ENVIRON-MENTAL REPORT 2016

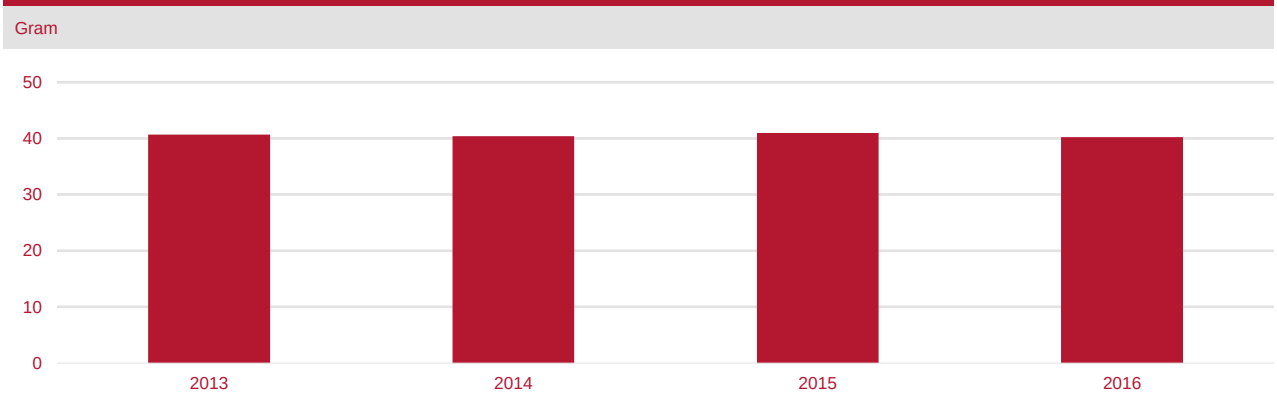
Content

Environment and climate

In 2016, DSB set a strategic measuring point for sustainability, defined as the emission of CO_2 in grams from train operations per passenger kilometre. The diagram below shows the results from recent years.

With emissions of approx. 40 grams per passenger kilometre, trains are a very competitive means of transport compared to other forms of transport as cars and planes both emit approx. 100 grams CO_2 per passenger kilometre, while busses emit approx. 60 grams.

Figure 1: CO_2 emission per passenger kilometre



Through its environmental policy, DSB focuses on reducing the company's impact on the surrounding environment and contributing to the transport sector's overall restructuring and reduction of climate impact.

The continued electrification of the main network in Denmark means a decline in energy consumption and CO_2 emissions due to the conversion from diesel to electricity. In addition, a decline in CO_2 emissions is expected due to the higher share of renewable energy in the Danish energy mix.

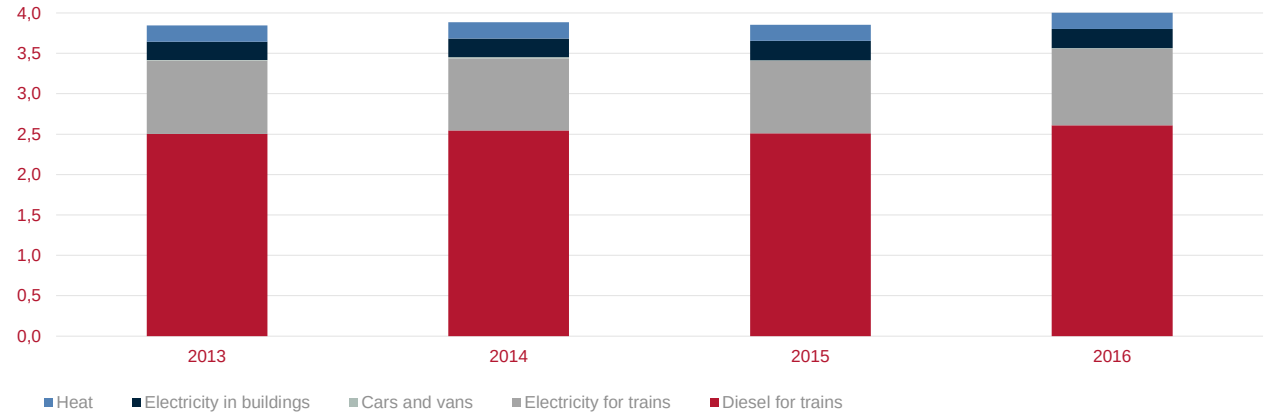
DSB's total energy consumption for trains increased by 4 percent compared to 2015. The increase has been in both diesel consumption and electricity consumption. This is due to additional production as a result of ID-verifications in Kastrup, increased numbers of seat in the Long-distance traffic and a change in train type used.

