ENVIRON-MENTAL REPORT 2014

DSB

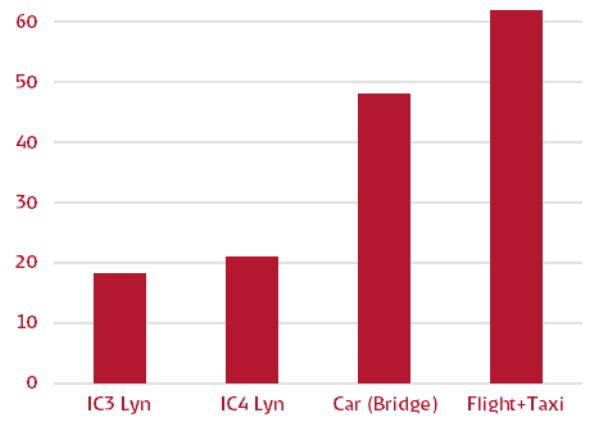
Content

Environment and climate

Approx. 90 percent of DSB's total energy consumption is used for train operation, which is an energy-friendly mode of transport compared with other modes of transport, regardless of whether the journey is a long journey or only a few stations in the Greater Copenhagen area.

Figure 6: CO_2 emissions (Aalborg-Copenhagen)

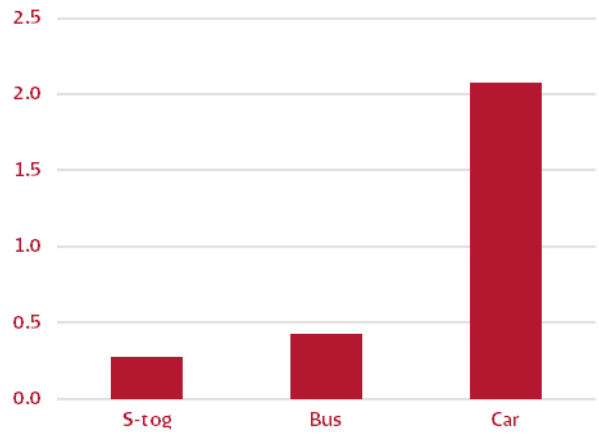
Kg per person



Assumptions for comparing different modes of transport are described in the Environmental Report 2014.

Figure 7: CO_2 emissions for a 12-km journey in the Greater Copenhagen area

Kg per person

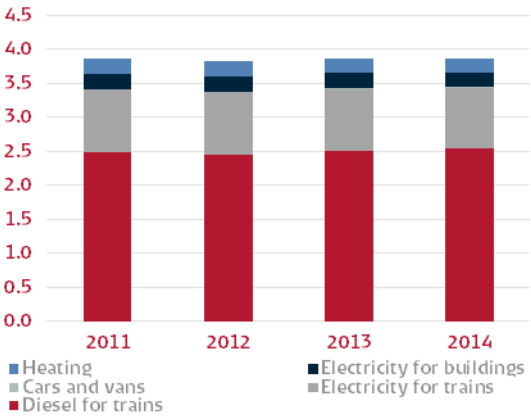


Nevertheless, DSB continues to focus on increasing efficiency through a reduction of its energy consumption per passenger train kilometre. In the long term, the adopted electrification of the main network in Denmark will make it increasingly possible to operate on renewable energy.

In 2014 DSB adopted a new Environmental Policy to ensure continued focus on reducing the overall environmental impact of the transport sector.

Figure 8: Direct and indirect energy consumption

GJ (million)



The energy consumption for cars and vans comes to less than 1 percent of the total consumption, therefore not visible in the figure.

DSB's total energy consumption for trains remains unchanged compared with 2013. Although unchanged, DSB's diesel operations are responsible for an increase in the energy consumption which was, however, offset by a decline in the consumption of electric operations.

The energy consumption for operations fell by 9 percent, primarily in the form of a reduced electricity consumption, i.a. due to the closing of the Kort & Godt shops and ongoing installation of more LED lights.

DSB's total CO_2 emissions fell by approx. 2 percent compared with 2013. CO_2 emissions for the train remain unchanged, but for the corporation there was a decline by 9 percent, primarily due to a reduced electricity consumption.

