KUEHNE+NAGEL

# How Book and Claim can flick the switch: its role in electrifying road freight

# Contents



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# Introduction

The road freight industry is the backbone of global commerce. Almost every shipment starts and ends on wheels. It's no exaggeration—road freight plays an integral part in society as we know it. However, sustainability has emerged as a pressing concern.

It is estimated that freight transport worldwide accounts for around 8% of $CO_2e$[1] emissions.[2] With the current trends, this figure has the potential to double by 2050.[3] By that time, the freight sector could be the highest emitter, as it continues to rely heavily on fossil fuels to meet a growing demand, while other sectors shift to more sustainable energy sources.[4] At the same time, by 2030, the transport industry, along with other sectors, must achieve a 42% reduction in global emissions (compared to 2020) to meet the targets set out in the Paris Agreement.[5] This is aligned with the Science Based Target initiative (SBTi), which aims to keep global temperature increases under 1.5°C and accomplish net-zero emissions by 2050.

At present, the road freight industry has clear reduction targets and, despite challenges, has technologies available that can support the sector's decarbonisation journey. Battery-electric vehicles (BEVs) and biofuels like hydrotreated vegetable oil (HVO) are prominent examples.

Nonetheless, with the current speed of change, the road freight industry will not meet its targets. Road freight companies must, therefore, innovate further to create substantial change.

As part of its portfolio of low-emission transport services (LETS), Kuehne+Nagel is currently leveraging HVO as a bridging solution towards achieving a significant share of BEVs in its own fleet and in the fleets of its carriers. Considering the urgency to decarbonise, fleet electrification needs to happen in a timely manner.

There are many roadblocks to that ambition. But there are also mechanisms that can accelerate the deployment of BEVs. Take, for example, a Book and Claim chain-of-custody model. Book and Claim addresses one of the main hurdles to faster fleet electrification, namely, the present-day mismatch between the demand for LETS and its supply. Moreover, it can help small and medium-sized trucking companies to finance their transition to electric fleets. However, the success of this innovative solution relies on ticking the right boxes.

This white paper provides insights into the robust principles behind Kuehne+Nagel's Book and Claim solution for BEVs. It also advocates for a wider acceptance of this solution and articulates the need for a clear differentiation from carbon offsetting. Book and Claim as a mechanism is arguably the road freight industry's best bet to accelerate urgently needed fleet electrification, but we must ensure it is rightly formalised and implemented.

1 $CO_2e$, or $CO_2$ equivalent, is a unit of measurement used to group the emissions from different greenhouse gases into one number. The calculation relies on the global-warming-potential of the different greenhouse gases.
2 International Energy Agency. $CO_2$ Emissions from Fuel Combustion. (2018).
3 International Transport Forum. ITF Transport Outlook 2021. (2021).
4 SR15_Chapter2_Low_Res.pdf (ipcc.ch)
5 https://sciencebasedtargets.org/resources/files/Pathway-to-Net-Zero.pdf

# Flicking the switch to BEVs

There are several ways to reduce emissions from road freight. For one, designing the most efficient supply chain not only in terms of time and cost, but also sustainability.
In practice, this could look like choosing the shortest route and optimising load or vehicle efficiency. Optimisation, however, has its limits.


**The term low-emission transport services (LETS)** was first coined in the Smart Freight Centre's Voluntary Market Based Measures Framework for Logistics Emissions Accounting and Reporting (MBM FW). It is an umbrella term that captures transport solutions that reduce emissions compared to those that burn "traditional" fossil fuels. Examples of LETS include biofuels or electric vehicles. It is useful to avoid having to talk about "litres" (in the case of fuels) and kWh (in the case of electric vehicles) in the context of Book and Claim as it allows a measurement of greenhouse gas (GHG) emission intensity of LETS that's independent from the underlying technology.

**Carbon emission intensity** is calculated by dividing the total emissions by a metric of an operation, such as the number of units or amount of service. In transport, it is expressed by $CO_2e$ per tonne-kilometre (t-km).

To truly decarbonise road freight, addressing the energy source of a vehicle is a non-negotiable. Today, Internal Combustion Engines (ICE) still dominate the trucking market. When those are fuelled by diesel, they produce a significant amount of $CO_2e$ emissions. There are two alternatives to reduce road transport emissions as opposed to "traditional" burning of fossil fuels like diesel. These centre on tackling a vehicle's energy source—low-carbon fuels and electric motors. These two solutions fall under the umbrella of LETS.

Biofuels or power-to-liquid fuels are being evaluated to reduce emissions from ICE vehicles. However, their limited availability, low efficiency, residual pollutants, and high cost suggest that they will not become the norm in the near- and long-term. Instead, electric vehicles stand to shape the future of road freight.

Policymakers worldwide started to incentivise the shift from fossil fuels to low-carbon energies in the road freight industry. California's Advanced Clean Trucks (ACT) regulation, for example, requires that at least half of heavy-duty electric trucks sold in the state should be electric by 2035. In addition, the EU proposed a 90% decrease in new heavy-duty vehicle $CO_2$ emissions by 2040 (compared to a reference period between 1 July 2019 to 30 June 2020).[6] These are significant steps in the right direction.