Approx. 90 percent of DSB's total energy consumption is used for train operation.

Energy consumption for other than train operation is unchanged since 2015.

Figure 2: Energy consumption

GJ (million)



Electricity consumption for cars and vans is less than 1 percent of DSB's total energy consumption and is therefore not included in the figure.

DSB's total CO_2 emission has declined by 5 percent compared to 2015. This is due to a decrease for the train product and the company resulting from the improved energy mix for electricity and district heating.

DSB conducted an energy review in 2016 and is listed on the Danish Energy Agency's positive list of companies who have conducted an energy review. The energy review is required for all large companies throughout the EU and must cover at least 90 percent of the company's total energy consumption. At DSB, the energy review covered energy consumption for train operation and energy consumption at the Preparation Centre Kastrup.

The energy review takes stock of energy consumption in the selected areas and identifies potential measures to reduce consumption. Preparation Centre Kastrup is continuing its work to connect to the district heating system, closing a local combined heat and power station and reinvesting in ventilation.

Diesel trains make a local impact on air quality in the form of particles, NO_x, etc. DSB's main focus is on a reduction of particles, including ultrafine particles.

Figure 3: Particle emissions

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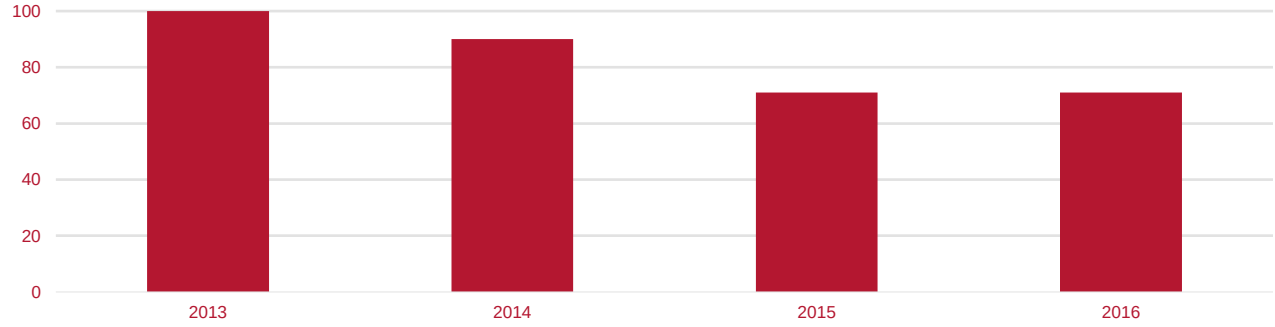


The total emissions of particles, calculated by mass, from diesel trains was unchanged compared to 2015, but has declined by 30 percent since 2013. The reason is the reduced use of MR train sets and ME locomotives, as well as the installation of catalytic converters in the MR train sets.

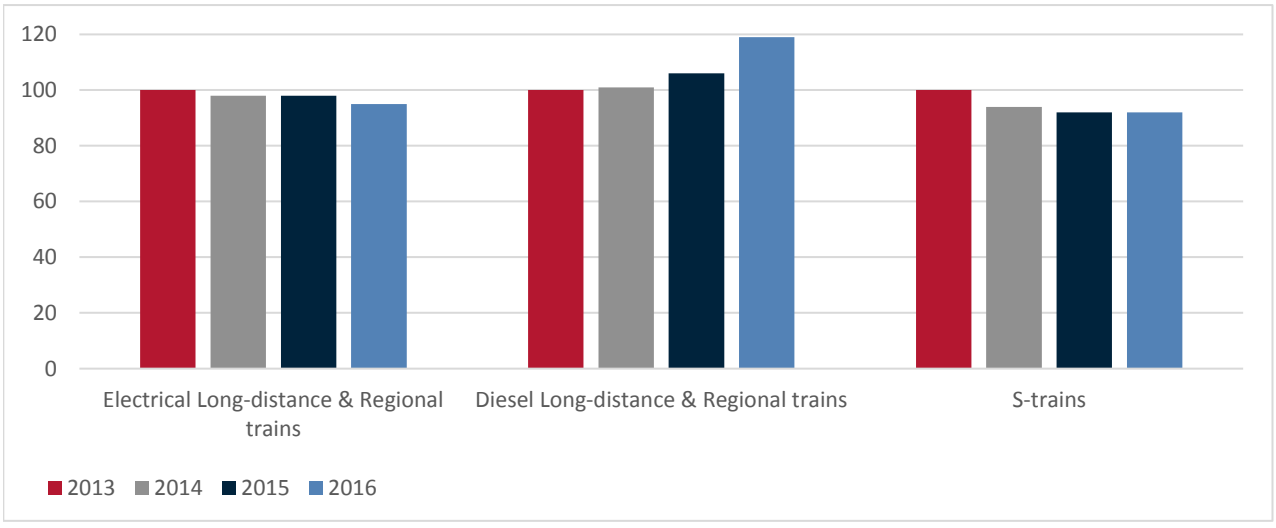
DSB is continuing its work to implement various prototypes for reducing customers' and employees' exposure to ultrafine particles.

