in the period 2010-2012.



It will be possible to apply for subsidies for aerodynamic equipment for trucks in the period 2010-2012

# ECODRIVING SAVES MONEY

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**Every motorist knows that heavy-footed driving increases fuel consumption. But how can we save fuel and still move quickly in traffic? And what do more energy efficient driving techniques comprise?**

Some types of cars are already fitted with tools that can help energy efficient driving, including gear change indicators and measurement tools that show the actual fuel economy.

The Centre for Green Transport has been allocated DKK 28 million to develop campaigns and courses in energy efficient driving techniques. As a result of these techniques, drivers save money on fuel, reduce CO<sub>2</sub> emissions, and also ensure that they simultaneously keep moving. The primary target groups for these measures are cars and light commercial vehicles



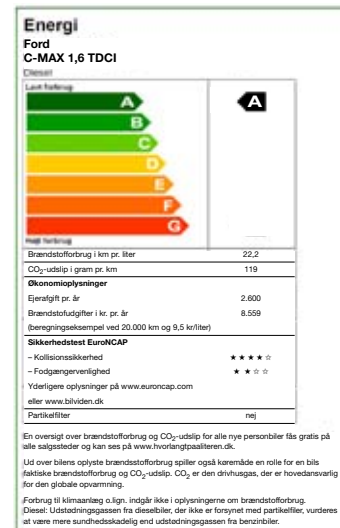
Ecodriving should be in focus both in urban and more general traffic conditions

# ENERGY LABELLING OF LIGHT COMMERCIAL VEHICLES (VANS)

Just as cars must be fitted with an energy label, so light commercial vehicles should also be marked in the future. This will ensure that companies and users have the opportunity to evaluate fuel consumption and therefore a vehicle's energy efficiency.

The energy consumption for both older and new light commercial vehicles can be seen on the Centre's Danish website at: [www.centerforgrontransport.dk](http://www.centerforgrontransport.dk) which also includes information on both new and older cars.

The Centre for Green Transport has set aside DKK 14 million for campaigns and the energy labelling of light commercial vehicles. The aim is to ensure that, in future, there will be a greater share of energy efficient light commercial vehicles in the Danish vehicle park.



Energy labelling has been used for many years in connection with cars

# GREEN CERTIFICATION

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**The Centre for Green Transport has been given the task of developing and administering a certification scheme for municipalities and companies that prioritize environmentally-friendly transport.**

Municipalities and private sector companies that wish certification must work in a targeted way with energy effi-

cient vehicles and driving techniques, the optimal use of vehicle parks, as well as the implementation of efficient management tools for improved utilization of vehicles.

Transport certification is viewed as a natural part, or extension, of the overall environmental leadership and green profile for an individual municipality or company.



# NETWORK, RESEARCH AND DEVELOPMENT

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**The Centre for Green Transport will work to create opportunities for knowledge sharing, ensure that best practice is communicated, and initiate network collaboration involving the transport sector's numerous players.**

We wish to collect and communicate knowledge from research in areas including alternative fuels, and the connection between transport, the environment and CO<sub>2</sub> emissions.

The goal is to position Denmark as a development laboratory within energy efficient transport technologies. To achieve this goal it will be necessary to have an overall view of the current research avenues in order to ensure that the focus will be on areas where knowledge is missing.



Alternative fuels will be the focus of future research

# FOCUS ON DIALOGUE AND INNOVATION

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**The Centre for Green Transport will invite the transport sector's many interested parties to participate in a dialogue and network activities, now and in the future. In practical terms, this will mean that we will conduct an open and ongoing dialogue with municipalities, regions, and commercial and professional bodies.**

The Centre will identify and invite applications for test projects within sustainable technologies and energy efficient control systems.

By using campaigns, press activity and through the use of the Centre's website, our goal is to publicize current projects and initiatives, as well as the results achieved. We will therefore try to influence all the target groups to work for a sustainable transport sector and a better environment, now and in the future.



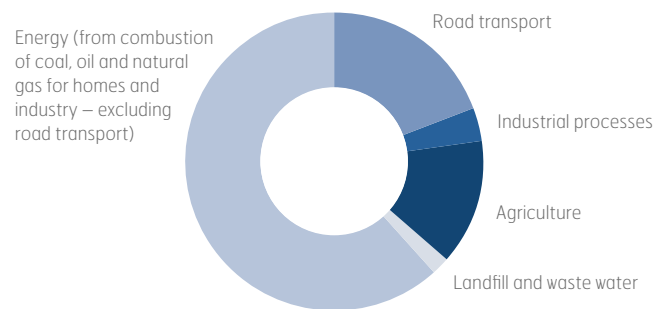
# FACTS ABOUT DENMARK'S CO<sub>2</sub> EMISSIONS

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Denmark's total emissions of CO<sub>2</sub> in 2006 were just under 60 million tons. The energy sector accounted for the largest share, namely 2/3, but road transport was responsible for approximately 1/5, with agriculture producing approximately 1/7.

The energy sector's emissions are primarily the result of the combustion of coal, oil and natural gas at power stations, and in homes and industry. There are relatively large variations in the energy sector's emissions from year to year. These are mostly as a result of electricity being traded across frontiers.

Inter-ministerial collaborations are developing current strategies for when, and how, we can optimally reduce the country's total CO<sub>2</sub> emissions.



Share of Denmark's CO<sub>2</sub> emissions in 2006 by sector



# Centre for Green Transport

Road Safety and Transport Agency

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