# The mismatch between supply and demand

Much emphasis is put on battery-electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) as they have zero tailpipe emissions. Only the production processes of the batteries that power them, generating the electricity used by those batteries, producing the hydrogen and non-exhaust particulate matter may cause emissions. Among those two options, BEVs are predicted to prevail over FCEVs because the hydrogen required for FCEVs is likely to be mostly allocated to other energy-intensive industries and transportation modes (like planes and ships). BEV technology is also already more mature than FCEVs, which makes it a more feasible solution in the short term. The total cost of ownership (TCO) of battery-electric trucks is also expected to be lower than for FCEVs and even ICE trucks in the long run.

So, to decarbonise road freight, we must transition to electric fleets—a journey which most logistics service providers have started. However, this transition is currently too slow. Unfortunately, moving to new electric technologies at a large scale is not yet possible today due to several limiting factors, the most prominent of which are described in the next section.

Electrifying trucking represents a huge step towards achieving sustainable road transportation. However, for BEVs to be scalable, some critical hurdles must be addressed.

The substantial upfront cost of BEVs remains a major obstacle for fleet operators. Despite the potential long-term savings in TCO, the high upfront costs and uncertainty about its operating costs complicate adoption within current operational budgets. These obstacles weigh even heavier on the small and medium-sized carriers who represent 90% of the road haulage market.[7]

Overcoming this challenge requires innovative financing solutions, government incentives, and clear economic analyses to demonstrate the cost-effectiveness of BEVs over their lifecycle. Setting up a widespread charging infrastructure is also key to BEV adoption. Installing fast-charging stations on major routes and at distribution centres is central to these efforts. Furthermore, the transition to BEVs will place additional demands on energy infrastructure, requiring investments in renewable energy, grid capacity and intelligent grid management.

6 https://climate.ec.europa.eu/eu-action/transport/road-transport-reducing-co2-emissions-vehicles/reducing-co2-emissions-heavy-duty-vehicles_en

7 https://www.klu.org/fileadmin/klu.org/media/landingpages/SMEstudy/SFC-KLU_report_v5i.pdf

**In summary, the demand is not always where the supply is. A solution, if the right mechanisms are in place is Book and Claim.**


Additionally, further technological advances in battery design are imperative to extend the driving range and improve payload capacity of BEVs.

Today, those limiting factors clearly lead to a mismatch between the supply and the demand for BEVs. Moreover, other LETS face a mismatch between supply and demand as well, albeit due to different challenges. For example, driving range is not restricted when using HVO. However, it is not available everywhere. This frequently means businesses that are keen to switch to LETS are not yet able to do so because deployment is either operationally unfeasible or inefficient.

We have engaged in numerous discussions with clients on LETS that have often been halted by feasibility concerns. On the other hand, we already have BEVs in place across specific segments of our road freight operations, for example, as part of our groupage network in France or the pre-carriage activities near Bangkok in Thailand, where the demand for LETS has not yet matured.

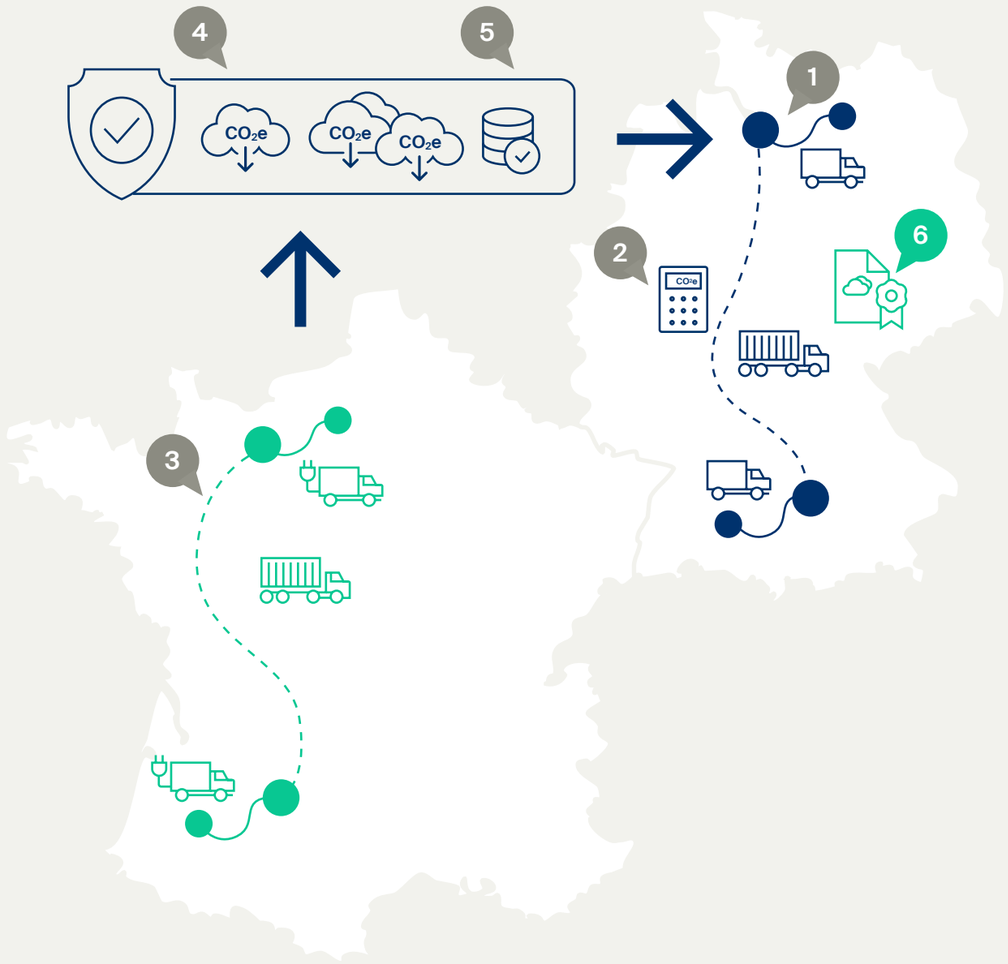
In summary, the demand is not always where the supply is. However, there is a way to overcome this mismatch. A solution that might be key to accelerate truck electrification and build the road freight industry of the future if the right mechanisms are in place—Book and Claim.