For S-trains the energy consumption per passenger kilometre fell by 6 percent. This fall was obtained through growth in the number of passenger kilometres of 2 percent and a fall in the overall energy consumption of 4 percent. The reduced energy consumption was obtained due to a decline in the number of degree days and reduced energy consumption for heating.

Figure 9: Development in electricity and diesel consumption per passenger kilometre

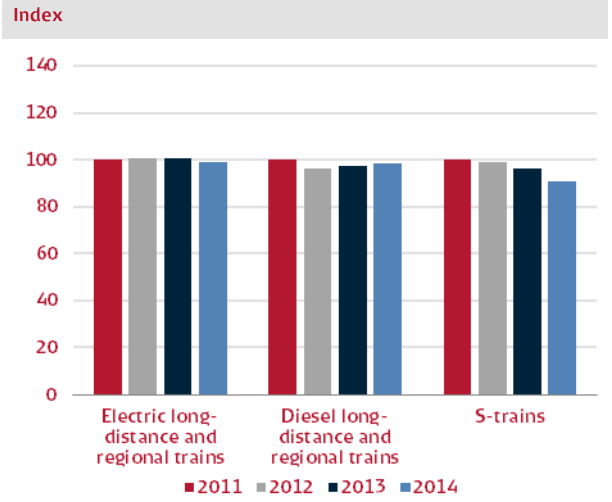


Table 1: Development in energy consumption and CO2 emission

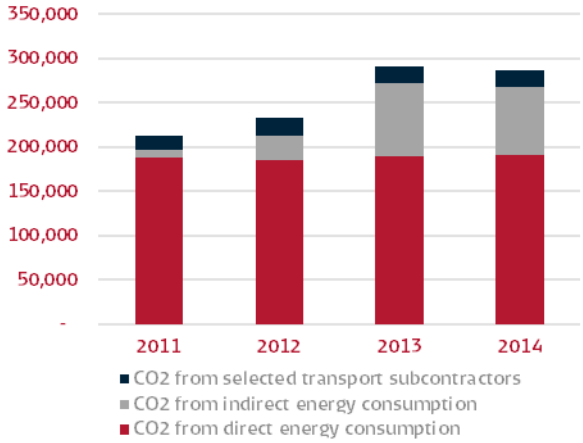
	Energy consumption per seat kilometre	Energy consumption per passenger kilometre	CO_2 emission per passenger kilometre
Long-distance & Regional Trains			
- Diesel trains	1%	1%	1%
- Electric trains	-4%	-2%	-1%
S-trains	-5%	-6%	-6%

DSB continues to make a targeted effort to reduce the energy consumption in its buildings and fixed installations. The following measures are among those taken in 2014:

- Replacement of lighting by LED at a number of addresses; expected annual savings of 400 MWh.
- Gathering of workshops and insulation of buildings.

CO_2 emissions from selected subcontractors of transport is largely unchanged compared with 2013. Replacement bus services in connection with track improvement work increased by 17 percent. Contrary CO_2 emissions from school trips by bus and/or ferry fell by 5 percent compared with 2013. CO_2 emissions from transport relating to the corporation fell by 6 percent, primarily due to a decline in the number of employees in DSB.

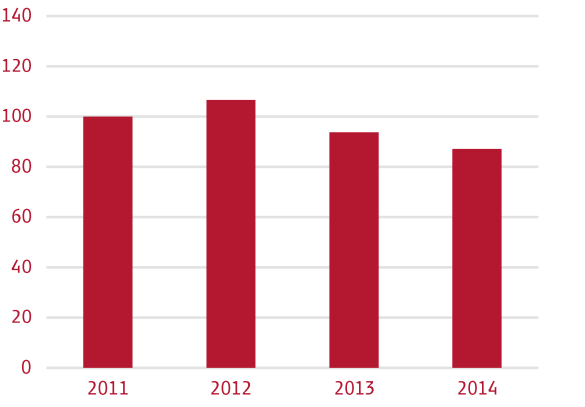
Figure 10: CO_2 emissions distributed on source



As of 2013, DSB decided against purchasing RECS certificates for power produced by renewable energy sources. Therefore emission data for 2013 and 2014 is not comparable to the result of earlier years.