CO_2 emissions per passenger kilometre for DSB's electric trains have declined significantly due to the energy mix in Denmark contains a higher proportion of renewable energy. The increase for diesel traffic is due to the declining occupancy rate and more frequent use of types of rolling stock with a higher energy consumption per seat kilometre.

Table 1: Development in energy consumption and CO_2 emissions

Change from 2015 to 2016	Energy consumption per seat kilometre	Energy consumption per passenger kilometre	CO_2 emission per passenger kilometre
Long-distance & Regional Trains			
- Diesel trains	6%	12%	12%
- Electrical trains	-6%	-3%	-31%
S-trains	6%	0%	-29%

Figure 4: Development in electricity and diesel consumption per passenger kilometre



DSB is continuing efforts to reduce energy consumption in buildings and fixed installations. This included the following measures in 2016:

- The majority of lighting at the S-train platforms was replaced with LED lighting during autumn 2015, with a full impact of approximately 1 GWh in 2016.
- Optimisation of ventilation system at Klargøringscenter København. Full impact in 2017
- New gas boiler at Klargøringscenter Kastrup. Full impact in 2017

During 2016, there were three spill accidents from trains in operation. Dialogue was conducted with the municipalities in connection with all three events, in addition to remedial actions. In the cases where soil samples have been taken, testing determined that the oil does not pose any risk. An excavation permit is still pending in connection with the last case.

The number of noise and smoke complaints submitted by neighbours and customers fell from 147 in 2015 to 93 in 2016.

Complaints and enquiries, by category:
Noise outside of train: 34
Noise inside train: 17
Smoke: 2
Noise and smoke: 15
Air quality outside of train: 11
Air quality inside train: 14

Noise outside train typically involves noise from ME-diesellocomotives idling on turning tracks / in preparation areas. Noise inside trains typically involve S-trains with surfaces on one or more wheels.

In two cases, a municipality was involved, though without enforcement (Aarhus and Copenhagen). Both cases concern noise.

Due to the establishment of the Light Rail in Århus, DSB has stopped traffic between Grenaa and Odder. In the autumn of 2016, this enabled a replacement of rolling stock on the Roskilde-Køge-Næstved line, from MR train sets to Desiro train sets. This has reduced both the noise impact and particle impact.

Ultrafine particles and air pollution generally also give rise to a number of enquiries regarding air quality at Nørreport Station and the risk of travelling by diesel train (ME and MR train sets). The measurements carried out by Rail Net Denmark of the air quality at Nørreport station show a continued substantial improvement, compared with the situation before the rebuilding.

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) 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 subsuppliers 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 transport 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 based on data provided by external partners. Procedures for the compiling of data and quality control are described in the "Manual/Handbook for Compiling Environmental Data". The manual describes the roles and responsibilities between central and local 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 a whole for DSB. The quality control of the data is primarily undertaken centrally in DSB.

Energy consumption for train operation
The consumption of diesel per train is automatically registered when refuelling. A wastage from stationary tank installations (difference between refuelled and received amount) is allocated to the different train types. DSB pays for the traction consumption 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 is added to the recorded values.

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

Air emissions from electricity consumption for traction and electricity consumption for fixed installations are based on environmental key figures for electricity from Energinet.dk. The declaration calculates the emissions of CO_2, SO_2, NO_x, HC, CO and dust per kWh. A mean value is used for 2014 and 2015.

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 the Danish Ministry of Transport's model, the TEMA2015. The emission levels of SO_2 are corrected according to the sulphur contents of petrol and diesel, respectively.

Key figures for emissions from school journeys by ferry are collected from TEMA2015.