# Book and Claim in logistics—what is it?

Book and Claim is a chain-of-custody model [8] "in which the administrative record flow does not necessarily connect to the physical flow of material or product throughout the supply chain," (source: ISO 22095:2020). It means that the attributes of a product or service, like its sustainability benefits, can be uncoupled from that product or service and transferred through an accounting methodology.

# The Book and Claim concept: a new gateway to $CO_2e$ reductions




**Kuehne+Nagel's Book and Claim for BEVs:**

1. We agree on the scope of transported services to be executed with BEVs using Book and Claim.
2. We calculate the $CO_2e$ emissions of those (non-low-emission) transport services transport service using the ISO 14083 norm.
3. We ensure that BEVs somewhere in our network generate the required $CO_2e$ emission reductions.
4. Those emission reductions are booked in our registry.
5. From this registry, we allocate the emissions savings to the scoped transport services.
6. **All emission reductions are fully traceable and linked to a unique Book and Claim certificate.**

In a logistics context, it enables companies to "claim" the emission reductions of LETS when it is not possible or efficient to physically move their goods through these means (for example, where HVO is not available, grid power is insufficient, or payload capacity is too low, etc.). This works because emissions have no borders, and global warming is only concerned with the absolute quantity of $CO_2e$, not with who physically produced it. The key principle here is that it's possible to clearly define and differentiate between the entity generating the emission reduction and the entity claiming that reduction.

This helps to address today's biggest hurdle to the decarbonisation of logistics: limited access to cost-effective, low-emission solutions for businesses that are willing to initiate the change. Book and Claim helps to match the demand for more responsible transport means to the supply of these solutions that are already operationally possible, scalable, and cost-effective.

Book and Claim is recognised[9] and well-established in the electricity market. In logistics, however, it is a relatively novel solution that was initially applied for SAF in aviation. The following list summarises its history in logistics:

8 A process that tracks and documents evidence at every step.
9 https://ghgprotocol.org/scope-2-guidance

## Phase 1:
## **Focus on biofuels**

**In 2019,** Book and Claim was already identified and trialled by Kuehne+Nagel's Sea Logistics department to help customers decarbonise.

**2019**

**2020**

**In November 2020**, the Smart Freight Centre and the DHL Group proposed insetting [10] as "the missing piece in the decarbonisation puzzle", presenting it as a way to finance low-emission transport services to meet climate goals. It raised Book and Claim as a mechanism to put this into practice. [11]

**2021**

**In December 2021**, the first industry collaboration on Book and Claim was launched by the Smart Freight Centre in partnership with WEF and leading logistics companies. The aim was to develop a framework and accounting guidelines for a Book and Claim chain of custody system for transportation supply chain emission reduction actions, highlighting that the solution is a powerful tool to accelerate the decarbonisation of freight transportation. [13]

**In the summer of 2021**, the World Economic Forum (WEF) first highlighted the potential of Book and Claim as an incentive for greening the supply chain (source). Additionally, the Smart Freight Centre published guidelines for the principles of a Book and Claim chain of custody system for the air freight industry. [12]

**2021**

**From 2021 onwards**, more and more logistics service providers have introduced Book and Claim, mainly for sustainable aviation fuel (SAF) and sustainable maritime fuels (SMF). HVO also got included, but at a smaller scale.

**2021 onwards**



## Phase 2:
## **Assets included too**

**In January 2024** Kuehne+Nagel made a pioneering move and included electric trucks in the Book and Claim framework. This was developed by working together with leading French carbon consultancy Carbone 4 and by relying on Smart Freight Centre's accounting guidelines.

**2024**

**2023**

**In June 2023**, the Smart Freight Centre published accounting guidelines for decarbonisation measures through Book and Claim across all transportation modes. This was the first time that the road freight industry was formally included. [14]

Book and Claim for the logistics industry has come a long way. However, SBTi and the GHG Protocol have not yet formalised how LETS $CO_2e$ reductions achieved through Book and Claim can be accounted for in official carbon reports. SBTi announced that the "first draft of basic rules, thresholds, and guardrails for the potential use of environmental attribute certificates for abatement purposes of Scope 3 emissions will be issued by SBTi by July 2024." [15]

The final formalisation of Book and Claim's $CO_2e$ reductions accounting may take time. However, given the urgency of transport decarbonisation needed to meet the Paris Agreement's targets and to stay well below a rise of 2°C globally, the sector desperately needs more tools to accelerate change. Book and Claim, when built on sound and industry-aligned accounting rules, is one such catalyst for the decarbonisation of freight.

