About Nordic Swan Ecolabelled

E-commerce logistics

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Consultation document

Nordic Ecolabelling

Content

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This document is a translation of an original in Danish. In case of dispute, the original document should be taken as authoritative.

Addresses

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

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1 Summary

E-commerce has grown rapidly and is an establish compliment to traditional retail. When shopping online the end consumer has become a transport buyer with a need for guidance. In addition to the climate aspect the transport industry has other challenges such as increased crowding, emission hazardous to health particular in cities and insecure employment and working conditions for drivers.

With these insights, the Nordic Ecolabel started the work in this area with a pre study[1] which was conducted in close dialogue with different stakeholders. In September 2021, the Nordic Ecolabel initiated the project to develop criteria for the completely new product group Nordic Swan Ecolabelled e-commerce logistics.

The purpose with Nordic Swan Ecolabelled e-commerce logistics is to give the consumers of the Nordic region's a more sustainable and credible choice of delivery in the check-out when shopping online. The label takes a holistic approach, with climate, environmental and social requirements on the entire transport from e-retailer's warehouse to the end consumer.

The criteria cover both line haul and last mile, i.e. both the long-distance heavy goods transport and last-mile transport out to the agent, parcel locker or home delivery.

A central principle is that e-commerce goods should be transported integrated and collective as far as possible. The requirements are set at the level of "a company's collective e-commerce transport", i.e., not individual transport arrangements. Another principle is that certain requirements need to be differentiated depending on how large extent of the households in the country the transport/logistic company cover (i.e., degree of national coverage). To deliver in sparsely populated areas and in the northern parts of the Nordics imply greater challenges as regards to electrified vehicles and fossil free fuels. At the same time access to e-commerce to all inhabitants is an important sustainability aspect for people to be able to live throughout the country.

The requirements are divided into five main areas:

1. Climate and environmental requirements for network logistics with focus on:
    - A high share of electrified transports and transports conducted with renewable fuels.
    - High energy efficiency in the logistics network.
    - Reduced climate impact which must be improved over time.
    - Renewable fuels must not be made of unsustainable raw materials such as palm oil or PFAD.
    - A good level of performance in the existing vehicle fleet and those vehicles that are sustainable in the long term are chosen for new purchases.
2. Social requirements through requirements on:

[1] Möjligheter och hinder för en Svanenmärkning av e-handelstransporter" 2020

- Secure working conditions and good labour standards.
- Preventive road safety work.

3. Requirements included in agreements between carrier and e-retailer (indirect requirements on packaging and returns)
4. Information requirements
5. Licensee maintenance requirements

The criteria focus on climate and environmental requirements, but relevant social requirements are also set in the form of requirements concerning labour standards and road safety.

It has been an explicit strategy to harmonise the requirements of the Nordic Swan Ecolabel and the Transport Industries certification scheme, Fair Transport, primarily not to increase the administrative burden for carriers and freight forwarders.

The criteria for Nordic Swan Ecolabelled e-commerce logistics are on an open consultation during 1st June – 31st of August 2022. After all consultation responses have been processed the final criteria will be decided upon by te Nordic Board of Ecolabelling late autumn 2022.

With so many who have contributed to the progress, we at the Nordic Ecolabelling would like to extend a great thanks and our sincerest appreciation.

2 Definitions

The first time a term is used in the document, it is written in bold italics or with a reference to this definition list.

Term in background and criteria documents	**Definition**
Contractor	As a contractor, you do not run a business and pay corporation tax, which you do as a self-employed person. Instead, it is the umbrella company that invoices the clients for a certain amount of commission, reports employer contributions and makes tax deductions, and then pays the rest as salary to the contractor. This is referred to as being a contractor (freelance).
Euro emissions standard	A European classification system that specifies the highest permitted emissions of a number of different air pollutants (hydrocarbons, NOx, carbon monoxide and particles, but not CO_2) for cars, trucks and buses that are put on the market.
Fuel	Liquid or gaseous fuel and electrical energy for vehicle operation.
Electric vehicle	An electric vehicle is driven by an electric motor and charged with power from a wall box or charging station. Regenerative braking also charges the battery while driving. A pure electric vehicle has no internal combustion engine.
Dimensional weight/volumetric weight (bulky freight)	Dimensional weight or volumetric weight means that the weight is calculated by volume. Dimensional weight/volumetric weight is calculated as length x width x height x 280. The aim is to charge the highest of the actual weight and the volumetric weight. In e-commerce the volumetric weight is usually highest, and charges are made on that basis.
Renewable fuel	Liquid or gaseous fuels that are produced from biomass and used for transport purposes.
Green gas principle	A system whereby both biogas and natural gas are distributed within the system, with assurances that the same volume of biogas purchased is actually supplied to the system.

Household	A household consists of people who are registered as living in the same home. A household can often be equated with a shared mailbox.
Hybrid technology	All plug-in hybrids and hybrid cars have a battery that can power the car to reduce the car's emissions. A plug-in hybrid combines an electric motor with an internal combustion engine. The plug-in hybrid can be charged with power from a wallbox or charging station. Should the battery be discharged, or should you need extra power, the internal combustion engine will take over. A hybrid car, also known as a mild hybrid or electric hybrid, cannot be charged via an electrical socket, charging instead through regeneration while the car is being driven. Here, the battery is used to support the internal combustion engine and reduce the vehicle's emissions.
HVO100	Hydrogenated vegetable oil is a 100% renewable and fossil-free diesel fuel that can contribute to a significant reduction in CO_2 emissions compared with fossil diesel. HVO100 is a chemical copy of regular diesel but with a slightly lower density. The similarity to regular diesel means that specially adapted vehicles or storage tanks are not required for this fuel, which means low transition costs and becoming operational faster. However, approval from the vehicle manufacturer is required for warranties, etc. to be valid.
HVO97	This fuel consists of 97% HVO and is offered as "almost" completely renewable fuel from certain fuel companies. There is currently a major difference compared to HVO100. HVO100 falls outside the reduction obligation while HVO97 falls within it. Also called HVO Diesel/RD97/HVO97, or HVO light.
ILUC (indirect land use change)	Increased production of biofuel in one country can lead to other agricultural production being displaced, which in the long run can lead to the conversion of forest or pasture into agricultural land in other countries, thereby causing indirect emissions of greenhouse gases. The EU has been discussing the issue of ILUC for a long time. In the latest Renewable Energy Directive, ILUC risk for agricultural commodities has been divided into two levels, low and high. High-risk ILUC commodities must not be included in the EU framework after 2030.
Injection shipping	Distribution from the e-retailer's warehouse to the terminal or depot is carried out by a party other than the licensee or its subcontractors.
Incoming transport	The activities performed to bring specific items or deliveries to an e-commerce company, often from a supplier or manufacturer. It can involve all aspects of shipping and moving equipment to a warehouse.
Intermodal transport	Means that at least two modes of transport are used to move freight, with most of the route by rail or sea.
Last mile	Last mile refers to the movement of goods from a terminal/hub to a final destination, usually a consumer.
Line haul	The long-distance heavy goods transport between two defined points (cities, warehouses, ports, etc.) according to a fixed schedule.
Light goods vehicle	A vehicle that is not considered to be a passenger car or a bus and that has a gross weight of no more than 3.5 tonnes. A light goods vehicle may be driven on a Class B driving license.
Same day delivery	The customer has their package delivered on the day the customer placed the order. In many cases, same day delivery is offered by courier service, i.e. a dedicated delivery.
Economical driving	How the car is driven has a major impact on emissions and noise. Factors that have an impact include the speed at which the vehicle is driven and tyre pressure.
Consignment	Defined in accordance with the consultation draft ISO 14083 as "total amount of freight sold in a single transaction". These criteria use a customized variant: A consignment is defined as the total amount of freight that the e-commerce consumer has ordered/purchased in a single transaction and that is shipped from the e-commerce warehouse to the consumer.
Heavy goods vehicle	Truck weighing more than 3.5 tonnes.
Tonne-kilometres (tonne-km)	A measure of transport work for goods. The dimension is calculated by multiplying the weight of the goods in tonnes by the transport distance in kilometres.
Check-out solution	The electronic solution where payment and choice of delivery options take place.
Volumetric weight	See dimensional weight.

3 Environmental impact of e-commerce logistics

RPS analysis

The criteria for Nordic Swan Ecolabel e-commerce logistics are based on a life cycle perspective, a holistic approach and an RPS analysis (Relevance, Potential and Steerability). The RPS analysis aims to clarify where and how the greatest environmental benefit can be achieved through the criteria.

Table 1 Summary of results of the RPS analysis. The aspects assessed to have high or medium relevance are those covered by requirements in the criteria. These are marked in bold text in the table.

Area/Aspect	RPS value (high - medium - low)	Description
Road transport	R=High P=High S=High	The relevance is high, as the vast majority of e-commerce logistics uses road transport, and this will only increase as e-commerce expands. This form of transport generates emissions of greenhouse gases, substances that are hazardous to health, increased congestion, road safety issues and noise. In the field of e-commerce logistics, there is a clear trend towards ever faster deliveries. The increasing speed can be a limiting factor for increased sustainability. Another strong trend is increased home deliveries, which are generally less energy-efficient compared with deliveries to agents or parcel lockers. There is great potential to set requirements that limit the environmental impact of road transport, in the form of requirements concerning transport efficiency, greenhouse gas emissions and the vehicle fleet. A better Euro emissions standard reduces emissions of hazardous substances. Steerability is high as licensees have control over their road transport, regardless of whether it is performed by themselves or by subcontractors. Source: Hur kan e-handelns transporter bli mer hållbara? Trafikanalys. Redovisning av Regeringsuppdrag. 2020
Fuel	R=High P=High S=Medium	Greenhouse gas emissions can be attributed to the entire biofuel production chain: from the cultivation of raw materials to transport, production, distribution, and use. It is therefore highly relevant to set requirements for a high proportion of sustainable renewable fuel that reduces greenhouse gas emissions. There is great potential to choose fuel and powertrains with a lower climate impact. When it comes to renewable raw materials in fuels, it is relevant to prohibit raw materials with a high ILUC risk, such as palm oil, as these have a negative impact on the climate, biodiversity and soil conditions in the countries where the raw material is produced. HVO100 based on palm oil can actually have poorer climate performance than diesel. Reducing the transport sector's climate emissions requires the vehicle fleet to move in the direction of both more energy-efficient vehicles and a significantly greater proportion of electrically powered road transport. The alternative sustainable fuel of the future is mainly electricity, but biogas and hydrogen are also deemed to be good alternatives, primarily because they do not cause greenhouse gas emissions while driving. Source: Swedish Energy Agency
Rail transport	R=High (positive) P=Low S=Medium	Transporting goods by rail in the Nordic region generates low carbon emissions, seen from a life cycle perspective. By definition, rail transport is good, and the criteria strive to move larger volumes of goods from road to rail. Because the industry is currently experiencing obstacles, the criteria only set a point score requirement that rewards intermodal transport.
Air freight	R=Medium P=Medium S=Medium	If not subsidized, flying is an expensive mode of transport, which means that it is relatively unusual for freight transportation. In general, the goods moved by air are sensitive, high-value and time-critical, such as pharmaceuticals, vaccines, medical equipment, spare parts