Diesel rolling stock emits particles and also affects the air quality in other ways.

Figure 11: Particle emissions



Total emissions of particles from diesel trains fell by 7 percent compared with 2013. The reason is the increase placing in service of IC4, which means a reduced use of the old MR train sets. In addition, the fitting of the emission kit on the ME locomotives also contributed to the reduction.

In 2014 focus was still on the number of ultrafine particles in the double-decker coaches pulled/pushed by the ME locomotives. In the summer 2014 DSB replaced the filters in the coaches' air intake, which reduced the number of ultrafine particles by 40 percent inside the coaches.

Person borne measurements of DSB's employees in the autumn of 2014 show too high levels of ultrafine particles. This affects employees as well as customers.

DSB is making a targeted effort to reduce the impact through technical changes on the ME locomotives and MR train sets, which are the two types of rolling stock that present the biggest challenges.

The number of noise and smoke complaints submitted by neighbours and customers fell from 237 in 2013 to 195 in 2014.

The complaints represent the total number of complaints received by DSB through the Customer Centre, directly to DSB Environment and through Banedanmark. The complaints in 2014 do not concern one particular area, but are distributed over a wide range of issues. The reduced number of complaints is i.a. due to the fact that the noise inside the IC4 has been reduced.

The renovation of Nørreport Station was completed in December 2014 and the new ventilation system was commissioned. Banedanmark spent the autumn of 2014 adjusting the system and the preliminary measurements show marked improvements of the air quality at the platforms.

Accounting policies

Annual statement
The annual statement includes data for DSB's activities as well as data for fixed installations and buildings where DSB's activities take place.

All Group companies in Denmark (wholly owned and DSB Øresund) are included fully in the annual statement.

For the annual statement, DSB has decided to report on environmental impacts using the same groupings as in the "Greenhouse Gas Protocol", the GHG Protocol, in which energy consumption and emissions are reported in three categories: direct (scope 1) and indirect (scope 2) energy consumption and emissions as well as emissions relating to selected subcontractors of transport (scope 3).

External suppliers
As a main rule, the consumption and emissions of external suppliers on contracts with DSB are not included. An exception is the consumption of chemical products and CO_2 emissions relating to selected suppliers of transport. This applies to replacement services provided by bus and taxi, school journeys by bus and ferry, employee transport by aeroplane, taxi and car as well as employees' mileage to and from work. Official journeys by train outside Denmark are not included.

DSB as supplier
Consumption and emissions from buildings that are owned by DSB but are rented out are not included.

Compiling and processing data
The data in the annual statement is compiled via DSB's registration systems and on the basis of figures provided by external partners. Procedures for the compiling of data and quality control are described in the "Manual for Compiling Environmental Data". The manual describes the distribution of roles and responsibilities between central and decentralised environmental employees during the preparation of the environmental report.

The process starts with the compiling and assessing of environmental data in the business units, and then the units' contributions to data and text are processed and gathered into one entity for DSB. The quality control of the data is undertaken both in the units and centrally in DSB.

Energy consumption for train operation
The consumption of diesel is registered automatically when filling up. Add to this the wastage from stationary tank installations, which is also included in the calculations. DSB pays for the traction current based on invoices received from Banedanmark. The electricity consumption is distributed on rolling stock classes according to the meter readings on the trains. A loss of traction current is added to the recorded values.

Air emissions
DSB's calculations of air emissions are compiled on the basis of key figures.

As of 2013 DSB decided against purchasing RECS certificates for power produced by renewable energy sources. This means that the emissions for 2013-2014 are not comparable with the data from previous years. Until and including 2011, DSB also used power from renewable energy sources in buildings. This means that emission data from electrical train operation are not included in the statement until and including 2012 and from buildings in 2011.

The key figures for the emissions from diesel consumption are based on readings of the emissions' dependency on engine performance as well as readings or simulations of engine performance at different driving patterns.