10 Investing in carbon reduction projects along a company's own value chain.
11 Source: dgf-carbon-insets-white-paper-smart-freight.pdf (dhl.com)
12 Smart Freight Centre
13 https://www.smartfreightcentre.org/en/about-sfc/news/smart-freight-centre-partners-with-world-economic-forum-and-leading-companies-to-develop-a-book-and-claim-chain-of-custody-system-for-transportation-supply-chain-emission-reduction-actions/)
14 Smart Freight Centre
15 https://sciencebasedtargets.org/news/statement-from-the-sbti-board-of-trustees-on-use-of-environmental-attribute-certificates-including-but-not-limited-to-voluntary-carbon-markets-for-abatement-purposes-limited-to-scope-3

# Book and Claim for BEVs—two key benefits

Kuehne+Nagel has a long experience deploying SAF and SMF through Book and Claim. Having also built HVO fuels into the solution in October 2023, the next necessary step was to introduce electric trucks. Launched in January 2024, it represents a significant stride towards decarbonised road freight solutions. This ground-breaking solution, a pioneer in its field, has undergone rigorous testing and validation in collaboration with external stakeholders.

Currently, only Kuehne+Nagel's owned trucks are included in the Book and Claim offer. This enables us to maintain strict control and transparency over the accuracy of the data used in calculations. However, there are plans to extend this solution to encompass low-emission trucks operated by our partners and support their fleet electrification efforts as well.

Book and Claim for BEVs has two important benefits:

## 1

### Businesses can contribute to speed up the electrification of road freight

Because Book and Claim helps overcome the mismatch between the supply and demand for LETS, it enables businesses wanting to reduce their emissions by investing in LETS to already do that today. Companies that offer Book and Claim need to ensure and demonstrate that their customers' investments into Book and Claim are used to accelerate change. These investments need to flow to where it makes most sense, with the goal of supporting further technology penetration. For road freight, this means making BEVs more widely available.

At Kuehne+Nagel, we use the income from Book and Claim for BEVs to drive the electrification of road freight. The more businesses utilise this solution, the more we are able to shift from ICE vehicles to other solutions. It is a win-win situation: Book and Claim equips logistics service providers with more tools to help their customers reduce supply chain emissions, and the road freight industry has a chance to catch up with its reduction trajectory.

## 2

### It can support small road carriers to finance their transition

Book and Claim can help many small and medium-sized trucking companies finance their transition to electric fleets. Those businesses make up 90% of the road carrier market.[16] For these firms, the roadblocks to truck electrification, particularly the financial ones, are even harder to overcome. Bigger actors, like Kuehne+Nagel, could use Book and Claim to connect those SMEs with customer demand, giving an unprecedented incentive to transition sooner than without this tool.

However, for the benefits of Book and Claim to materialise, two boxes need to be ticked. Firstly, as already stressed, Book and Claim's scope, rules and constraints need to be transparent and as close as possible to the physical reality. Secondly, Book and Claim needs to be recognised by the wider community of stakeholders and institutions, like SBTi, shippers and end-consumers, as a tool to report emission reductions in official carbon reports. Furthermore—and crucially—it should be differentiated from other market-based solutions, such as carbon offsetting. In the next sections, we will dive deeper into those elements.

16 https://www.klu.org/fileadmin/klu.org/media/landingpages/SMEstudy/SFC-KLU_report_v5i.pdf

# A robust solution close to the physical reality

Book and Claim differs from offsetting in that investments in $CO_2e$ reduction certificates are bound to specific carbon reduction projects in the road transport sector. Book and Claim also has a high level of traceability and transparency, a facet we have prioritised at Kuehne+Nagel whilst developing our methodology. It follows that Book and Claim relies on established carbon account principles. For its $CO_2e$ baseline calculation, we apply ISO 14083 and related standards (such as the GHG protocol).


The methodology behind BEV inclusion in Book and Claim was aided by our experience in similar solutions for both sea and air logistics. Furthermore, Kuehne+Nagel collaborated with external partners to rigorously assess and validate the solution's philosophy, as well as its scientific and methodological reliability. Moreover, the Book and Claim methodology has been audited by Müller bbm cert. Lastly, we use the Market Based Measures Accounting Framework (MBM FW) as a guiding source, while sometimes going beyond those guidelines. We also participate in the Smart Freight Centre's Book and Claim Community to ensure the highest rigour and industry alignment.

On top of the programme's high standards, Kuehne+Nagel follows self-imposed principles to ensure the solution's robustness. Despite allowing a separation between the physical reality of LETS and the environmental attributes of that service, we strive to ensure our methodology has a strong physical coherence. This can be seen in our decision to place restrictions on the applications of our Book and Claim solution, which will be outlined below. Furthermore, we also advise our customers on how to use the emissions reduction certificates they receive.