		and components for industry, perishable goods with short shelf life, certain fashion goods and certain electronics. One example of e-commerce volumes transported by air is the small parcels (up to 2 kg) that are shipped within the regular postal service, primarily from China to Europe. These volumes have declined, but not completely disappeared. Traditionally ecommerce parcels distributed integrated with letters air freight is not used at all or to a minor extent and then due to the time aspect or because the geography and topography of a country restrict road transportation (i.e the northern parts of Norway). For the credibility of the Nordic Swan Ecolabel, it is important to remove air freight as an option where possible. The relevance is medium. The potential is medium as there are alternatives to air freight unless time is the critical factor. Steerability is medium as it is possible to set requirements that largely rule out air freight as an option. Source: Deepened Prestudy Nordic Swan Ecolabelled e-commerce logistics. Nordic Swan Ecolabel 2020, personal communication with a number of stakeholders.
Social conditions	R=High P=High S=high	Social conditions and road safety are important areas in the labelling of logistics. The industry is struggling with challenges such as unhealthy workloads, occupational injuries, stress, high staff turnover and drivers working under unreasonable conditions. The large and rapid growth in e-commerce has led to the emergence of platform companies that are disrupting the current labour market model. Platform companies may employee their own drivers or hire in so-called umbrella companies as an employer. When different employer functions are divided between different players, it is no longer clear who the employer actually is. Source: Fri frakt till ett högt pris. En analys av e-handelns utveckling och hållbarhet, 2021.
Road safety including driver and cargo safety	R=High P=Medium S=Medium	Heavy goods traffic is increasing year on year and road traffic accidents involving heavy goods vehicles often have major consequences. The number of occupational injuries is above average compared with other industries, and unfortunately the number of deaths in the “transport and warehousing” sector is not decreasing. Source: Swedish Work Environment Authority’s website 2019.
Packaging	R=Medium P=Medium S=Low	Packaging is an important parameter for the overall efficiency of e-commerce logistics. However, the packaging of the e-commerce product is not something that the transport companies/logistics companies have control over. The Nordic Ecolabelling criteria for e-commerce logistics set indirect requirements aimed at creating (economic) conditions for more efficient packaging solutions. Source: Packaging Logistics, Henrik: Pålsson, 2018.
Purchasing behaviour including returns	R=Medium P=Low/Medium S=Low	The criteria cover e-commerce logistics and not e-commerce itself. However, the rate of returns and misuse of returns, which are strongly linked to consumer behaviour, form an important parameter for the overall efficiency of e-commerce logistics. The criteria will include indirect requirements aimed at limiting unnecessary returns.
The following aspects are not covered by requirements in the criteria due to low relevance or low steerability.		
Marine transport	R=Medium P=Medium S=Low	Shipping is the primary mode of transport for goods between continents, but accounts for a small proportion within the country’s borders. The intercontinental container ships often go from major manufacturing countries to a port in Europe and are distributed from there on smaller ships to smaller ports. This shipping is not within the scope of the criteria, as it relates to the incoming freight transport to the e-retailer’s warehouse. Environmental impacts are primarily air and water pollution and emissions of greenhouse gases, but also the risk of conveying non-native species of animals and plants. Relevance is low, as freight transport by sea from the e-retailer’s warehouse to the consumer is small compared with transport by road. Between and within the Nordic countries there are vessels that are primarily passenger ferries, but also carry trucks of goods, including from e-commerce. Calculating the share of emissions for this type of parcel transport is complex, but not impossible. Steerability is,

		however, virtually non-existent as long as the vessel's primary task is to transport passengers, or the e-commerce goods form a very limited proportion of the goods that the cargo ship transports. Source: Fredrik Larsson, Miljö & Klimat, Sweship
Personal shopping trips	R=High P=Medium S=Low	E-commerce could potentially lead to lower traffic volumes and reduced energy consumption for transport if shopping trips by car can be replaced by more efficient freight transport. But if they are not, the result will be increased traffic volumes, with home and agent deliveries simply adding to unchanged (or even increased) travel. In the long term, e-commerce could be an important piece of the puzzle in enabling a car-free lifestyle. Due to the lack of steerability, neither personal shopping trips nor indirect transport-related rebound effects such as e-commerce freeing up more time that can be spent on other things will be included in these criteria. Source: Hur kan e-handelns transporter bli mer hållbara? Trafikanalys. Redovisning av Regeringsuppdrag. 2020
Life cycle requirements for vehicles	R=Medium/High P=Low S=Low	Production of battery-powered vehicles has a considerable environmental impact, mainly due to the energy-intensive production of the batteries. Overall, battery-powered vehicles have a significantly lower climate impact in terms of their entire life cycle, thanks to the significantly lower carbon emissions in operation. The batteries account for just over 40% of carbon emissions from the production of battery-powered vehicles. Steel is another major part of the vehicle's carbon footprint, due to its high dependence on fossil fuels in the production phase. Both potential and steerability are low, as manufacturing processes, choice of raw materials and recycling need to be further developed. Source: Life cycle assessment of distribution vehicles, Scania 2021
Tyres	R=Low/Medium P=Low S=Low	Studded tire use is the main reason for exceeding particle standards. There may be a conflict of objectives between studded tires and road safety, although studless winter tires should be adequate alternatives. The issue can be considered high on the authorities' agenda and studded tire bans are being dealt with in legislation and local regulations. Energy class and retreading of tires are also energy/environmental factors. Overall relevance low/medium. Circularity and energy efficiency stand in opposition to each other. Since retreaded tires have no energy class, it can be difficult to set requirements correctly. Potential and steerability are therefore low. Source: Däckbranschens Informationsråd.
Buildings (warehouses and depots)	R=Low P=Medium/High S=High	The energy consumption of a logistics building, warehouse or terminal is small compared to the energy consumed in the actual transport of the goods. The relevance is therefore low. Several of the transport/logistics companies engage in active sustainability work at the terminals, such as energy efficiency improvements and the expansion of solar panels. Potential and steerability are high. We set requirements for an open infrastructure. This issue will increase in relevance going forward, as the terminals will supply the logistics network with energy. Source: Prestudy Nordic Ecolabel, 2020.
Vehicle cleaning/washing	R=Low P=Low S=Medium	Metals, oil products and other environmentally harmful substances are discharged into the sewage system during vehicle washing. The contaminants originate from the washing chemicals, plus dirt from road surfaces, vehicles and tires. National and local rules and regulations effectively limit the environmental impact of vehicle wash installations through requirements concerning chemical use, water treatment technology and recirculation. Source: Swedish Environmental Protection Agency. Allmänna Råd

UN Sustainable Development Goals

The Sustainable Development Goals (SDGs) or Global Goals are a universal call for action to fight poverty and inequalities, protect the planet and tackle climate change by 2030.On an overall level Nordic Swan Ecolabel e-commerce logistics contribute to Goal 12: Ensure sustainable consumption and production patterns. This is done through requirements that promote sustainable management and efficient use of natural resources in transport, for example:

- Requirements for energy efficiency in the transport system.
- Reduce the climate impact from the logistics network by gradually increasing requirements for renewable fuel.
- Renewable fuels must not have a high risk of causing land use change.
- Economic incentives to minimize air in packaging for transport.

More specifically Nordic Swan Ecolabel also contributes to the following UN Sustainable Development Goals:

Goal 7: Promotes renewable energy and energy efficiency:

- A certain proportion of the energy used for the transport must be renewable.
- New vehicles must a large extent be electric.

Goal 8: Protects labour rights:

- Requires good basic working conditions for drivers, beyond legislation.
- Requires basic safety for drivers, vehicles and cargo, beyond legislation.

Goal 11: Promotes sustainable transport systems:

- A certain proportion of energy used for the transport must be renewable.
- Requirements for energy efficiency in the transport system.
- A large proportion of the vehicles must meet certain European emission standards.

Goal 13: Requires efficient energy use and reduces climate gas emissions:

- Requirements for energy efficiency in the transport system.
- Reduce the climate impact from the logistics network by gradually increasing requirements for renewable fuel.
- Requirements that accelerate the transition to electrified vehicles.
- Drivers must be trained in economic driving.

Goal 15: Promotes biodiversity and sustainable use of terrestrial ecosystems:

- Renewable fuels must not have a high risk of causing land use change, such as for example palm oil and PFAD.

4 Short market description

The largest companies on the B2C parcel market in the Nordic countries are presented in Table 1 below.

Table 1: The largest parcel suppliers in the Nordic region. Source: The Swedish Post and Telecom Authority.

Operator	Sweden	Norway	Finland	Denmark
PostNord	50-55%[2] parcel, letter	parcel	parcel	parcel, letter
DHL	10-15% parcel	parcel	parcel	parcel
Instabox	10-15% parcel	parcel	-	parcel
Schenker	5-10 % parcel	parcel	parcel	parcel
Budbee	5- 10 % parcel	parcel	-	parcel
Bring	5-10 % parcel	parcel, letter	parcel	parcel
Airmee	1-5% parcel	parcel	-	parcel
UPS	1-5% parcel	parcel	parcel	parcel
Posti	-	-	parcel, letter	-
GLS	-	-	-	parcel
DEO	-	-	-	parcel/papers
Early bird	0-2% parcel, papers	-	Parcel, letter	parcel

As the table shows, there are many transporters that offer e-commerce deliveries and there is a hard competition between these companies, especially on the Swedish market.

To simplify the market, the transporters above can be divided into two different categories, ie the traditional nationwide companies and the newer transport companies that are often named as tech companies or platform companies. The origin of the traditional companies are often other types of distribution such as post distribution, distribution of morning newspaper, courier business, etc. while the newer companies often come from the IT and tech industry where they offer a platform where hauliers or self-employed drivers assign and carry out transport services. In the recent years the number of last mile transporters have increased, especially when it comes to home deliveries.

[2] Andel av paketmarknaden i Sverige B2C

Something that is relevant for the Swan labelling system is whether the carrier owns the fleet and employ the drivers or if they are outsourcing the transport services to sub-contractors. It determines the level of control that the transporters have of some of the criteria in the labelling system such as employment conditions, vehicle purchases, fuel, euro class, etc. PostNord and Instabox have the largest owned fleet and employed drivers while the other transporters purchase most of their transports. This means that the most common business model in e-commerce deliveries is to outsource the actual transport to sub-contractors or self-employed drivers.

5 Other labelling and certification schemes

For the transport sector in the Nordic region, there are a couple of established labels and certification systems for freight transport. E-commerce/digital commerce also has a label, Trygg e-handel that does not include environmental parameters.

This project has had an explicit strategy to harmonise the requirements of the Nordic Swan Ecolabel and Fair Transport. The primary reason has been not to increase the administrative burden for carriers and freight forwarders, which has been a clear desire. Although this has not been a main purpose, the harmonisation of the requirements has a positive side effect that the systems can strengthen each other and increase their attractiveness and penetration in the industry. The revised criteria for Good Environmental Choice's light goods transport have also harmonised relevant requirements with Fair Transport. This means that a carrier who has transport services labelled according to Good Environmental Choice Local Goods Transport 2022 will directly fulfil several of the requirements in Nordic Ecolabelling's criteria and may become an attractive subcontractor to a licensee for Nordic Swan Ecolabel e-commerce logistics.