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 2014 and 2015. The thermal production covers 67 percent of the overall Danish district heating production. The key figure has been calculated based on 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 2015 data from the Danish Centre for Environment and Energy (DCE) with regard to gas and fuel oil. Data for LPG, natural gas and gas oil in the category "residential plants" may be found on the website. The electricity key figure for traction 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 consumptions and emissions for 2016 are calculated in absolute quantities. 2013 is the base year for indexation.

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

Environmental disclosures

For the environmental disclosure for train products, DSB uses the annual energy consumption and emissions as well as the annual average occupancy rate for the trains.

For environmental disclosures for types of rolling stock, DSB uses 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 made based on production figures.

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 2014, DSB had 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 on board the train, e.g. air quality and noise in the train.

Environmental key figures

Environmental disclosures and statements for 2016

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 2016 as well as index figures for the period 2013-2016.

Environmental disclosure for train products 2016

Train product	Energy Consumption	CO_2
Per passenger kilometre	MJ	g
S-trains	0.22	15
Regional trains	0.88	65
InterCity trains	0.49	36
Express trains	0.40	30

The environmental disclosure for the train product shows the energy consumption and CO_2 emissions per passenger kilometre from DSB's products in 2016.

Environmental disclosure for types of rolling stock 2016

Train type	Energy consumption	CO_2	SO_2	NO_x	HC	CO	Dust	Particles
Per seat kilometre	MJ	g	mg	mg	mg	mg	mg	mg
S-train (electricity)	0.05	3.7	0.6	2.3	1.7	1.7	0.1	0.0
Desiro (diesel)	0.29	21.4	0.1	168.8	26.5	96.5	0.0	3.6
ME and double-decker coaches (diesel)	0.32	23.5	0.1	306.8	17.9	37.5	0.0	9.9
Øresund train (electricity)	0.09	6.4	0.001	0.004	0.003	0.003	0.0002	0.0
MR (diesel)	0.42	31.0	0.2	468.9	67.4	104.8	0.0	23.4
IR4 (electricity)	0.09	6.0	0.001	0.004	0.003	0.003	0.0002	0.0
IC3 (diesel)	0.27	19.7	0.1	112.9	5.9	12.5	0.0	0.9
IC4 (diesel)	0.59	43.9	0.3	248.5	14.6	30.9	0.0	2.1

The environmental disclosure for train types shows the energy consumption and emissions per seat kilometre from DSB's train types in 2016.

Annual statement 2016

Consumption							
	Note	Index 2013	Index 2014	Index 2015	Index 2016	Volume 2016	Unit
Energy consumption							
The Product, total							
Electricity		100	98	99	104	262,674	MWh
Diesel		100	102	100	104	72,372,376	Litre
The Corporation, total		100	107	101	101	121,922	MWh
Electricity	1	100	100	102	105	67,482	MWh
Heating (adjusted for degree days)	1	100	116	99	97	54,440	MWh
Direct energy consumption							
Train product (L&R) (diesel)		100	102	100	104	72,372,376	Litre
Train operation		100	102	100	104	72,372,376	Litre
The Corporation							
Cars and vans							
Diesel		100	57	45	34	142,489	Litre
Petrol	2	100	83	45	0	0	Litre
Heating (adjusted for degree days)		100	146	105	109	12,138	MWh
Heating oil	1	100	188	169	165	1,087	MWh
Gas	1	100	143	101	106	11,051	MWh
Indirect energy consumption							
Train product (electricity)		100	98	99	104	262,674	MWh
S-trains		100	96	96	97	121,615	MWh
Long distance and regional trains		100	100	102	111	141,059	MWh
The Corporation		100	103	101	100	109,784	MWh
Electricity	1	100	100	102	105	67,482	MWh
District heating incl. steam (adjusted for degree days)	1	100	108	98	94	42,302	MWh
Water consumption		100	126	137	131	192,148	m³
Chemical products (selected)							
Nitrogen content in slippery surface prevention agents		-	-	-	-	11.4	Tonnes
Herbicides		-	-	-	-	23.2	Kg active substance

Base year for indexation is 2013 = 100.