John De Dryver,
Global Road Logistics
Sustainability Specialist
at Kuehne+Nagel

> **"Book and Claim: It can support small road carriers to finance their transition of road freight."**
>
> John De Dryver

**Conditions for a robust solution:**

# Reduction limit

A customer cannot purchase more LETS emissions profiles (and corresponding HVO volumes or BEV t-km) than the emissions generated by the operations provided to them by Kuehne+Nagel. Over-compensation is not permitted[17]

# Modal constraints

Kuehne+Nagel's Book and Claim solution is segregated by mode of transport. This ensures that investments into road freight LETS enable the decarbonisation of road freight.

17 Allocation of more LETS services (and underlying solution volume) than what would be physically possible to use in order to reach 100% emissions savings. In reality, LETS currently are not able to reach 100% compared to diesel.

18 According to ISO 13600, an energy carrier is either a substance or a phenomenon that can be used to produce mechanical work or heat or to operate chemical or physical processes. In a transportation context, it refers to biofuels or electricity stored in batteries.

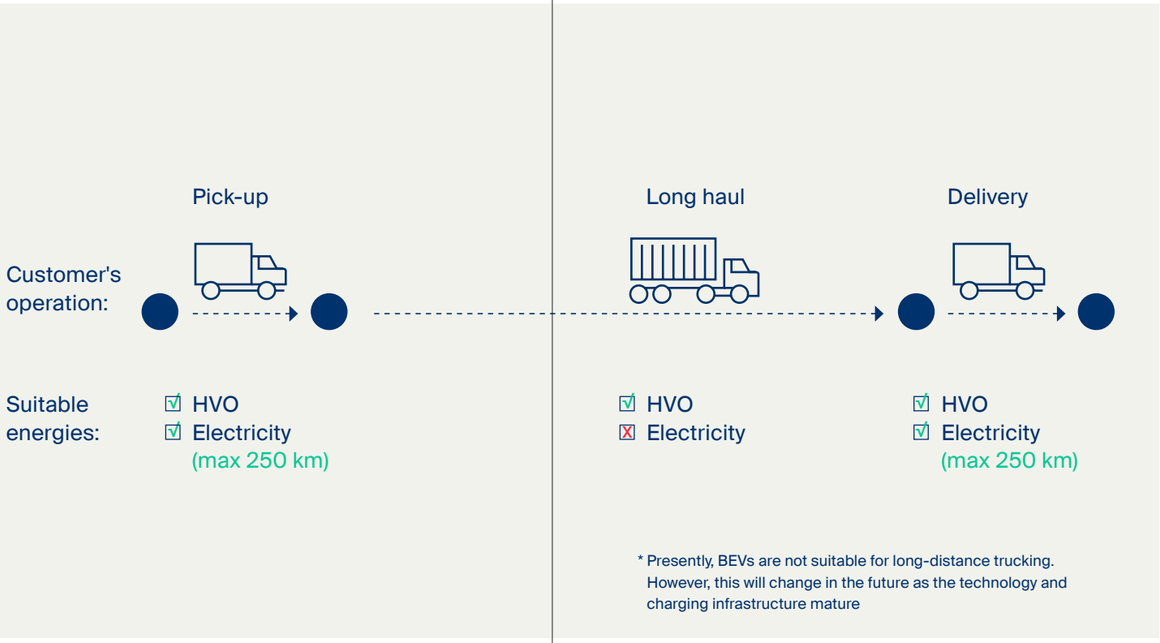
# Energy vector constraint

Emission reduction certificates sold to a given customer must correspond to a situation that is realistic within that customer's supply chain. Consequently, certificates for a given energy carrier[18] cannot be associated with journeys for which the energy carrier in question is not suitable.

Today, Kuehne+Nagel observes that HVO is suitable in all situations in which diesel is currently used. However, BEVs are still limited by several factors. An example here is driving range, which currently rests around 250km. Charging time is another consideration—currently, only overnight charging is available. To reflect this physical constraint in its solution, Kuehne+Nagel has decided to limit the Book and Claim for BEVs to pre- and post-carriage operations and distances under 250km. This decision stems from practical experience.

With the energy vector constraint, Kuehne+Nagel goes beyond the MBM FW.

### Energy vector constraint




* Presently, BEVs are not suitable for long-distance trucking. However, this will change in the future as the technology and charging infrastructure mature



# Geographical constraints

Although the Smart Freight Centre imposes no geographical constraints, Kuehne+Nagel has decided to restrict the sale of Book and Claim to regions[19] where the physical solution is implemented. The aim is to stay as close to reality as possible. Although trucks offer great flexibility on the roads, they are rarely used for long-distance, intercontinental connections.

A LETS' **emissions profile** reflects the GHG emission characteristics associated with transport activities (expressed in tonne-kilometre) that are executed by burning a litre of biofuel or consuming a kilowatt (kWh) of electricity to charge electric vehicles. It outlines the sources of emissions and the respective magnitudes of GHG emitted to produce the LETS.

19 "Region" is defined as per Kuehne+Nagel's regional set up: North America, South and Central America, Europe, Middle East – Africa and Asia Pacific.