Table 2: Summary of the most important labels

System	SE	NO	FI	DK	Summary
Fair Transport (FT)	Yes, updated version with climate/renewable fuels	Yes, basic version	No	No	Fair Transport was launched in a new guise in spring 2021 as a result of a merger with the certification system Sustainable Transport. Fair Transport currently covers road transport, but there are plans to expand into other modes of transport. The requirements have been developed collaboratively by the industry and cover the areas of climate and the environment, road safety and responsibility. Fair Transport is structured in levels. The basic level must be met by everyone and can then be supplemented with three different value-added levels. All certified companies meet set requirements and criteria and are followed up on an ongoing basis via an independent third-party audit. The criteria and information material can be found on the website www.fairtransport.se In Norway, Norges Lastebileier-Forbund (Norwegian Truck Owners' Association) runs the basic version of Fair Transport, which includes road safety, social responsibility, and legal compliance. Criteria and information can be found on the website www.fairtransport.no
Bra Miljöval	Yes	No	No	No	The Swedish Society for Nature Conservation created Bra Miljöval (Good Environmental Choice) criteria for goods transport back in 2005. In 2016, these were supplemented with criteria for courier transport (light goods). The criteria for courier transport have recently been revised and a proposal

					for revised criteria for the Local Goods Transport product group was sent out for consultation at the end of 2021.
Trygg e-handel	Yes	Yes	No?	Yes	This label, aimed at e-commerce, was developed by Svensk Digital Handel, the digital arm of the Swedish Trade Federation (Svensk Handel). The label regulates safety and consumer rights related to the purchase, e.g. availability, customer service, delivery terms, payment solutions, sales, total costs, etc. In other words, everything that makes an e-commerce consumer feel confident about their purchase.

5.1 The Swedish industry agreement Fossil-free Delivery

In spring 2022, Svensk Digital Handel launched an industry agreement on Fossil-free Delivery (Fossilfri Leverans). The industry agreement aims to create clarity and rigour at check-out around the concept of fossil-free, in order to simplify the choice for consumers. The industry agreement also aims to remove existing concepts that lack relevance and create confusion among consumers, such as climate-smart or climate-compensated shipping. The latter is a concept that should not be used in communications with consumers, according to a clear statement from the Swedish Consumer Agency, as the concept is imprecise and unclear.[3] When used without qualification, there is a risk of misleading the consumer about the product's environmental properties. The average consumer cannot be expected to understand what this means and cannot make an informed commercial decision based solely on such a statement.

The industry agreement makes it possible to offer fossil-free delivery at postcode level when the order is shipped using fossil-free fuel from the e-retailer's warehouse to the selected delivery location. It is important to emphasise that Fossil-free Delivery is not a label, but rather an industry agreement that sets a number of conditions for both distributors and e-commerce operators to comply with.

In the industry agreement, fossil free is defined as the energy from fossil free energy sources and has therefore not been produces by fossil forms of coals, oil, or gas. Fossil free energy sources includes the energy produced by hydrogen power, wind power, solar power, nuclear power, muscle power and energy produced by biomass. The Swedish electricity mix or an equated electricity mix is considered accepted when the vehicles are driven by electricity.

6 Legislation and standards

6.1 Legislation

Renewable Energy Directive

The EU's revised Renewable Energy Directive (REDII) sets criteria concerning when biofuel can be considered sustainable[4]. The directive also establishes detailed calculation rules for greenhouse gas emissions over the life cycle of

[3] Miljöpåståenden om klimatkompenserade produkter i marknadsföring, Swedish Consumer Agency 2021.
[4] https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en

biofuels (well to wheel). Compliance with the sustainability criteria and calculations of greenhouse gas emissions must, according to the directive, be checked by an independent third-party auditor. A revised edition of the directive was issued in July 2021, and the most important changes related to fuels are listed below.

- Requirement for fuel suppliers to achieve a renewable share of at least 14% by 2030 in the transport sector.
- Requirement for a certain proportion of so-called advanced biofuels. This proportion of the total energy consumption in the transport sector must amount to at least 0.2% by 2022, 1% by 2025, and 3.5% by 2030. Advanced biofuels are defined in the directive as biofuel produced from certain specific listed raw materials (mainly residual products and waste).
- Stricter sustainability criteria and criteria for greenhouse gas reduction.
- New fuels have been included for use towards the 14% target, e.g. electrofuels from electricity and carbon dioxide.
- REDII presents a new approach for handling ILUC (Indirect Land Use Change) from biofuel.

National legislation that reduces climate impact

All the Nordic countries have legislation that steers towards increased admixture of renewables in blended fuels. The legislation regulates the increasing proportion of renewable fuel in slightly different ways. A summary is shown in the table below.

	Legislation	Blend calculated by	Fuels covered
Denmark	CO_2 displacement requirements for transport[5]	Greenhouse gas reduction, g CO_2/MJ	All fuels incl. electricity
Finland	Distribution Obligation Act[6]	Energy (MJ)	All fuels excl. electricity
Norway	Sales requirement for biofuels[7]	Volume (l)	All liquid fuels (not gas and electricity)
Sweden	Act on reduction of greenhouse gas emissions[8]	Greenhouse gas reduction, g CO_2/MJ	Liquid biofuel blended with petrol and diesel. Not highly blended biofuels such as HVO100, FAME100, gas, electricity.

One issue being raised is whether the use of renewable fuels by an individual logistics company contributes to an overall reduction in the climate impact of the transport sector, in addition to the levels required by the legislation above. When a logistics company buys certain renewable fuels, the fuel companies put this towards their compliance with the statutory admixture requirements. This enables the fuel companies to sell products with a higher fossil mix to other

[5] https://www.retsinformation.dk/eli/lta/2021/2536
[6] Laki uusiutuvien polttoaineiden käytön edistämisestä liikenteessä 446/2007 – Updated legislation – FINLEX
[7] Forskrift om begrensning i bruk av helse- og miljøfarlige kjemikalier og andre produkter (produktforskriften) - Kapittel 3. Omsetningskrav for biodrivstoff og bærekraftskriterier for biodrivstoff og flytende b... – Lovdata
[8] Lag (2017:1201) om reduktion av växthusgasutsläpp från vissa fossila drivmedel Svensk författningssamling 2017:2017:1201 t.o.m. SFS 2021:747 – Riksdagen

consumers. The logistics companies' use of certain renewable products can therefore be considered to have questionable climate benefit, if any at all. If the availability of renewable fuel was higher, as well as the possibility of charging a higher price, the conclusion might be different.

The following fuels are not covered by the aforementioned regulations, which means that their use contributes to a more reliable additional climate benefit:

- Gas, electricity, and high-blend biofuels (HVO100, FAME, Ethanol (E85, ED95)) in Sweden
- Gas and electricity in Norway
- Electricity in Finland.

In Denmark, all fuels including electricity are covered by the legislation.

It is uncertain how the regulations will change moving forward. There is particular uncertainty about regulations for pure, high-blend liquid biofuels in Sweden, which are currently subject to a tax exemption. After 1 January 2023, either the tax exemption will remain, or the reduction obligation will include high-blend biofuels. If the tax exemption remains, the ability of transport companies, municipalities and private individuals to contribute to additional climate benefits will increase.

Sustainable raw materials

The Renewable Energy Directive (REDII) has introduced new requirements that will gradually phase out raw materials with a high ILUC risk (ILUC = Indirect Land Use Change). According to the directive, no raw materials with a high ILUC risk may be counted as renewable in fuel by 2030, unless they are certified as biofuel with a low risk of indirect land use change.

In order to determine which fuel raw materials, entail a "high ILUC risk", there are a number of cumulative criteria that must be assessed. Currently, the EU considers primary palm oil to have a "high ILUC risk". The directive's criteria are set at a high level and there is currently no certified palm oil that meets the criteria for low-risk ILUC.

PFAD, a by-product from palm oil production, is handled in slightly different ways in the legislation of the Nordic countries. This is largely due to the way PFAD is classified in the legislation. The most important difference between the Nordic countries' implementation is that Sweden, Norway and Denmark consider PFAD to be a by-product/co-product, while Finland, like a couple of other countries in the EU, defines PFAD as a residual product.

When PFAD is considered a by-product/co-product, it is equated with primary palm oil, i.e. PFAD is considered a raw material with a high ILUC risk. When PFAD is instead considered a residual product, the raw material only needs to be traced to the place where it occurs. It is not considered to be a raw material with a high ILUC risk and therefore does not need to be phased out but can continue to be found in biofuel.

6.2 Standardisation work

The guidelines from the GLEC (Global Logistics Emissions Council) were draw up with the ambition of establishing a common framework for calculating and reporting emissions from freight transport and logistics. This framework is now being developed into an international standard, ISO 14083, which was released as a version for consultation in spring 2022. The standard includes climate calculations for all modes of transport.

There is also a European standard for calculating emissions from road transport (CEN 16258). This is being revised and will be harmonised with the international standard, ISO 14083.

7 Justification of the requirements

The requirements are divided into five main areas:

- Climate and environmental requirements for network logistics
- Social requirements
- Requirements included in agreements between carrier and e-retailer
- Information requirements
- Licensee maintenance requirements

The criteria focus on climate and environmental requirements, but relevant social requirements are also set in the form of requirements concerning labour standards and road safety.

A central principle is that e-commerce goods should be transported by public transport as far as possible. This means that the requirements are set at the level of “a company’s collective e-commerce transport”, i.e., not individual transport arrangements. As Figure 1 shows, both line haul and last mile are included, i.e., transport from the terminal/depot out to the agent, parcel locker or home delivery.

Another principle is that certain requirements need to be differentiated depending on how large extent of the households in the country the transport/logistic company cover (i.e., degree of national coverage). To deliver in sparsely populated areas and in the northern parts of the Nordics imply greater challenges as regards to electrified vehicles and fossil free fuels. At the same time access to e-commerce to all inhabitants is an important sustainability aspect for people to be able to live throughout the country.

When a requirement is partly or fully harmonised with Fair Transport Sweden and/or Fair Transport Norway or Good Environmental Choice Local Goods Transport (Bra Miljöval Lokala Godstransporter), this is clearly stated in the requirement. It is also clearly stated when an approval in accordance with Fair Transport (FT) or a Good Environmental Choice certificate can be used as verification of Nordic Ecolabelling’s requirements.

8 Requirements for network logistics

This chapter contains requirements for the network of e-commerce logistics, with a focus on climate, fleet, truck fuel and energy efficiency.

8.1 General

O1 Description of the logistics network

The network of e-commerce logistics to be Nordic Swan Ecolabelled must be described. The purpose is to create an understanding of the network and the service/product and to assess whether the service/product meets the product group definition, see "What can carry the Nordic Swan Ecolabel" and Fig. 1.