Emissions (CO_2)

	Note	Index 2013	Index 2014	Index 2015	Index 2016	Volume 2016	Unit
Air emissions, calculated							
CO_2		100	101	99	94	274,823	Tonnes
The Product		100	101	99	95	245,650	Tonnes
The Corporation		100	102	98	84	29,173	Tonnes
Direct energy consumption (GHG* scope 1)		100	102	100	103	195,016	Tonnes
The Product	3	100	101	100	104	192,076	Tonnes
Long distance and regional trains (diesel)		100	101	100	104	192,076	Tonnes
The Corporation		100	117	86	84	2,940	Tonnes
Cars and vans (petrol and diesel)	2	100	58	45	33	378	Tonnes
Heating (heating oil and gas)		100	146	106	110	2,561	Tonnes
Indirect energy consumption (GHG* scope 2)		100	99	101	77	64,353	Tonnes
The Product	3	100	97	101	76	44,717	Tonnes
S-trains (electricity)		100	96	98	71	20,704	Tonnes
Long distance and regional trains (electricity)		100	99	104	81	24,014	Tonnes
The Corporation		100	102	101	80	19,636	Tonnes
Electricity, fixed installations		100	99	105	76	12,093	Tonnes
District heating incl. steam		100	109	93	89	7,543	Tonnes
Selected transport subsuppliers (GHG* scope 3)		100	103	81	77	15.454	Tonnes
The Product		100	107	74	68	8,857	Tonnes
Replacement busses		100	128	149	135	6,707	Tonnes
S-trains	4	100	179	145	425	3,724	Tonnes
Long distance and regional trains		100	117	150	73	2,983	Tonnes
Taxa		100	65	61	102	43	Tonnes
School journeys	5	100	95	27	26	2,107	Tonnes
Busses		100	70	168	167	608	Tonnes
Ferries		100	96	20	20	1,499	Tonnes
The Corporation		100	94	94	94	6,597	Tonnes
Service travel by airplane		100	54	48	59	195	Tonnes
Service travel in own car		100	108	100	61	32	Tonnes
Taxa		100	142	158	192	182	Tonnes
Employee transport to and from work		100	95	95	95	6,188	Tonnes

Base year for indexation is 2013 = 100.
* GHG = Greenhouse Gas protocol

Emissions (other emissions)							
	Note	Index 2013	Index 2014	Index 2015	Index 2016	Volume 2016	Unit
Air emissions, calculated							
NO_x		100	95	85	88	1,598	Tonnes
The Product	3	100	95	85	88	1,580	Tonnes
Long distance and regional trains (diesel)		100	95	85	89	1,552	Tonnes
Long distance and regional trains (electricity)		100	94	87	70	14.7	Tonnes
S-trains (electricity)		100	94	85	64	12.7	Tonnes
The Corporation		100	93	81	70	18.3	Tonnes
Cars and vans (petrol and diesel)	2	100	52	35	23	0.8	Tonnes
Heating (district heating. heating oil and gas)		100	106	90	90	10.1	Tonnes
Electricity, fixed installations		100	94	87	66	7.4	Tonnes
SO_2		100	110	106	87	12.7	Tonnes
The Product	3	100	113	113	87	8.5	Tonnes
Long distance and regional trains (diesel)		100	102	100	104	1.2	Tonnes
Long distance and regional trains (electricity)		100	115	116	88	3.9	Tonnes
S-trains (electricity)		100	115	114	80	3.4	Tonnes
The Corporation		100	104	93	87	4.3	Tonnes
Cars and vans (petrol and diesel)	2	100	58	45	33	0.002	Tonnes
Heating (district heating. heating oil and gas)		100	96	71	90	2.3	Tonnes
Electricity, fixed installations		100	114	117	83	2.0	Tonnes
HC		100	92	80	76	124	Tonnes
The Product	3	100	92	80	76	124	Tonnes
Long distance and regional trains (diesel)		100	95	83	80	104	Tonnes
Long distance and regional trains (electricity)		100	82	70	61	10.7	Tonnes
S-trains (electricity)		100	82	68	55	9.2	Tonnes
CO		100	89	79	77	237	Tonnes
The Product	3	100	89	79	77	237	Tonnes
Long distance and regional trains (diesel)		100	89	78	77	216	Tonnes
Long distance and regional trains (electricity)		100	97	90	83	11.2	Tonnes
S-trains (electricity)		100	98	88	75	9.7	Tonnes
Particles (TSP)		100	90	71	71	36	Tonnes
The Product	3	100	90	71	71	36	Tonnes
Long distance and regional trains (diesel)		100	90	71	71	36	Tonnes
Dust		100	131	140	85	1.2	Tonnes
The Product	3	100	131	140	85	1.2	Tonnes
Long distance and regional trains (electricity)		100	131	141	89	0.64	Tonnes
S-trains (electricity)		100	131	138	81	0.56	Tonnes
Greenhouse gas						2.2	Tonnes
HFC	6	-	-	-	-	2.2	Tonnes

Base year for indexation is 2013 = 100.