# Vintage constraint

A vintage constraint removes ambiguity between when the energy vector is produced, when it is procured, when the LETS is generated, and when a certificate can be sold to a client. In other words, Book and Claim certificates should be used as close as possible to the time LETS generation occured. For HVO, Kuehne+Nagel has 12 months between the moment the LETS is generated and the moment it is booked in Kuehne+Nagel's registry. The goal is keeping the timeframe as short as possible while still having a degree of flexibility. Furthermore, Kuehne+Nagel advises its clients to report the related $CO_2e$ reductions in the same year of the booking. The maximum time limit is up to two full calendar years.

For BEVs, Kuehne+Nagel imposes more constraints than it does for HVO because electricity is not an easy-to-store energy vector. To calculate the emissions profile of BEV LETS, Kuehne+Nagel uses the grid average electricity emissions factor of the country where the truck was charged.[20] This data has a vintage disparity in itself because the values used to determine this emission factor are not based on real-time data. The electricity mix of the year preceding the LETS generation is usually used.

The figure on the right illustrates this vintage constraint.

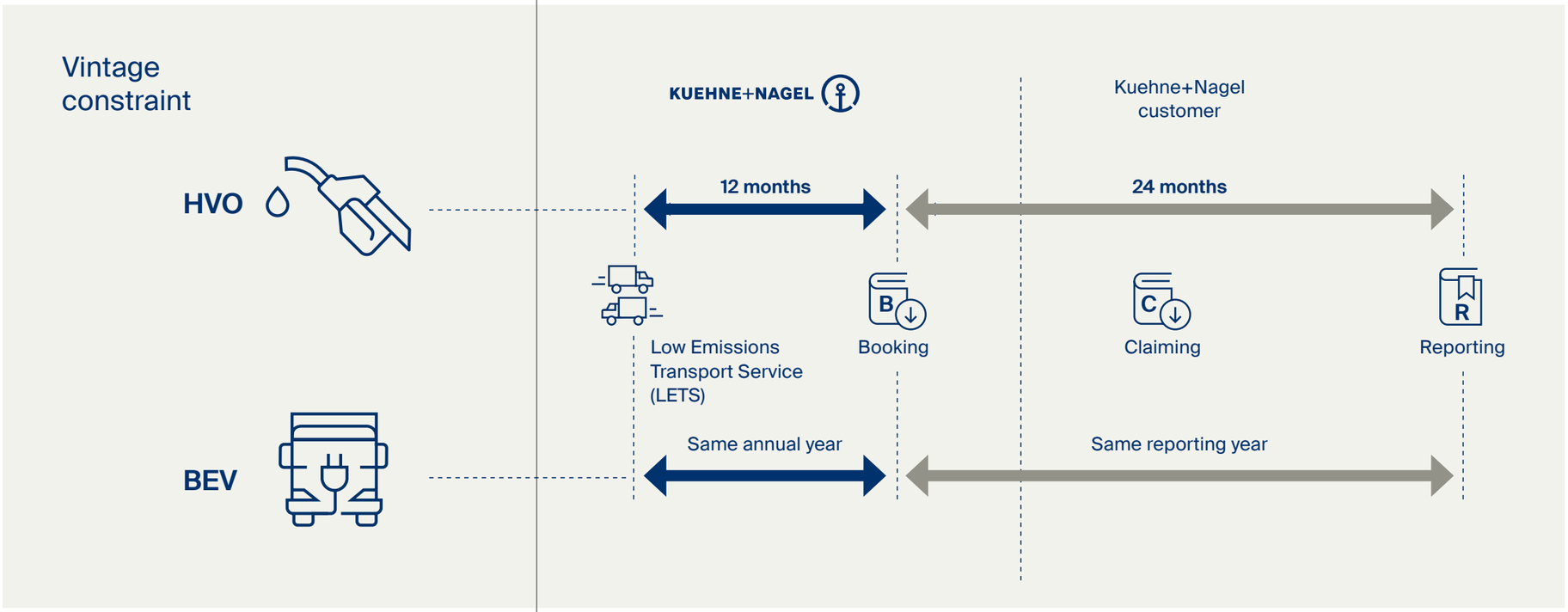
20 This approach is in line with ISO 14083. Kuehne+Nagel will always report at least location-based values in line with ISO 14083.



Kuehne+Nagel will ensure that LETS generation and booking happen within the same annual calendar. Kuehne+Nagel also advises its clients to report the related $CO_2e$ reductions in the same reporting year. This way, the disparity between the electricity generation that determines the emission factor, the LETS generation, and the client's operations is minimised.

# Issuance of certificates

Certificates are only issued after shipments have taken place, when the client's routing and load data are available. That's when the ISO 14083-compliant calculation is executed to determine the emissions associated with the shipments. Subsequently, the required LETS can be calculated. This approach ensures the accuracy of LETS allocation, as the data used for the calculation is not based on assumptions or hypothetical models but measured in real-life situations.