The description must, as a minimum, include:

1. An overall description of the network of e-commerce logistics or the entire integrated network of which e-commerce logistics are a part. Any delimitations must be clearly described.
2. The modes of transport used in the network, and specifically whether intermodal solutions are used.
3. Any name of a product/service that is intended to be Nordic Swan Ecolabelled.
4. Coverage expressed as a percentage of households (see definitions) in the country in question or another relevant metric.
5. Number of terminals, depots and their geographical locations (city).
6. Number of vehicles in the network of e-commerce logistics (including subcontractors) and percentage of vehicles in own vehicle fleet.
7. Form of employment for drivers/those performing the transport work.
8. Estimation of the proportion of total transport that is injection shipping, i.e. where for example the e-commerce company itself takes care of the transport of e-commerce goods to the terminal. If the injection shipping exceeds 5% of the total energy used, they shall be included in requirement O5 and O6, see Appendix 3.

✉ Description of points 1–8, as above, preferably in Appendix 1.

Background

In order to create an understanding of what is to be Nordic Swan Ecolabelled and to quality-assure the processing of the application, a clear description of the logistics network is required.

O2 Flight transportation

In order for flights not to occur as a *standard* part of the business model for Nordic Swan Ecolabel e-commerce logistics, both part 1 and 2 must be fulfilled:

1. Air freight on a regular basis is not permitted in the Nordic Swan Ecolabelled e-commerce network.

This means for example, that a parcel service that uses an express postal service which includes flights on certain routes (integrated transportation) cannot be Nordic Swan Ecolabelled. Despite this, flight transportation can occur in

exceptional cases. Exception is also made for special destinations such as Svalbard.

2. The licensee may not offer Nordic Swan Ecolabel e-commerce logistics to the e-commerce companies whose business concept requires the goods to be flown in order to meet the terms of delivery.

This means that e-commerce platforms which often fly goods from manufacturing country to the end consumer, cannot offer Nordic Swan Ecolabel e-commerce logistics.

✉ A guarantee that flight is not on a regular basis used as mode of transportation within theNordic Swan Ecolabelled e-commere logistics. Signed Appendix 1.

✉ Certification of that Nordic Swan Ecolabelled e-commerce delivery is not sold to the e-commerce companies addressed in requirement part 2. Signed Appendix 1.

🔑 Nordic Ecolabelling carries out random checks of e-retailers' check-out solutions.

Background

In the pre-study the question of flight as a mode of transportation in e-commerce were analyzed[9]. In summary air freight is used to a very small extent in the network of Nordic Swan Ecolabel logistics, which extends from the e-retailer's final warehouse to the end consumer. There are some instances of inbound transport, see definitions, but these fall outside the product group definition.

For the trustworthiness of the Nordic Swan Ecolabel, flit is important to limit air transportation as much as possible. This is performed in two ways:

1. Limitation of air freight on a regular basis within the Nordic Swan Ecolabelled e-commerce network.

As the rules now allow post to be delivered less frequently than on a daily basis, air travel has fallen sharply as a mode of transport for letters and small parcels. To ensure that flights are not normally used within the framework of Nordic Swan Ecolabel e-commerce logistics, the license applicant must sign Appendix 1.

2. Limitation of flight as a part of the business concept of the e-commerce company.

One example of e-commerce goods that are transported by air are the small parcels carried in the postal service primarily from China to Europe. These types of transports were previously subsidized which made it possible for light and very cheap products (gadgets) to be flown directly from China to the Nordic countries. Regulations have been changed[10] and the volumes of goods transported in this way have dropped but not disappeared. This type of e-commerce platforms and companies cannot offer Nordic Swan Ecolabel e-commerce logistics in their check-outs.

[9] Deepened Prestudy Nordic Swan Ecolabelled e-commerce logistics. Nordic Swan Ecolabel 2020
[10] https://www.svt.se/nyheter/ekonomi/paket-fran-kina-blir-dyrare.

8.2 Climate and environmental requirements

Nordic Ecolabelling has developed the STEP (Swan Transport Energy Performance) calculation tool for use in reporting information for requirements O5 and O6. STEP shows the outcome as a percentage of renewable energy and energy efficiency.

STEP also shows the climate impact performance, in accordance with requirement O7, based on the data entered. Rules and principles for input of data are described in Appendix 2.

Appendix 3 contain the allocation principles that shall be used by the companies with an integrated transport network where e-commerce and other/traditional goods are transported in an integrated way.

O3 Existing truck fleet

All of the licensee's own vehicles and subcontractors' vehicles involved in carrying out the licensee's Nordic Swan Ecolabel e-commerce logistics must meet the following conditions.

If the subcontractor has vehicles dedicated do the license holder, these specific vehicles must meet the requirement. If not, the whole truck fleet of the subcontractor must meet the requinto.

The same principles apply to the license holders' own vehicles.

a) Emissions standard Euro 5 is the absolute minimum for all vehicles.

b) At least 70% of all vehicles must be Euro 6.

c) At least 5% of vehicles > 3.5 tonnes must be powered by gas, electricity, hydrogen or ED95. Plug-in hybrids can also be included.

d) At least 15% of the light goods vehicles ≤ 3.5 tonnes must be powered by gas, electricity or hydrogen.

In this context, "vehicles" refers to all motorised vehicles registered as light goods vehicles or heavier.

✉ Documentation to show that the requirement is fulfilled, e.g. list of vehicles.

✉ Points a) and b) can alternatively be verified with a copy of Fair Transport (SE) approval, value-added level 2.

O4 Requirement for new vehicles

The requirement applies to new vehicles that are added to the licensee's network annually during the licence's period of validity after the licence has been obtained, either as purchased, rented or leased.

The requirement applies to own vehicles and new vehicles from subcontractors/carriers that carry out e-commerce logistics. The term "new" does not include added capacity from subcontractors' existing vehicle fleet, only newly purchased, new rented or new leased vehicles.

A. Light goods vehicles

New added light goods vehicles* for the Nordic Swan Ecolabelled network must be powered by gas, electricity or hydrogen. Hybrid technology is not accepted. In order to reward purchases of electric, gas and hydrogen vehicles with a greater

load capacity, different vehicles are weighted based on their gross weight according to the table below.

Light goods vehicle category	Gross vehicle weight (kg)	Load capacity factor
Panel van	2500–3500	10
Distribution vehicle (delivery vehicle)	1500–2499	7
Other motorised trucks	500–1499	4
Bicycles, mopeds, etc.	0–499	1

The new (added) load capacity from gas, electric and hydrogen vehicles must amount to at least 75% or 85%, depending on how large a part of the country the licensee's network covers, according to the table below.

Company coverage of the country, defined as the share of households (unit with a mailbox)	Proportion of added load capacity from gas, electric and hydrogen vehicles
≥ 80%	75%
< 80%	85%

** Light goods vehicles mean all motor vehicles ≤ 3.5 tonnes. In other words, utility vehicles, mopeds and bicycles are also included.*

Example calculation: 10 vans, 8 of which are gas vehicles, and 50 electric bikes are purchased. Added load capacity from gas, electric and hydrogen vehicles = (8 x 10) + (50 x1) / (10 x 10) + (50 x1) = 87%

B. Heavy goods vehicles

At least 20% or at least 1 vehicle of the new added heavy goods vehicles for the Nordic Swan Ecolabelled network must be powered by gas, electricity or hydrogen. The accepted hybrid technology is range extender (see definition).

✉ When applying for a licence: Investment plan for own vehicle fleet.

✉ The year after the licence is issued and all subsequent years: Extract from the vehicle register showing newly purchased and registered vehicles for the previous 12 months.

✉ Requirements in agreements with subcontractors/carriers for procured logistics services in the Nordic Swan Ecolabelled network.

🔑 Check that the licensee has conducted the audit of logistics suppliers in the network.

Background

Reducing the transport sector's climate emissions requires changes to and development of the vehicle fleet towards both more energy-efficient vehicles and a significantly greater proportion of electric road transport. The trend towards electric vehicles is moving fast for passenger cars and light goods/distribution vehicles. Heavy goods vehicles, on the other hand, are not as easy to electrify and for now require other solutions. Requirement levels are therefore differentiated for heavy goods vehicles or light goods vehicles.

Requirement O3 ensures a minimum level that must be achieved for the vehicle fleet in order to obtain a licence. This is supplemented by requirement O4, which ensures that vehicles that are sustainable in the long term are purchased when renewing and expanding the vehicle fleet. The requirement covers both the vehicles owned by the licensee and the vehicles owned by subcontractors/carriers.

Nordic Ecolabelling's requirement for powertrains with long-term sustainability refers primarily to electricity, but biogas and hydrogen are also considered to be good alternatives. The percentages of 75% and 85% are high, as the requirement only applies to new purchases of light goods vehicles, where emission-free alternatives are available, and they are economically viable.

For the fleet, it would have been better to set the requirement expressed as a percentage of kilometres driven. However, producing this data would probably be a considerable burden. Therefore, the requirement is expressed as a percentage of the number of added vehicles, weighted on the basis of their load capacity.

In the table above, the vehicles are categorised into different gross weights (found in the vehicle register) and the weighting is based on the load capacity for each category expressed as payload. The weighting is relatively simple and is based on the following logic. The bicycles and mopeds category ranges from simple bikes that can take a load of approx. 60 kg to cargo bikes that can carry 150–170 kg. The average payload for this category is approx. 100 kg. The upper category is electric panel vans (e.g., VW Crafter) with a payload of approx. 900–1000 kg. This means that an electric van carries about 10 times as much as an average bicycle. For this reason, it is weighted at 10, and then there is a descending scale for each step down in the gross weight of the vehicles.

O5 Renewable energy

The proportion of renewable energy used for the overall transport work in the e-commerce network must amount to the levels below, as a bare minimum. Energy from both own vehicles and those of any subcontractors must be included.

Country	Proportion of renewable energy from the start date of the criteria until 31 Dec 2024	Proportion of renewable energy from 1 January 2025 until the end date of the criteria
Sweden	60%	75%
Norway and Denmark	40%	55%
Finland	30%	45%

Definition of renewable energy:

$$Proportion\ of\ renewable\ energy\ = \frac{Renewable\ fuels\ +\ 2.5\ x\ electric}{Total\ energy\ for\ transport}$$

Energy for the operation of terminals, sorting machines and the like is not included.

The initial limit value for Sweden has been harmonised with Fair Transport's value-added level 2.

Appendix 2 sets out the specifics of the STEP calculation tool and rules for reporting.

Appendix 3 specifies the allocation and accounting principles that may be used.

In the event of significant external changes (regulations, etc.) that may affect the availability of renewable fuels, the limit values may need to be adjusted. This will take place after a national consultation.

✉ Annual reporting of fuel components/volumes in STEP.

✉ A description of how reported data has been produced, including allocation methods, assumptions and supporting verification in the form of reports from fuel suppliers.

Background

Carrying the Nordic Swan Ecolabel for e-commerce logistics means that the transport and logistics companies involved have reduced their carbon footprint by, among other things, limiting or even phasing out fossil fuels, through an increase in the proportion of renewable energy in the transport system and electrification. Depending on the supply of renewable fuels in the Nordic countries, transport companies have different opportunities to quickly switch to renewable fuels. In all countries, however, it is possible to replace vehicles powered by fossil fuels and make the logistics system more efficient.