Key figures for emissions from cars and vans are collected from TEMA2010. The emission levels of SO_2 are corrected according to the sulphur contents of petrol and diesel, respectively.

Key figures for CO_2, SO_2 and NO_x from district heating used in buildings are calculated on the

basis of the statement from Energinet.dk for emissions and thermal production in Denmark. A mean value is used for 2012 and 2013. The thermal production covers 73 percent of the overall Danish district heating production. The key figure has been calculated on the basis of the energy content method and is corrected for a 20 percent net loss in the distribution network.

Key figures for CO_2, SO_2 and NO_x from buildings are based on 2013 data from the Danish Centre for Environment and Energy (DCE) with regard to gas and fuel oil. Data may be found on the website under the subject of "Air", Emission Inventories, Emission Factors for LPG, natural gas and gas oil in the category "residential plants". The electricity key figure for traction current is used in the calculation of the emissions from the energy consumption in buildings, and the figure is corrected for a 5 percent net loss in the distribution network.

Indexation
In the annual statement, the consumption and emissions for 2014 are calculated in absolute quantities. 2011 is the base year for indexation. Notes 4 and 5 list a few deviations from the indexation in relation to 2011.

In some cases, it has been decided not to index the consumption and emissions on account of, for instance, different maintenance intervals between the years. This applies, for example, to certain chemical products.

Environmental disclosures and comparisons with other modes of transport
For the environmental disclosure for train products and comparisons between different means of transport, we use the annual energy consumption and emissions as well as the annual average occupancy rate for our trains.

Key figures for cars are taken from the Danish Ministry of Transport's model, the TEMA2010. There may be major variations in the result depending on the type of car used. DSB has decided to use an average figure somewhere between a fairly small and a fairly large car, both with EURO III engines. This key figure is close to the average for the Danish fleet of cars.

To calculate the CO_2 emissions from aeroplanes, we use Scandinavian Airlines' CO_2 calculator. We use the default value for the most commonly used planes on the selected route.

The occupancy rates for cars are taken from the statistics produced by the Danish Road Directorate. We estimate that there is, on average, 1.54 passengers per car, and for rush-hour calculations, we calculate with an average of 1.1 passengers.

For environmental disclosures for types of rolling stock, we use the annual energy consumption and emissions as well as the number of seat kilometres covered by the rolling stock. The distribution on the different types of rolling stock is performed using the annual statement tool.

Customer enquiries and complaints
DSB receives enquiries and complaints regarding various environmental issues from customers and neighbours. Previously, reporting focussed on enquiries and complaints regarding external environmental issues. As of 2013 DSB has adjusted its statement of customer enquiries and complaints regarding environmental issues, so that the reporting also concerns complaints and enquiries from passengers with regard to conditions onboard the train, e.g. air quality and noise in the train.

Environmental key figures

Environmental disclosures and statements for 2014

The environmental disclosures include energy consumption and emissions of various types of air pollutants for product types and types of rolling stock.

The annual statements contains absolute figures of consumption and emissions for 2014 as well as index figures for the period 2011-2014.

Environmental disclosure for train products 2014

Train product	Energy Consumption	CO_2
Per passanger kilometre	MJ	g
S-trains	0.29	21
Regional trains	0.87	64
InterCity trains	0.50	37
Express trains	0.45	33

The environmental disclosure for the train product shows the energy consumption and CO_2 emissions per passenger kilometre from DSB's products in 2013.

Environmental disclosure for types of rolling stock 2014

Train type	Energy consumption	CO_2	CO	NO_x	SO_2	HC	Dust	Particles
Per seat kilometre	MJ	g	mg	mg	mg	mg	mg	mg
S-trains (electricity)	0.07	4.9	2.2	3.3	0.8	2.4	0.2	0.0
Desiro (diesel)	0.31	22.6	102.0	178.5	0.1	28.0	0.0	3.8
ME and double-decker coaches (diesel)	0.29	21.6	32.7	283.6	0.1	16.9	0.0	8.9
Øresund trains (electricity)	0.12	8.8	3.9	5.9	1.5	4.3	0.3	0.0
MR (diesel)	0.34	24.9	100.8	376.2	0.2	57.8	0.0	21.3
IR4 (electricity)	0.12	9.1	4.0	6.1	1.6	4.4	0.3	0.0
IC3 (diesel)	0.28	21.1	13.3	120.9	0.1	6.4	0.0	0.9
IC4 (diesel)	0.39	29.2	20.5	165.6	0.2	9.6	0.0	1.4

The environmental disclosure for train types shows the energy consumption and emissions per seat kilometre from DSB's train types in 2014.