# Avoiding incorrect double counting

Double counting is defined as two or more reporting companies claiming ownership of the same GHG emission reductions or emissions profile. [21]

The GHG protocol distinguishes between correct and incorrect double counting. Correct double counting occurs when one organisation's direct emissions [22] are counted as the indirect emissions of another organisation. [23]

In its MBM FW, the Smart Freight Centre explains extensively the different scenarios that run the risks of incorrect double counting and how to address them:

**Double issuance:**
When Kuehne+Nagel purchases low-emission solutions (i.e., biofuel), we make sure to also purchase and gain ownership of that solution's emissions profile. This ensures that the environmental benefits of the LETS enabled by that solution cannot be claimed by another party (i.e., a business whose goods have been physically moved by the truck driving on biofuel) and that Kuehne+Nagel can avoid incorrect double counting. [24]

**Double use:**
Kuehne+Nagel's audited internal registry ensures that all customer sales are effectively retrieved from the available Book and Claim stock. Moreover, Kuehne+Nagel uses an accounting method that allocates the emission reductions of each unit of its LETS by numbering and uniquely identifying them. This is also visible on the certificates. The figure below shows the concept of "From Liter No" and "To Liter No" and how it is displayed on the certificates in the case of HVO. In this example, all the unique litres units from 11 to 1254 have been allocated to the customer which makes a total of 1243 litres of HVO.

**HVO ID lot description printed on KN's certificates**

| ID Lot | GHG Reduction % | Emission factor | Feedstock | From Liter No | To Liter No |
|---|---|---|---|---|---|
| ISCC-POS-DExxx-xxxxxxx-R-xxxxx | 90 | 0.13 g CO2e/MJ | UCO | 11 | 1254 |

**Double claiming:**
To avoid misinterpretations of GHG emissions when reporting, and to reduce the potential for incorrect double counting, Kuehne+Nagel follows Smart Freight Centre's guidelines on information declaration. [25] When Kuehne+Nagel books the GHG emissions profile of LETS and sells the emissions profile to its customer, it will report GHG emission intensity information differently in its declaration to external stakeholders and in its declaration to the customer.

For external declarations, the annual sustainability report will reflect the overall average transport emission intensity resulting from the transport activities of Kuehne+Nagel. The report distinguishes between transport activities associated with LETS and transport activities not associated with LETS (i.e., without emission reductions). Clients of Kuehne+Nagel who do not use Book and Claim must rely on the emission intensity for non-LETS activities to accurately reflect the emission intensity of their transport activities with Kuehne+Nagel, avoiding inappropriate double counting.

For declarations to customers, Kuehne+Nagel will only allocate LETS emission profiles to clients participating in the Book and Claim programme. For these customers, the emission intensity resulting from their transport with Kuehne+Nagel will be lower than for a customer that didn't participate in Book and Claim, even when the goods of the latter have been physically moved using LETS (their emission intensity will be based on diesel operations).

21 World Resources Institute and World Business Council for Sustainable Development. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, 2004.
22 The "emitter's emissions" i.e., emissions from the transport activity conducted by the carrier (in its scope 1).
23 The "supply chain" emissions i.e., the indirect emissions of the organisation for which the transport activity was conducted (in its scope 3).
24 Ref. p.50, part 11 of the SFC guidelines.
25 Ref. p.55, part 11 of the SFC guidelines.

# The missing piece: Book and Claim in carbon reporting

At Kuehne+Nagel, we are proud of the robust accounting methodology we have built to launch the first Book and Claim solution for BEVs. It has passed the scrutiny of auditors with flying colours and has been met with great interest from customers and road carriers—a clear proof of its effectiveness to accelerate the electrification of road freight. However, we are convinced that a second box needs to be ticked for the solution to live up to its potential.

In short, Book and Claim needs to be rightly formalised and institutionalised to truly move the needle in the decarbonisation of the logistics industry. In doing so, it is essential to distinguish Book and Claim from offsetting. As the world's leading bodies of corporate climate reporting and targets, GHG protocol and SBTi play an essential role in that.

**GHG Protocol** establishes comprehensive, globally standardised frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. Building on a 20-year partnership between World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), GHG Protocol works with governments, industry associations, NGOs, businesses and other organisations.

The **Science Based Targets initiative (SBTi)** is a collaborative effort aimed at helping companies set ambitious greenhouse gas (GHG) emissions reduction targets aligned with climate science. This world-leading arbiter of corporate climate targets enhances credibility and accountability by encouraging companies to disclose their targets and progress publicly, demonstrating a transparent commitment to addressing climate change. The SBTi is crucial in mobilising corporate action on climate change, contributing significantly to global efforts to mitigate the effects of climate change and build a more sustainable future.



GHG protocol is already evaluating the inclusion of market-based solutions such as Book and Claim for scope 3 emission reductions.[26] On top, in April 2024, SBTi announced its intention to allow companies to use such solutions to report reductions in Scope 3 emissions.[27] At the time of writing, SBTi announced the publication of a draft framework for that in July 2024, already indicating that carbon credits from offsetting would also be included.
This sparked lots of criticism due to the controversies that surround offsetting practices. Allowing the use of offsetting certificates to reduce emissions in official carbon reports—especially without stringent guidelines and limits on how they are applied—could dramatically reduce the potential of Book and Claim to help the transport sector accelerate its decarbonisation efforts.

It sends a clear signal that high-quality Book and Claim solutions must be differentiated from offsetting practices, and should carry more weight in carbon reports.