Nordic Ecolabelling expects all renewable fuels used by the transport/logistics company to meet the requirement, including those covered by national legislation on the admixture of renewable fuels through a reduction obligation and a quota obligation. Nordic Ecolabelling believes that it is important for major fuel users to lead the way, drive the development of more sustainable fuels, and signal that the market is ready to raise its ambition level, thereby creating a clear and rapid demand for renewable fuels. The requirement is also designed to work in all Nordic countries, regardless of variations in national legislation. The fact that all renewable fuels may be included, regardless of whether they are part of a statutory duty or not, also prevents vehicles from being refuelled in countries with lower statutory requirements for renewable admixture.

The requirement level is set on the basis of dialogue with logistics companies and analysis of opportunities for renewable energy in the transport sector in the Nordic countries. The higher requirement level for Sweden is partly due to the high statutory level of renewable fuels in petrol and diesel (reduction obligation), and to a developed market for completely renewable fuels for use in conventional vehicles. The limit value is the same as Fair Transport Sweden's criteria at value-added level 2.

The limit value for renewable energy will be raised for all countries during the licence's period of validity as a result of both the rapid development of renewable liquid fuels and the expected rapid increase in electric vehicles in the companies' vehicle fleet.

In the calculator, Nordic Ecolabelling has chosen to give electricity a higher weighting in the calculation of the renewable share. Fuel Quality Directive (2015/652/EU) specifies an efficiency factor of 0.4 for battery-powered electric drive systems and a factor of 1 for internal combustion engines. Therefore, a

factor of 2.5 (1/0.4) has been used to take into account the higher efficiency of the electric motor.

It is optional to include the energy use from e-commerce goods on trains. For those players who send a lot of e-commerce goods on trains, it can be advantageous to include the train's energy use. Please note that the volumes of packages transported by train must always be taken into account.

Energy use for ship transport shall not be included.

O6 Energy efficiency

The total energy (E) used for the overall transport work in the e-commerce network must not exceed:

$$E = F\ x \left(\frac{company's\ average\ volumetric\ weight\ per\ consignment\ (kg)}{3.0\ (kg)} \right)$$

The formula is designed to handle differences in weight and volume of the goods and weights the licensee's average volumetric weight (kg) using the Nordic average volumetric weight (3.0 kg).

The calculation shall be performed in STEF where E is calculated automatically and displays fulfilment of the requirement.

F is a national adjusted factor (kWh/consignment):

For Norway, Sweden and Finland: F = 2.3

For Denmark: F = 2.0

A consignment is defined as the total amount of freight purchased by the e-commerce consumer in a single transaction.

✉ Annual reporting of fuel components/volumes, number of consignments and average volume per shipment in STEP.

✉ A description of how reported data has been produced, including allocation methods, assumptions and supporting verification in the form of reports from fuel suppliers (usually the same description and verification as for requirement O5).

Background

The purpose of this requirement is to exclude those logistics companies that do not work with:

- a high load factor
- efficient packaging solutions
- rail freight
- electrification
- an efficient logistics network and route planning
- co-loading with other carriers.

A key factor in creating sustainable transport is transport efficiency, i.e. reducing the waste of energy within the logistics network in the form of low load factor, fragmentation of volumes between smaller vehicles, empty running, etc. It is therefore important that this area is covered by the Nordic Swan Ecolabel.

In order to set requirements concerning efficiency, energy consumption needs to be related to the benefits of the transport. In this case, the requirement will be set for the key figure (kWh/consignment) for the network. This is equivalent to the energy required to complete an average shipment.

During the dialogues that Nordic Ecolabelling has had with logistics operators, it has emerged that energy consumption will differ greatly depending on the type of goods being transported but also depending on other factors such as geography, demography and size of the country. The requirement limit will therefore be adapted in two ways:

Firstly, an adaption is made to the company's average size and weight of goods. If a company transports heavy and bulky goods, the limit for the key figure (kWh/consignment) will be raised for this particular company. In other words, this particular company can use more energy per consignment and still fulfil the requirement.

Secondly, an adjustment is made of the factor F for energy use per average consignment. The factor F is set to 2.3 kWh/average consignment for Norway, Sweden and Finland. Whereas the factor F 0 2.0 shall be used for Denmark,

Based on the companies involved in the development process, a Nordic standard value has been calculated as an average volumetric weight of 3 kg. The license holders' average volumetric weight is related to this standard value to adjust the limit of energy efficiency that shall be obtained by the company.

During the development work, other functional units such as tonne-kilometres, parcels and km have been investigated, but in consultation with the industry the unit consignment has been deemed most relevant within e-commerce. In many cases, a consignment is the same as a parcel, but there may be consignments that contain several parcels. The term consignment has been chosen as it can be linked to a single e-commerce transaction. In communication with the e-commerce consumer, however, consignment will be equated with parcel, since parcels are a simpler concept for a consumer to understand.

O7 Climate performance

Licensees must, on an annual basis, improve the climate performance of the Nordic Swan Ecolabelled e-commerce logistics, in absolute measures (not related to the number of consignments).

The licensee's climate performance per is calculated by STEP based on data reported in requirements O5 and O6.

By default, average emission coefficients are used in STEP. The licensee may use other emission coefficients for liquid and gaseous fuels, provided that they are verified via documentation from the fuel company. The emission coefficient for electricity must not be changed.

In the event of acquisitions, sales or consolidation between transport logistics companies that have a major impact on the transport network's climate emissions, the base year shall be calculated on the basis of a methodology accepted by Nordic Ecolabelling.

✉ Accounted climate performance according to STEP.

✉ If other emission coefficients are used: documentation, for example an environmental report from the fuel company.

Background

Climate/CO_2 performance is often highlighted as perhaps the most important factor for which to set requirements. Many of the Nordic Swan Ecolabel requirements drive a reduction in climate emissions, such as requirements concerning renewable energy, fossil-free home deliveries, the vehicle fleet and purchasing. In the dialogue conducted with stakeholders during the development of the criteria, Nordic Ecolabelling has concluded that it is difficult to set a steering requirement limit for e.g. CO_{2e}/consignment, since both the calculation methodology and the conditions for different companies differ greatly.

It is vital that the emission of greenhouse gases decreases rapidly and that this decrease starts immediately. In order to ensure that the Nordic Swan Ecolabelling leads to reduced CO_2 emissions, the climate performance in absolute measures will be followed up (not related to the number of consignments). This metric must be continuously improved year on year, although how great improvement is not regulated in the requirement. The climate performance generated in STEP is likely to differ from the climate key figure that the licensee communicates to its stakeholders, on the website and in customer reports. This is due to the lack of a common calculation methodology.

As stated in section 6.2, a great deal of work is under way on standardisation of climate calculations in the transport industry. There are thus hopes that the next generation of the criteria will be able to set steering requirements concerning climate performance when, in contrast to now, there may be an established and standardised CO_{2e} calculation in place for the industry.

The STEP calculation tool uses emission coefficients for fuels obtained from the Swedish Energy Agency, since the Swedish biofuel market is more developed than in the rest of the Nordic region and the statistics are comprehensive. However, the licence applicant may specify their own emission coefficients if they can be verified by the fuel company.

For electricity, STEP uses the Nordic electricity mix as the emission coefficient for electricity in the CO_{2e} calculation[11]. The reasons for this are that the Nordic electricity system is interconnected, and that the requirement involves reporting CO_{2e} emissions, rather than setting an absolute requirement limit. Nordic Ecolabelling also wishes to place the climate impact of electrification in each country on an equal footing.

[11] https://naturvardsverket.diva-portal.org/smash/get/diva2:1540012/FULLTEXT01.pdf

O8 Sustainable raw materials/fuels

Fuel containing raw materials with a high ILUC risk in accordance with the EU's Renewable Energy Directive (RED II)[12] must not be used. The requirement covers both the licensee's own vehicles and those of the subcontractors/carriers included in the Nordic Swan Ecolabelled logistics network.

A calculation bases on mass balance in accordance with Article 30 of the Renewable Energy Directive can be used to verify that raw materials with a high ILUC risk have not been used.

Nordic Ecolabelling considers the raw material Palm Fatty Acid Distillate (PFAD) to be a by-product/co-product of palm oil production and PFAD is therefore considered to be a raw material with a high ILUC risk. Please note that so called palm oil free biodiesel, in Finland, can consist of PFAD.

Own fuels:

✉ A copy of agreement with and annual verification from fuel supplier(s) showing that purchased quantities of fuel do not contain raw materials with a high ILUC risk, such as palm oil and PFAD. Mass balance assessment/calculation can be used, The copy of agreement must be enclosed with application and the annual verification shall be submitted according to requirement O 20 Annual reporting.

Subcontractors' fuels:

✉ Copy of agreement, or other documentation, confirming that the licensee requires subcontractors to not use fuel based on raw materials with a high ILUC risk, such as palm oil and PFAD.

✉ Results of annual spot checks of subcontractors' fuel purchases.

Background

Renewable raw materials in fuels can have a negative impact on the climate, biodiversity and soil conditions in the countries where the raw material is produced. The EU's revised Renewable Energy Directive (REDII) has introduced new and ambitious requirements that will gradually phase out raw materials with a high ILUC risk (ILUC = Indirect Land Use Change). According to the directive, no raw materials with a high ILUC risk will count as renewable in fuel by 2030, unless they are certified as biofuel with a low ILUC risk. Currently, the EU only assesses primary palm oil as a commodity with a high ILUC risk. If any other raw material becomes high risk under the EU's assessment criteria, this raw material will also be automatically covered by the requirement. By already prohibiting raw materials with a high ILUC risk, Nordic Ecolabelling is setting stricter requirements than the legislation.

PFAD, a by-product from palm oil production, is handled in slightly different ways in the legislation of the Nordic countries. This is largely due to the way PFAD is classified in the legislation – either as a by-product/co-product or as a residual/waste product in palm oil production. Sweden, Norway and Denmark consider PFAD to be a by-product/co-product, while Finland considers it a residual product. This means that in Finland biodiesel as well as fossil diesel with a component of biodiesel can contain PFAD.

[12] Regulation (EU) 2019/807 of 13 March 2019 https://eur-lex.europa.EU/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0807&from=EN

Nordic Ecolabelling deems the raw material PFAD to be a by-product/co-product and thus PFAD is equated with primary palm oil, i.e. PFAD is considered a raw material with a high ILUC risk. As the legislation stands now, meeting the requirements will potentially be a problem for e-commerce carriers in Finland, as applicants will need to have full control over the fuels they are using. They can achieve this control either through using gas or electricity, or if run by fossil diesel or biodiesel, fuel on their own fuel filling facilities or by concluding an agreement with a fuel supplier to purchase fuel free from palm oil/PFAD at mass balance level. Such an agreement shall ensure that the fuel supplier will deliver fuel that is free from palm oil and PFAD based on the supplier's mass balance system. Each year the license holder shall obtain an accounting from the fuel supplier to ensure fulfilment of the requirement and submit this to the Nordic Swan Ecolabel in accordance with requirement O20.

The mass balance solution as outlined in the Renewable Energy Directive applies only to biofuels – whether they are blended with fossil fuels or not. It enables batches with different sustainability characteristics to be physically mixed, while "administratively" being separate.