Annual statement 2014

Consumption

	Note	Index 2011	Index 2012	Index 2013	Index 2014	Volume 2014	Unit
Energy conumption							
The Product, total							
Electricity		100	99	99	97	246,826	MWh
Diesel		100	99	101	103	70,769,740	Litre
The Corporation, total		**100**	**97**	**98**	**90**	**113,963**	**MWh**
Electricity	1	100	101	104	94	58,402	MWh
Heating (adjusted for degree days)	1	100	94	93	87	55,561	MWh
Direct energy consumption							
Train product (L&R) (diesel)		**100**	**99**	**101**	**103**	**70,769,740**	**Litre**
Train operation		100	99	101	103	70,769,740	Litre
The Corporation							
Cars and vans							
Diesel	2	100	105	161	92	238,753	Litre
Petrol	2	100	72	64	53	15,906	Litre
Heating (adjusted for degree days)	1	100	88	80	96	13,624	MWh
Heating oil	1	100	95	131	246	1,240	MWh
Gas		100	88	78	91	12,385	MWh
Indirect energy consumption							
Train product (electricity)		**100**	**99**	**99**	**97**	**246,826**	**MWh**
S-trains		100	102	100	96	120,406	MWh
The Coastal line (operated by DSB Øresund)		100	100	103	101	65,937	MWh
Long distance and regional trains		100	95	92	93	60,483	MWh
The Corporation		**100**	**99**	**100**	**90**	**100,339**	**MWh**
Electricity	1	100	101	104	94	58,402	MWh
District heating incl. steam (adjusted for degree days)	1	100	96	96	84	41,936	MWh
Water consumption		**100**	**72**	**67**	**68**	**147,823**	**m³**
Chemical products (selected)							
Nitrogen content in slippery surface prevention agents		-	-	-	-	12.7	Tonnes
Herbicides		-	-	-	-	175.5	Kg active substance

Base year for indexation is 2011 = 100.

Emissions (CO_2)

	Note	Index 2011	Index 2012	Index 2013	Index 2014	Volume 2014	Unit
Air emissions, calculated							
CO_2		**100**	**109**	**137**	**135**	**287,297**	**Tonnes**
The Product		100	100	131	131	255,200	Tonnes
The Corporation		100	209	196	179	32,097	Tonnes
Direct energy consumption (GHG* scope 1)		**100**	**98**	**101**	**102**	**191,314**	**Tonnes**
The Product	**3**	**100**	**98**	**101**	**102**	**187,771**	**Tonnes**
Long distance and regional trains (diesel)		100	98	101	102	187,771	Tonnes
The Corporation		**100**	**91**	**96**	**97**	**3,543**	**Tonnes**
Cars and vans (petrol and diesel)	2	100	102	152	88	671	Tonnes
Heating (heating oil and gas)		100	89	82	99	2,872	Tonnes
Indirect energy consumption (GHG* scope 2)		**100**	**316**	**945**	**870**	**77,018**	**Tonnes**
The Product	**3**	**-**	**-**	**100**	**93**	**55,045**	**Tonnes**
S-trains (electricity)	4	-	-	100	96	28,031	Tonnes
The Coastal line (electricity)	4	-	-	100	82	12,933	Tonnes
Long distance and regional trains (electricity)	4	-	-	100	101	14,081	Tonnes
The Corporation		**100**	**316**	**278**	**248**	**21,973**	**Tonnes**
Electricity, fixed installations	5	-	100	81	73	14,312	Tonnes
District heating incl. steam		100	94	98	87	7,662	Tonnes
Selected transport sub-suppliers (GHG* scope 3)		**100**	**127**	**116**	**115**	**18,965**	**Tonnes**
The Product		**100**	**133**	**108**	**111**	**12,384**	**Tonnes**
Replacement busses		100	374	240	281	4,808	Tonnes
S-trains		100	78	26	35	35	Tonnes
L&R		100	392	254	296	4,772	Tonnes
Taxa		100	69	72	74	10	Tonnes
School journeys		100	89	85	80	7,566	Tonnes
Busses		100	66	82	57	257	Tonnes
Ferries		100	90	85	81	7,310	Tonnes
The Corporation		**100**	**114**	**130**	**122**	**6,580**	**Tonnes**
Service travel by airplane		100	277	84	46	179	Tonnes
Service travel in own car		100	76	96	114	71	Tonnes
Taxa		100	92	80	87	152	Tonnes
Employee transport to and from work		100	102	136	129	6,178	Tonnes