Emissions (other emissions)

	Note	Index 2013	Index 2014	Index 2015	Index 2016	Volume 2016	Unit
Waste						12,299	Tonnes
Waste (excl. construction waste)		100	106	112	116	9,402	Tonnes
For recycling		100	104	102	96	2,697	Tonnes
For incineration		100	96	97	104	4,646	Tonnes
For special treatment		100	174	247	287	2,026	Tonnes
For depositing		100	149	87	56	32	Tonnes
Construction waste		-	-	-	-	2,897	Tonnes
For recycling		-	-	-	-	2,076	Tonnes
For incineration		-	-	-	-	142	Tonnes
For special treatment		-	-	-	-	18	Tonnes
For depositing		-	-	-	-	662	Tonnes

Base year for indexation is 2013 = 100.

Notes

Note 1: Energy consumption for fixed installations (buildings)

DSB continuously improves the data for calculations of energy and water consumptions. DSB register filling of heating oil, not the actual consumption of oil.

Note 2: Cars and vans

In 2016 DSB leases only diesel-powered vehicles, so no petrol consumption. The downward trend is due to DSB has outsourced a significant share of the transport that was previously handled by DSB's own vehicles.

Note 3: The Product

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

Note 4: Replacements services by bus for S-trains

Emissions from replacement services by bus or taxi varies with the numbers of track work and other events where DSB transports customers by bus or taxi instead of trains. The large increase in emissions from replacements service by bus for S-trains is a result of the need for more replacement services due to increase in track works. Especially the section from Køge to Copenhagen has been affected by track work.

Note 5: School journeys

There are fluctuations in the CO_2-emissions from school journeys by bus and ferry, due to improved data basis for busses and updated key figures for emissions for ferries from TEMA2015.

Note 6: 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.

Declaration

Independent auditors' report on DSB's Environmental Report 2016

To DSB's stakeholders
As agreed, we have examined DSB's Environmental Report 2016 for the period 1 January 2016 to 31 December 2016. DSB's Environmental Report 2016 has been prepared in accordance with the accounting policies described on pp. 7-8.

We are to conclude on DSB's Environmental Report 2016. The degree of assurance expressed in the conclusion is limited.

Management's responsibility for DSB's Environmental Report 2016
DSB's Management is responsible for the preparation of DSB's Environmental Report 2016 in accordance with the accounting policies described on pp. 7-8.

DSB's Management is also responsible for such internal control as DSB's Management considers necessary to enable the preparation of DSB's Environmental Report that is free from material misstatement, whether due to fraud or error.

Auditors' responsibility
Our responsibility is to conclude on DSB's Environmental Report on the basis of our procedures. We performed our procedures in accordance with ISAE 3000, "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" and additional requirements under Danish audit legislation to obtain limited assurance for our conclusion.

Ernst & Young Godkendt Revisionspartnerselskab is subject to the International Standard on Quality Control (ISQC) 1 and thus uses a comprehensive quality control system, documented policies and procedures regarding compliance with ethical requirements, professional standards, applicable requirements in Danish law and other regulations.

We complied with independence requirements and other ethical standards under FSR - Danish Auditors' Code of Ethics for Professional Accountants, which rely on general principles regarding integrity, objectivity, professional competence and due care, confidentiality and professional conduct.

As part of our examination, we performed the below procedures:

- Interviews of relevant company personnel responsible for the preparation of DSB's Environmental Report 2016.
- Checks of whether data have been collected, assessed and quality-reviewed as prescribed in DSB's manual for collection of environmental data.
- Comparison, on a sample basis, of the statement of energy consumption with data reported by data suppliers.
- Analytical reviews of data supplied by DSB.
- Evaluation of the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management.

We believe that our procedures provide a reasonable basis for our conclusion.

The procedures performed in connection with our examination are less than those performed in connection with a reasonable assurance engagement. Consequently, the degree of assurance for our conclusion is substantially less than the assurance which would be obtained had we performed a reasonable assurance engagement.

Conclusion

Based on our procedures and the evidence obtained, nothing has come to our attention that causes us to believe that DSB's Environmental Report 2016 has not been prepared, in all material respects, in accordance with the accounting policies described on pp. 7-8.

Copenhagen, 9 February 2017
ERNST & YOUNG
Godkendt Revisionspartnerselskab
CVR-nr. 30 70 02 28

Michael N. C. Nielsen
State Authorised Public Accountant

Carina Ohm
Executive Director