O9 Driving behaviour

The requirement consists of two parts and applies to both the licensee's employed drivers and drivers of subcontractors/contracted carriers used for Nordic Swan Ecolabel e-commerce logistics.

A. Driver training

All motor vehicle drivers (driving licence category B or higher) must be trained in economical driving (see definitions). Drivers who have not already completed training must have done so within 12 months of the licence being received. New drivers must be trained within 12 months of starting their job.

Nordic Ecolabelling accepts various types of training, including web-based training courses or elements included in category B driving licence training (completed since 2014).

B. Maintaining economical driving

Economical driving behaviour should be maintained over time. This must be done by implementing at least one of the following alternatives for all drivers:

- regular repetition of training at least every five years.
- a recurring in-depth/supplementary training session with practical elements during the period of validity of the licence.
- continuous feedback on driver behaviour through coaching or feedback between manager/employee.

A supplementary paragraph on measuring and feedback on actual fuel consumption can be found in O12 Optional requirements.

✉ A: Training plan that includes driver and date of completed or planned training.

✉ A: For subcontractors, the licensee must present procedures for compliance checks and the results of the spot checks performed.

✉ B: Procedure describing how economical driving behaviour is maintained over time for own drivers and subcontractors.

✉ For drivers with a class C1, C1+E, C or C+E driving licence, a Certificate of Professional Competence (CPC) is sufficient to verify the requirement.

Background

Fuel consumption can vary greatly between different driving styles. Practising economical driving is an effective method of reducing emissions in the short term. Another added benefit of economical driving is increased road safety. There are indications that initiatives for economical driving can reduce fuel consumption by up to 15%, but reductions of around 7% are likely to be more common. The potential is greatest in urban traffic.[13] A mini pilot study conducted in Norway showed a 7–8% reduction in fuel consumption.[14]

There are challenges in maintaining the new economical driving that has been taught, as it is easy to "fall back" into old, ingrained driving patterns. Nordic Ecolabelling therefore sets requirements for a supplementary part B with requirements for repetition, advanced training or systematic feedback for drivers.

Driving Licence Directive (EU) 2018/645[15] applies to drivers of heavy goods vehicles, who require certification. The directive states that drivers must undergo training in order to obtain a Certificate of Professional Competence, which is required to transport heavy goods. The latest amendment to the directive has clarified what the training should contain in terms of optimising fuel consumption. The directive requires further training every five years, and according to the directive the emphasis must be on the environmental impact of driving vehicles. All drivers of heavy goods vehicles can therefore be assumed to have undergone basic training and ongoing training in economical driving. The directive is implemented in the Nordic countries through: Lag (2007:1157) om yrkesförarkompetens (SE), Laki liikenteen palveluista 320/2017 (FI), Forskrift om grunnutdanning og etterutdanning for yrkessjåfører (yrkessjåførforskriften) (FOR-2008-04-16-362) (NO) and Bekendtgørelse nr. 322 af 30. marts 2020 om kvalifikationskrav til visse førere af køretøjer i vejtransport (DK).

National legislation in the Nordic region requires sections on optimum, fuel-efficient driving to be included in both basic and advanced training. Nordic Ecolabelling goes beyond the legislation, including not just truck drivers but all motor vehicle drivers with a category B driving licence or higher in the requirement for economical driving. For drivers with a category C1, C1+E, C or C+E driving licence, a Certificate of Professional Competence is sufficient to meet the requirement.

O10 Route optimisation

The transport/logistics company must employ digital route optimisation that includes at least all regional transport and last-mile transport by motor vehicle, in order to minimise the number of kilometres driven. The requirement also covers the subcontractors/carriers included in the licensee's network of Nordic Swan Ecolabel e-commerce logistics.

Digital route optimisation refers to a digital system that is continuously updated and thus ensures optimal routes that, for example, take into account parcel volumes, delivery points, traffic queues and roadworks. It is sufficient for routes to be optimised up to departure.

[13] Vägledning för transportköpare Västmanland County Administrative Board, 2021
[14] Økonomisk kjøring gir kostnads- og miljøgevinster, Samferdsel 21-11-2019, https://samferdsel.toi.no/
[15] DIRECTIVE (EU) 2018/645 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Regional transport and last-mile transport are the transport carried out from the distributing terminal to the end consumer, via any depots. Line-haul transport and other fixed routes are not covered by the requirement.

A supplementary paragraph on dynamic route optimisation can be found in O12 Optional requirements.

✉ Description of the route optimisation tool(s) used by the licensee and its subcontractors and how they work to make the logistics more efficient.

On-site inspection.

Background

Digital route planning is a method of planning and optimising the company's routes in a more or less advanced way. Route planning makes transport more resource-efficient, as the distance travelled is optimised, the number of vehicles used can be reduced, the number of stops per trip increases and the load factor increases. Up to 20% more efficient routes can be created using a digital tool for route planning, compared with manual (traditional) planning[16]. For companies with a large proportion of fixed routes, route optimisation can be done with some advance planning. Companies with varying routes, on the other hand, need to run the optimisation over the course of the day.

O11 Home delivery

Requirements a) and b) below must be met for the transport/logistics companies that offer home delivery. Home delivery cover the distance to transport/deliver the parcel from the final distribution spot and to the end consumers home address. Deliveries to parcel agents or parcel lockers are not included.

a) To obtain a licence, home delivery must be conducted in accordance with the table below:

	Share of home delivery vehicles that always run on eletricity or renewable fuels**			
Company's coverage (share of households* in the country)	**Sweden:**	**Denmark:**	**Norway:**	**Finland:**
> 90%	60%	50%	50%	40%
70–90%	80%	70%	70%	60%
< 70%	100%	100%	100%	100%

b) Home delivery notifications must always be issued at least 24 hours before delivery.

.

** A household consists of people who are registered as living in the same home. A household can often be equated with a shared mailbox.*

*** Defined as vehicles that run on electricity (regardless of energy production), pure (100%) biofuels, biogas (according to the green gas principle, see definitions), hydrogen and muscle power. Hybrid technology is not accepted, see definitions.*

[16] Förstudie samordnad varudistribution, Nationellt centrum för kommunal samordnad varudistribution, 2020

A margin of error of 2% is permitted in the limit values for the proportion of vehicles that perform these deliveries. The margin of error includes for example incorrect refuelling.

✉ Information on the percentage of households covered by the licensee in the country where Nordic Swan Ecolabel e-commerce delivery is offered.

✉ Calculation and other verification showing compliance with the requirement level in the country in question. The verification must show that the vehicles have run on electricity or on renewable fuels.

✉ Description of system/procedure for notification of home delivery.

Background

Various last-mile options might be offered at check-out (see definitions). Home delivery is generally less energy efficient than delivery to parcel agents or parcel lockers. Home delivery entails a lower overall load factor, as the vehicle gradually empties as the delivery route continues, not to mention the numerous stops and starts with relatively higher emissions, more transport using smaller vehicles and a lack of coordination between the last-mile companies in the market.

At the same time, home delivery can be efficient, low-carbon and highly sustainable if private shopping trips or ownership of a car can be avoided.

In order to balance the differences in the effectiveness, a specific requirement has been set that applies solely to home delivery, and not to delivery to a parcel locker, agent or in-store pick-up point. Home delivery is defined as the distance from the final distribution spot and to the end consumers home address.

It is easier for a transport company that specialises in delivering goods to densely populated areas to establish electrified or renewable home deliveries, compared to those who offer home delivery throughout the country. Home deliveries in rural or sparsely populated areas mean longer distances which complicates for electrified vehicles, while access to renewable liquid and gaseous fuel alternatives are more limited. The requirement therefore involves three different levels, based on household coverage in each country.

This requirement makes it more likely that home delivery with the Nordic Swan Ecolabel will actually be performed by an electrified vehicle or a vehicle running on renewable fuel.

For home delivery, it is highly relevant to minimise repeat delivery attempts, which is why home delivery notifications must be sent.

O12 Requirement with optional measures

This requirement contains six different measures that contribute to more sustainable e-commerce logistics. At least one (1) of these measures must be established to obtain a licence.

1. Intermodal transport

The licensee must either have a strategy for intermodality (see definitions), agreed by senior management, that aims to increase freight volumes by sea or rail, or a fully funded project plan approved by management that aims to increase freight volumes by sea or rail. The benefit of such a project must be realised within 2 years of the licence being granted.

Scheduled ferry traffic included in the road network is not considered an intermodal solution.

✉ An agreed strategy or an approved and funded project plan.

2. Monitoring of actual fuel consumption

An (IT) system that reports more than just the vehicle's fuel consumption/ average consumption should be used and at least 75% of the vehicles deployed in the network must be covered.
The system must measure and deliver detailed driving and consumption data (to the office/control centre or to the driver). The system must give the company the ability to analyse the reason for the consumption.

✉ Description of the system and how large a proportion of the vehicles are connected.

3. Digital dynamic route optimisation

The licensee must employ dynamic route optimisation that includes at least 20% of the parcel volumes delivered annually.

Dynamic route planning means that routes are optimised on a daily basis in terms of distance/energy efficiency, based on the goods to be delivered, and which vehicles and drivers are available. This requires a digital tool in which all the underlying data is analysed and presented to the planner.

Requirement O10 sets an obligatory requirement for digital (static) route optimisation

✉ Description of dynamic route optimisation system and how it contributes to increased energy efficiency and/or climate performance.

4. Co-loading/co-transport between different transport companies

The licensee shall routinely coordinate/co-load at least one transport arrangement with one or more other transport/logistics operators (not subcontractors). The co-loading/co-transport needs to entail a real reduction of at least 10% reduction in the number of kilometres driven and have a planned duration of at least 2 years.

✉ A description of how the collaboration is set up and an estimate of the efficiency/benefit of the collaboration.

5. Open charging infrastructure

In order to speed up the conditions for electrification, the licensee must give its subcontractors/carriers access to its own operations' charging stations for light and heavy goods vehicles at at least half of its own terminals or depots.

✉ A list of the company's terminals and which of them offer open charging stations.

6. More eco-efficient packaging

In collaboration with e-commerce, the licensee will carry out ongoing work (not projects) that either results in less air in the packaging or reduces the amount of packaging material through, for example, returnable/refillable packaging. The work must comprise at least 20% of the parcel volumes delivered annually.

Requirement O17 sets an obligatory requirement for an agreement on dimensional weight (see definitions).

✉ A description of the work on more environmentally efficient packaging.

Background

1. Intermodal transport

Intermodal transport means that at least two modes of transport are used for freight, with the majority of the route covered by rail or sea. There are great expectations that intermodal transport will increase, thereby contributing to climate goals and increased transport efficiency. There is a strong desire to transfer transport from road to intermodal rail transport, but one of the main obstacles mentioned is the lack of reliability on the rail network[17]. General obstacles to intermodal transport are the time factor, higher costs, port fees, lack of knowledge and resources, and various technical barriers[18]. Since major barriers to intermodality in the transport of e-commerce goods remain, this is an optional requirement.

2. Monitoring of actual fuel consumption

There are various systems that systematically measure and report vehicles' fuel consumption, and that can also feed this back to the driver. The aim is to provide a basis for decisions that reduce fuel consumption, and that support and consolidate an economical driving style. A survey by the Swedish Transport Administration (Trafikverket),[19] lists three main categories of IT systems (see below), with systems in categories II and III approved for this requirement.