Base year for indexation is 2011 = 100.
* GHG = Greenhouse Gas protocol

Emissions (other emissions)

	Note	Index 2011	Index 2012	Index 2013	Index 2014	Volume 2014	Unit
Air emissions, calculated							
NO_x						**1,711**	**Tonnes**
The Product	**3**	**100**	**100**	**100**	**96**	**1,689**	**Tonnes**
Long distance and regional trains (electricity and diesel)	4	100	100	98	95	1,671	Tonnes
The Coastal line (electricity)	4	-	-	100	54	5.8	Tonnes
S-trains (electricity)	4	-	-	100	60	12	Tonnes
The Corporation		**100**	**185**	**181**	**147**	**21**	**Tonnes**
Cars and vans (petrol and diesel)	2	100	101	152	78	1.8	Tonnes
Heating (district heating, heating oil and gas)		100	93	95	82	10	Tonnes
Electricity, fixed installations	5	-	100	85	72	10	Tonnes
SO_2						**15**	**Tonnes**
The Product	**3**	**100**	**99**	**885**	**963**	**11**	**Tonnes**
Long distance and regional trains (electricity and diesel)	4	100	99	287	326	3.6	Tonnes
The Coastal line (electricity)	4	-	-	100	99	2.2	Tonnes
S-trains (electricity)	4	-	-	100	110	4.8	Tonnes
The Corporation		**100**	**177**	**166**	**150**	**4.5**	**Tonnes**
Cars and vans (petrol and diesel)	2	100	102	152	88	0.0042	Tonnes
Heating (district heating, heating oil and gas)		100	80	87	68	2.0	Tonnes
Electricity, fixed installations	5	-	100	81	84	2.5	Tonnes
HC	**6**					**160**	**Tonnes**
The Product	**3**	**100**	**107**	**124**	**126**	**160**	**Tonnes**
Long distance and regional trains (electricity and diesel)	4	100	107	104	105	133	Tonnes
The Coastal line (electricity)	4	-	-	100	97	8.6	Tonnes
S-trains (electricity)	4	-	-	100	109	19	Tonnes
CO	**6**					**276**	**Tonnes**
The Product	**3**	**100**	**106**	**106**	**99**	**276**	**Tonnes**
Long distance and regional trains (electricity and diesel)	4	100	106	98	92	256	Tonnes
The Coastal line (electricity)	4	-	-	100	91	6.3	Tonnes
S-trains (electricity)	4	-	-	100	102	14	Tonnes
Particles (TSP)	**6**					**46**	**Tonnes**
The Produkt	**3**	**100**	**107**	**94**	**87**	**46**	**Tonnes**
Long distance and regional trains (diesel)		100	107	94	87	46	Tonnes
Dust						**1.8**	**Tonnes**
The Product	**3**	**-**	**-**	**100**	**123**	**1.8**	**Tonnes**
Long distance and regional trains (electricity)	4	-	-	100	133	0.45	Tonnes
The Coastal line (electricity)	4	-	-	100	108	0.41	Tonnes
S-trains (electricity)	4	-	-	100	126	0.90	Tonnes
Ozone-depleting agents						**2.2**	**Tonnes**
HFC	7	-	-	-	-	2.2	Tonnes
HCFC	8	-	-	-	-	0.023	Tonnes