Category	Description
I	Information on fuel consumption is delivered to the office/control centre.
II	Detailed driving and consumption data is measured and delivered to the office/control centre. Allows for cause of consumption to be analysed.
III	Detailed driving and consumption data is measured and displayed to the driver in the cab. Encourages maintenance of economical driving.

3. Digital dynamic route optimisation

Digital dynamic route optimisation creates delivery routes and stop sequences according to customer and order type, based on daily variations in demand.

[17] Hinder för ökad omlastning till intermodala järnvägstransporter. Delredovisning av regeringsuppdrag. Trafikverket. 2019.
[1818] Uppdrag att intensifiera arbetet med att främja intermodala järnvägstransporter. Redovisning av regeringsuppdrag Trafikverket. 2021.
[19] Klimatsmart val av IT-stöd för att öka lönsamheten- kartläggning av uppföljningssystem, och stöd för förare under färd. Trafikverket. 2012.

Dynamic route optimisation determines the unique routes based on the goods to be driven for the day, time windows, stop times, load capacity, driver's working hours, returns, etc. Dynamic route optimisation is far from standard in the industry today. Requirement O8 sets an obligatory requirement for digital (static) route optimisation.

Some examples of digital dymanic route optimisaton systems ate Descartes and Route4Me.

4. Co-loading/co-transport

Co-loading/co-transport can take place, for example, through coordinated distribution of goods to certain cities or areas through a carrier-neutral transshipment hub or parcel lockers, or through different logistics companies collaborating on transport to e.g. a logistics centre. Co-loading is primarily used in urban environments to reduce the number of vehicle movements. In rural areas, the driving force is to increase the load factor and achieve economy over long distances. There are many different variations on co-loading and coordination, but they all reduce the number of journeys and/or create more efficient logistics.

5. Open charging infrastructure

With the electrification of the automotive sector, logistics companies also need to meet the carriers' charging needs[20]. Under this measure, the licensee gives partners/subcontractors/carriers access to its own truck charging stations (semi-public charging points), often located at logistics nodes, terminals and depots.

6. More eco-efficient packaging

The packaging used, packaging materials and how efficiently the goods are packaged are beyond the steerability of the transport/logistics companies, as it is the responsibility of the e-retailers. During the development of the criteria, however, we have seen that carriers, in collaboration with e-commerce, are testing various measures to reduce the environmental impact of packaging. This measure rewards work that is so effective that it is made permanent within the business. The Swedish working group "Frakta Luft"[21] (Transporting Air) has drawn up a nine-point list of measures that may offer inspiration.

[20] Behov av laddinfrastruktur för snabbladdning av tunga fordon längs större vägar. Trafikverket, report 2021:012.
[21] A working group within the framework of the industry initiative Hållbar E-handel (Sustainable E-commerce) www.hallbarehandel.org

8.3 Social requirements

This section contains the following three requirements:

- Requirement O13, which applies to employed drivers and drivers employed by subcontractors, including self-employed persons.
- Requirement O14, which instead applies when the contractor format is used, i.e. when the driver is employed by an umbrella company, see definitions.
- Requirement O15 which is a basic requirement for preventive road safety work.

The requirements are harmonised with Fair Transport SE, basic level and Fair Transport NO, as well as the new criteria for Good Environmental Choice Local Goods Transport 2022/Bra Miljöval Lokala godstransporter 2022. Approval or licence certificates in accordance with these systems automatically verify requirements O13 and O15.

O13 Labour standards for employees and self-employed persons

The following requirements apply to both own drivers employed and those drivers who are subcontractors, i.e. employees of carriers and hauliers. The requirement applies to all drivers who carry out transport within the e-commerce network that is to be Nordic Swan Ecolabelled.

First comes the requirement, then national references to relevant agreements and finally how the requirement is to be documented by the applicant.

a) The licence applicant must comply with agreements concluded between the social partners (employer's organisation and employee organisation/union organisation), known as collective agreements.

Alternatively;

b) Salaries, holidays, working hours and insurance cover, including collective pension provision, must be at least on a par with the terms and conditions set out in the agreement specified in point a) above.

Sweden

Swedish Transport Workers' Union, Transport Agreement: Arbetsrättsliga villkor för godsförare

(Procurement authority's website, Requirement ID: 11367:3, in accordance with Appendix 1.)

SEKO agreement for Postal Services: Avtal Kommunikation

Norway:

Written labour agreement, the content of which complies with Norwegian legislation, with reference to the minimum requirements in Section 14-6 of the Norwegian Working Environment Act.

As a minimum, drivers must have a salary equivalent to that stated in the "Regulation on general application of wage agreements for goods transport by road" and be covered by the statutory insurance and pension insurance provision. Forskrift om allmenngjøring.

Denmark:

One of the most common collective agreements according to the Danish Road Traffic Authority:
https://fstyr.dk/da/Erhvervstransport/Godskoersel/Overenskomstforhold

Finland:

Any of the following collective agreements within Central Organisation of Finnish Trade Unions SAK member unions:

Transport Workers' Union https://www.akt.fi/in-english/

Finnish Post and Logistics Union, PAU Collective Agreement https://www.pau.fi/

✉ For own employees: Most recently signed collective agreement. If there is no collective agreement, complete Appendix 4 for the country in question instead.

✉ For employees of subcontractors: Written agreement/contract/Code of Conduct between the licensee and subcontractor, showing that the licensee sets requirements for collective agreements or for labour standards on a par with collective agreements.

✉ The licence applicant's procedures and follow-up of subcontractors' compliance with the terms of the agreement/contract/Code of Conduct and the results of the most recent year's review.

✉ The requirement can also be verified with a copy of an approval from Fair Transport Sweden or Norway, or a licence certificate for Good Environmental Choice Local Goods Transport 2022.

🔑 Nordic Ecolabelling conducts random checks on implemented reviews of the terms and conditions of the agreement.

Background

A sustainable transport industry requires that the company provides its employees with safe employment and good working conditions, and complies with laws, ordinances and regulations. This shall of course apply regardless of whether the employee is employed by the licensee or by a subcontractor carrying out transport work for the licensee. Although the Nordic Swan Ecolabel is an environmental label, we always set requirements concerning social sustainability areas that are deemed to be of high relevance.

As an agreement between the two social partners in the labour market, a collective agreement governs forms of employment, pay and remuneration, overtime, leave, working hours, pensions and insurance, etc.

Nordic Ecolabelling's requirements for labour standards are based on the basic level of the transport industry's Fair Transport system. The requirement means that there must be *either* a collective agreement in place *or* an agreement covering labour standards to an equivalent level. Stated per country, reference is then made to the relevant agreements and legislation.

For self-employed persons, e.g., a carrier with no employees, the requirement and appendix may be skipped.

If the licence applicant has a collective agreement, the requirement is easily verified with the latest signed agreement. If there is no collective agreement, the terms must be entered in Appendix 4 for the country in question. A review then takes place to check that these are at an "equivalent level".

Licence applicants who engage subcontractors steer these by setting requirements for labour standards in written agreements/contracts/Codes of Conduct. Nordic Ecolabelling reviews these and the licence applicant's working methods in order to check how agreements/contracts are being complied with in practice.

O14 Working conditions, contractors

In order to ensure that the transport service is carried out in a socially responsible way, all persons carrying out transport work on behalf of the licence applicant must, as contractors, be:

a) Covered by a collective agreement or terms and conditions at least on a par with such an agreement.

a) Employed by an umbrella company.

b) Paid an hourly wage. Percentage-based pay is not accepted.

There must also be a written agreement between the licence applicant and the umbrella company governing implementation of the assignment and clarifying employer responsibility.

✉ Signed Appendix 5.

✉ Extract from the agreement between the licence applicant and the umbrella company/companies engaged, demonstrating regulation of the above requirements.

✉ The licence applicant's procedures and follow-up of compliance with the agreement on the part of the umbrella company.

✉ Extract from the agreement between the umbrella company and the individual driver, demonstrating regulation of the above requirements.

Background

The strong growth in e-commerce has prompted higher demand for transport and postal services, which has led to new players entering the market. Some of these are platform companies that use various forms of employment. One of the major challenges of platform work is the different business structures, which are disrupting current systems. When different employer functions are divided between different players, it is no longer clear who the employer actually is.

Some platform companies employ their staff as usual and become employers, while others use the employment form of contractors[22]. This means that the worker invoices and pays tax (and other social security contributions) via a third party, a so-called umbrella company. This third party in turn charges the worker a fee for his/her services. In other words, the worker performs a service for the platform company, but receives pay from a third party.

Using contractors can be a way of modernising and meeting new demands in the labour market without sacrificing statutory rights and healthy conditions. The main principle should be that social rights should be guaranteed regardless of the

[22] Fri frakt till ett högt pris. En analys av e-handelns utveckling och hållbarhet. Swedish Commercial Employees' Union, SEKO and Transport Workers' Union. 2021.

type of employment[23,24]. To guarantee this, Nordic Ecolabelling requires drivers to be employed by the umbrella company, and that the agreement between the licensee and the umbrella company (third party) clarifies employer responsibility and establishes working conditions on a par with a collective agreement. In addition, there is a requirement that a percentage-based salary is not accepted. A percentage-based salary is percentage pay based solely on the actual deliveries a person has been given. This remuneration model may result in unreasonably low pay for a worker who remains available for work.

An authorisation system has been established for umbrella companies[25] in Sweden. This could become a requirement in the next generation of the criteria.

O15 Safety

As a minimum, licensees and subcontractors/carriers must have the following in place:

1. Customised checklists for safety checks on vehicles, drivers and load securing including at least the actions stated in Appedix 6.
2. Procedures for ensuring that safety checks, including tyre pressure checks, are carried out as specified in the checklist/safety check procedure.
3. Procedures and/or system support ensuring that checks, servicing and vehicle inspections are carried out.
4. Procedure and/or system support that describes how driving and rest times, plus the provisions of the Swedish act on working time in road transport (Vägarbetstidslagen), are complied with and monitored.
5. Procedures for monitoring speeds and any speed limit violations.

There are various aids (templates, checklists, procedures and the like) to support this, see Fair Transport and the associations for employees and employers in transport.

✉ Procedures, checklists and descriptions of system support and follow-up systems, in accordance with points 1–5 above.

✉ Alternatively, the requirement can be verified with a copy of Fair Transport (SE) approval basic level, a copy of Fair Transport (NO) or a licence certificate for Good Environmental Choice Local Goods Transport 2022.

Background

Measures to reduce the number of road traffic accidents and their impacts are targeted at roads, vehicles and use, and responsibility is thus shared by several parties[26]. In these criteria, we set requirements relating to vehicle use, as this is what the licensee primarily has steerability over. The requirement covers areas

[23] EU Proposal for a Directive on improving working conditions in platform work – 2021/0414 (COD)
[24] Plattformsarbete i Norden, Cecilia Westerlund on behalf of the Nordic Transport Workers' Federation, 2022.
[25] Egenanställningsföretagens branschorganisation https://www.egenanstallning.org/
[26] Djupstudieanalys av olyckor med tunga lastbilar, Effekter av åtgärder för en säker tung trafik. Trafikverket, Report 2008:136.

where legislation exists but compliance is inadequate, and areas not covered by legislation.