Emissions (other emissions)

	Note	Index 2011	Index 2012	Index 2013	Index 2014	Volume 2014	Unit
Waste						**9,935**	**Tonnes**
Waste (excl. construction waste)		**100**	**97**	**105**	**111**	**8,535**	**Tonnes**
For recycling		100	99	118	122	2,927	Tonnes
For incineration		100	98	98	94	4,294	Tonnes
For special treatment		100	80	108	187	1,228	Tonnes
For depositing		100	99	93	139	86	Tonnes
Construction waste		**-**	**-**	**-**	**-**	**1,400**	**Tonnes**
For recycling		-	-	-	-	797	Tonnes
For incineration		-	-	-	-	599	Tonnes
For special treatment		-	-	-	-	2.1	Tonnes
For depositing		-	-	-	-	1.6	Tonnes

Base year for indexation is 2011 = 100.

Note 1: Energy consumption for fixed installations (buildings)

DSB improves the data basis for calculations on an ongoing basis. DSB register filling of heating oil, not the actual consumption of oil.

Note 2: Cars and vans

The fuel consumption for cars and vans has declined in 2014 due to an unusual volume of diesel consumption in 2013. Similarly, the emissions due to the fuel consumption has declined. At the same time, DSB is using more energy efficient vehicles.

Note 3: The Product

The statement on air emissions is compiled on the basis of key figures. For further information look at the part "Accounting policies".

Note 4: RECS certificates for trains

As of 2013, DSB decided against purchasing RECS certificates for power produced by renewable energy sources for train operations. This means that emission data from electrical train operation are not included in the statement until 2012.

Note 5: RECS certificates for fixed installations (buildings)

As of 2012, DSB decides against purchasing RECS certificates for power produced by renewable energy sources for fixed installations (buildings). This means that emission data from fixed installations are not included in the statement until 2011.

Note 6: Less emissions for cars and vans

The statement of emissions for The Corporation is standardized. This means that emissions of HC, CO and particles (TSP) are not included emissions from fuel consumption for cars and vans from 2014.

Note 7: HFC

Since 2005, the acquisition of new systems with HFC and the use of HFC have been prohibited, except for the purpose of servicing existing systems. Another exception is for air conditioning systems in vehicles, meaning that DSB still uses HFC.

Note 8: HCFC

According to legislation, HCFC is required to be phased out by 1 January 2002, but it is legal to fill tanks with reclaimed (recycled) HCFC.

Declaration

Independent auditors' report

To DSB's stakeholders
We have made an assessment of environmental data for 2014 in **DSB Environmental report 2014**.

DSB's Management is responsible for the data in **DSB Environmental report 2014**. Our responsibility is to express an opinion on the data in the mentioned environmental report.

Basis of opinion
We conducted our work in accordance with International Standards on Auditing on other assurance engagements and additional requirements in accordance with Danish audit regulation to obtain limited assurance for our opinion.

Our work has, based on an assessment of environmental materiality and risk, included analyses, inquiries to the Management of the department for environment and control of whether data has been compiled, assessed, and quality controlled as provided in DSB's manual regarding compiling of environmental data. We have, on a test basis, reconciled the calculation of energy consumption with reporting from data suppliers. Also, we have assessed whether the accounting policies chosen by Management are appropriate and whether the estimates made by Management are reasonable.

An examination is limited primarily to inquiries of company personnel and analytical procedures applied to environmental data and thus provides less assurance than an audit.

We have used both audit and environmental specialists in performing our work. We believe that our work provides a reasonable basis for our opinion.

Opinion
Based on our work, nothing has come to our attention that causes us to believe that the environmental data for 2014 in **DSB Environmental Report 2014** has not, in all material respects, been prepared in accordance with the accounting policies describe.

Taastrup, 26 February 2015

Erns & Young
Godkendt Revisionspartnerselskab

Michael N. C. Nielsen
State Authorised
Public Accountant

Jens Frederiksen
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