The requirement is to a large extent harmonised with the requirements set in the basic level of Fair Transport. This means that a carrier/haulier that is approved in accordance with Fair Transport in Sweden or Norway is automatically considered to fulfil this requirement.

8.4 Requirements included in agreements between carrier and e-retailer

The chapter contains requirements that must be fulfilled in the agreement between the licensee and the customers, i.e. e-commerce companies.

O16 Consumer promise on delivery time

The *fastest* promised delivery time given to the consumer in the check-out solution should be "delivery within 1–3 days".

In this way, Nordic Swan Ecolabel e-commerce logistics can create:

- Conditions for increased environmental and social sustainability, as normal delivery time is increased by one day (+1 day)
- New norms for consumers and counteract express deliveries (same day delivery)

✉ Agreement between the licensee and e-commerce company keeping the delivery time to a maximum of 1–3 days for the Nordic Swan Ecolabelled alternative and requiring that this is clearly stated in the check-out solution.

🔑 Nordic Ecolabelling carries out random checks of e-retailers' check-out solutions.

Background

The development of ever-faster deliveries can make it more difficult to create sustainable e-commerce logistics from a broader perspective. Swedish analysis agency Trafikanalys reports that fast deliveries with narrow time windows can lead to inefficient routes, a lower load factor and increased delivery vehicle traffic, compared with deliveries with slightly longer delivery times and wider time windows. Narrow time windows also mean deliveries to the same area at different times of the day, instead of all deliveries to a specific area being delivered on the same round.

Allowing the delivery to take a little more time makes the transport and logistics companies better able to optimise routes and co-load. A longer time window provides opportunities to balance volumes, as not everything needs to go through the network at the same pace. It is also a prerequisite for transferring goods to rail, as transshipment and transport to and from combi terminals takes time, plus larger amounts of goods are required to make rail transport financially viable. In addition, longer time windows can alleviate the pressure, as well as creating benefits for the social sustainability of drivers and for road safety.

It is possible to create fast, efficient and at the same time sustainable/climate-smart transport arrangements. However, this requires one or more conditions to be met, such as the use of existing networks/journeys, for example parcels

delivered with the post or morning newspapers, electric vehicles and/or city terminals/distribution hubs that provide short home deliveries. A high/good load factor can be achieved in specific systems, but often with more fragmented transport, smaller and less energy-efficient vehicles and more vehicles than necessary, which means more frequent departures.

Today, there is also a trend driving even faster deliveries – same day delivery, which many agree is not a sustainable development. This is despite studies showing that it is more important for the e-commerce consumer to know when a delivery will arrive (punctuality) rather than that it will arrive quickly. One purpose of the Nordic Swan Ecolabel is thus to act as a counterweight to increasingly faster deliveries.

In summary, there is a requirement for a consumer promise in the check-out solution, i.e. the delivery time shown when the consumer chooses shipping, which allows a little more time and also serves to prevent same day delivery. The normal delivery time varies, but a consumer promise of delivery within approximately 2 days is considered normal. Nordic Ecolabelling's requirement for a consumer promise of 1–3 days means in many cases that the transport company has an extra day to work with, compared with the current situation. It is not permitted not to write any delivery promise in the check-out.

The requirement provides:

- Opportunities for transport companies to optimise their transport operations. How this opportunity is utilised will vary. Some transport operations are difficult to further optimise and the causal relationship is not a given.
- The fastest customer promise is thus 3 days, but delivery is allowed to be faster if, based on transport efficiency, it is the best alternative. This will exceed the customer promise, and the consumer will (probably) be very pleased.
- The option of longer delivery times as specified at check-out.
- The requirement does, however, mean that delivery must not take place more quickly than the next day, as the aim is to help establish new norms. Consumers who need their e-commerce products guaranteed faster are thus not able to choose a Nordic Swan Ecolabelled e-commerce delivery.

O17 Incentives to minimise air in packaging

In the licence applicant's agreement with an e-commerce company concerning Nordic Swan Ecolabel e-commerce logistics, the pricing model must be based on volume (i.e. dimensional weight or volumetric weight, see definitions) according to the formula below. However, this does not apply to e-commerce goods that are transported as part of the regular postal service.

$$Dimensional\ weight\ =\ height\ (m)\ x\ width\ (m)\ x\ length\ (m)\ x\ conversion\ factor.$$

Conversion factor = 280 kg/m^3.

The pricing model must not be based on weight or unit.

✉ Copies of anonymised agreements with e-commerce companies.

🔑 Nordic Ecolabelling carries out random checks of anonymised invoices.

Background

E-commerce differs from traditional commerce, as goods are transported directly from warehouse to end consumer and not via a store, which means that consumers often receive both secondary and primary packaging, increasing resource consumption and volumes of waste. The indirect impact of air in packaging has a greater negative effect in terms of energy use during transport and risk of scrapping than the direct impact of energy in the manufacture of packaging materials and waste management.[27]

Efficient packaging of an e-commerce product is therefore a prerequisite for a good overall load factor. Although the e-commerce company makes all the decisions on the packaging, there is a risk that the end customer will see it as part of the transport solution. Despite a lack of steerability, it is important that Nordic Ecolabelling attempts to set requirements for packaging.

An effective way to reduce packaging volumes is for the carrier to price logistics services so that they are cheaper, the more efficiently the e-retailer packages its goods. A pricing model that favours efficient packaging is one whereby carriers charge on the basis of dimensional weight[28], or volumetric weight as it is also known. The volumetric weight is calculated using a standardised formula and then compared with the actual weight, with the higher weight determining the transport cost. The formula uses the industry-agreed factor of 280[29] kg/m^3 for domestic transport.

The model of pricing by weight or so-called flat rates where you pay per parcel sent, regardless of the volume of the goods, are not accepted.

O18 Price neutrality

The price of any return transport (in relation to the route) must not be lower than the outbound transport in the agreement between the carrier and e-commerce.

✉ Copies of anonymised agreements with e-commerce companies.

🔑 Nordic Ecolabelling carries out random checks of anonymised invoices.

Background

One disadvantage of e-commerce compared with in-store shopping is that it is not possible to try or feel the product before making a purchase decision, which leads to a higher risk of incorrect purchases and an increased need for returns. The quantity of returned purchases varies, but is highest in the categories Clothing & Shoes, Home Furnishings and Sport & Leisure. There is a statutory right to cancel an online order within the cooling-off period, and the ability to return goods that are wrong or do not fit is important for sustainable e-commerce. Goods that are returned are forwarded via the transport flow of the carriers to a central warehouse location for further processing.

[27] Packaging logistics. Henrik Pålsson, 2018
[28] This is calculated by multiplying the volume of the packaging in m^3 by 280 (conversion factor to weight, i.e. kg per 1 m^3). 1 consignment weighing 10 kg with dimensions of 0.5 x 0.5 x 0.5 m, i.e. actual weight 10 kg, has a volumetric weight of 0.5 x 0.5 x 0.5 = 0.125 x 280 kg = 35 kg. The dimensional weight is thus 35 kg, which is the basis on which the e-commerce company is charged.
[29] Vikt och volymberäkning för Transport | ColliCare Logistics

A key strategy is to reduce the risk of returns actually in the online store. However, the ability to influence returns is very limited for carriers who are licensees. One (indirect) way is to set requirements for price neutrality, which means pricing return shipping so that it is not financially advantageous.

8.5 Information requirements

This chapter only contains one requirement regarding the information that should be included at check-out,

O19 Information at check-out

The Nordic Swan Ecolabel in the check-out must be accompanied by the following description:

(Nordic Swan Ecolabel) E-commerce logistics ensure reduced climate impact and good labour standards.

//And corresponding text in the other Nordic languages//

The label and the description must be placed to make it very clear that it is the delivery option that is Ecolabelled and not the entire logistics/transport company nor the e-commerce company.

✉ The license holders' routines for implementing the requirement and the routines for follow up and random checks that the customers have implemented the requirement in their check-outs.

✉ List of companies that have signed agreements for Nordic Swan Ecolabel e-commerce logistics including web page addresses, and annual updating of this.

🔑 Nordic Ecolabelling carries out random checks of the company's check-out solutions.

Background

There are often different green claims in the check-out, with a various degree of clarity and suitability towards consumers. To make it as clear as possible what the Nordic Swan Ecolabel represent and include, a clear description must accompany the label and must be placed to the right of the label and directly under the delivery option in the check-out.

The space in the check-out is very limited and there are also technical restrictions due to the fact that shopping online must be performed both by smart phones and computers. The text "(Nordic Swan Ecolabel) E-commerce logistics ensure reduced climate impact and good labour standards" is very shortly describing to the consumer what the label means and imply. The purpose is also to confirm the consumers' sense of having done something good.

Consumers that want more information are guided to the webpage of Nordic Swan Ecolabel. Read mot in Criteria document under " Regulations for the Nordic Ecolabelling of products".

8.6 Licence maintenance

This chapter mainly includes a requirement for annual performance reporting to show that the relevant requirements are met over the course of the licence's validity.

O20 Annual reporting

To ensure compliance with the requirements over the validity period of the criteria, the following requirements must be reported annually to Nordic Ecolabelling:

O4: Requirement for new vehicles

O5: Renewable fuel in the STEP calculation tool

O6: Energy efficiency in STEP

O7: Climate performance in STEP

O8: Sustainable raw materials/fuels

O11: Home delivery

O19: Information at check-out

✉ Annual report demonstrating compliance with the above requirements, submitted to Nordic Ecolabelling no later than 1 April of the following year for review. For details, see the respective documentation requirements.

Background

It is important to check a number of the requirements in the criteria document over time to establish compliance throughout the licence period, i.e., the validity period of the criteria. These relate to the new acquisition of vehicles, renewable fuels (the limit value for which is also set to be tightened in the middle of the validity period), the limit value for energy efficiency, climate performance and sustainable fuels.

The licensee must report the outcomes relating to these requirements annually, as specified alongside the envelope icon in the respective requirements. Requirement O19 on information at check-out must also be checked annually to ensure that new customers/e-commerce companies display correct information in their check-out solution.

O21 Consumer complaints

The licensee must guarantee that the quality of the Nordic Swan Ecolabel e-commerce logistics is maintained during the period of validity of the criteria. The licensee must, therefore, have a procedure in place for receiving complaints from the end consumer and e-commerce companies.

As a minimum, the procedure needs to cover complaints about products damaged in transit, too much air in packaging, non-eco-friendly packaging or inadequate attention to road safety during delivery.

Under the procedure, relevant complaints will be passed on in writing to the appropriate e-commerce company.

✉ Company procedure for receiving and handling consumer complaints.

🔑 Compliance check during on-site audit.

Background

The licensee must have a set procedure in place for receiving customer complaints from the end consumer. The procedure must also cover the relevant environmental aspects described in the requirement. When the licensee receives and documents customer complaints that are the responsibility of the e-commerce company, the complaint must be forwarded to them in writing.