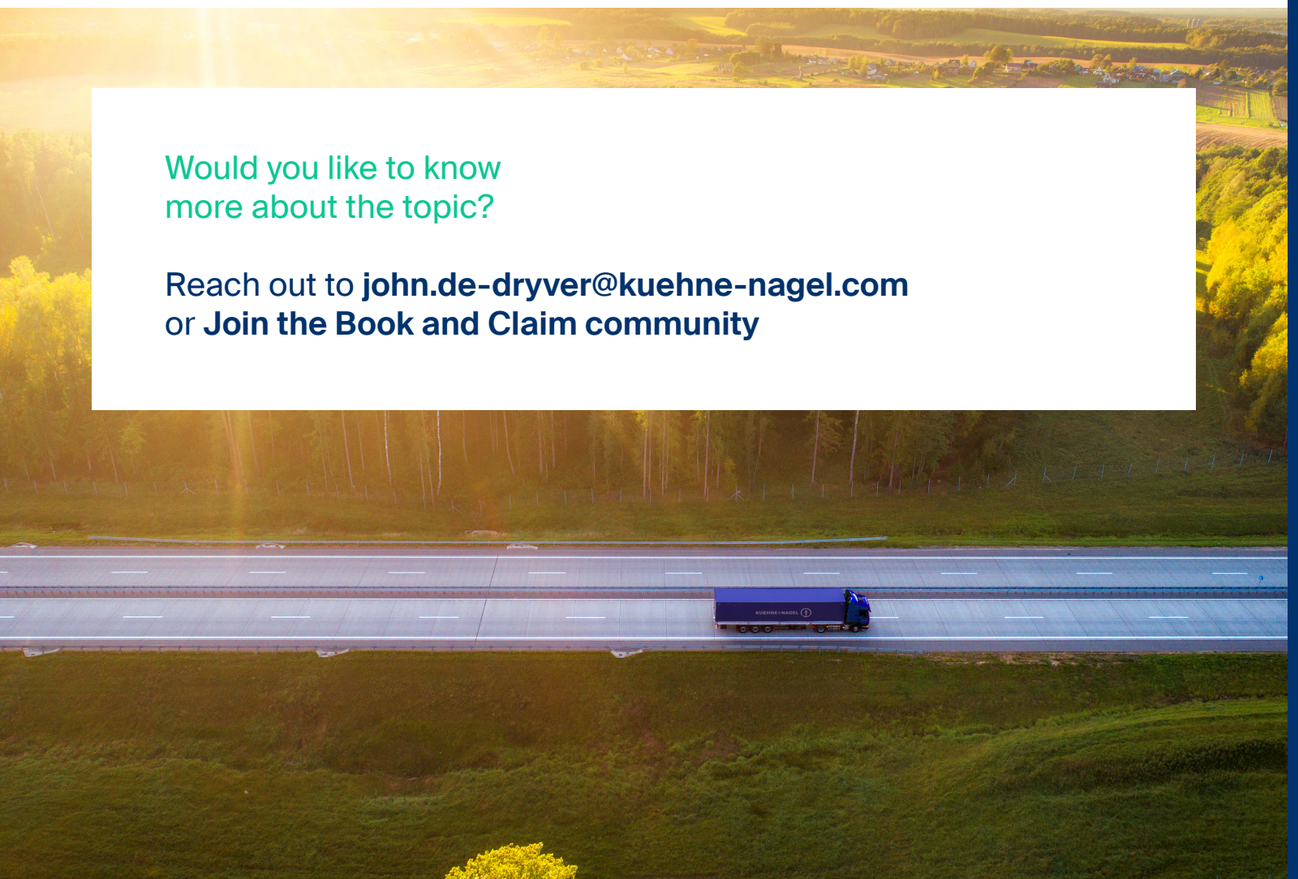
In many instances, offsetting certificates are easier to generate in larger quantities and at a lower price. However, the value they bring can't be put on the same level as the positive change that Book and Claim can engender for the transport sector. More precisely, Book and Claim—especially when respecting rigid rules to keep the solutions they rely on close to physical reality—brings tangible emissions reductions and pours investments into projects that can further accelerate decarbonisation efforts within the same value chain.

Lastly, numerous critics challenge the robustness and efficacy of offsetting solutions, thereby jeopardising the credibility of emerging systems like Book and Claim. Institutions such as the GHG protocol and SBTi have a unique opportunity to support transport decarbonisation. Recognising market-based solutions like Book and Claim should be applauded and prioritising positive impact is paramount. It is of utmost importance that this is done properly, especially as the world just recorded its hottest year on record in 2023.

26 Greenhouse gas protocol. Market-based and Project Accounting Approaches: Where We Are Now
27 Statement from the SBTi Board of Trustees on use of environmental attribute certificates, including but not limited to voluntary carbon markets, for abatement purposes limited to scope 3 - Science Based Targets

# Conclusion

As we navigate the complexities of decarbonising road freight, one thing becomes abundantly clear—the need for innovative solutions like Book and Claim has never been greater. In the face of unprecedented climate challenges, we need to leverage pragmatic tools that offer a pathway to reducing emissions within the road transport sector and mitigate our impact on the environment. The time for action is now, and the recognition of Book and Claim is a crucial step towards realising our collective ambition of a carbon-neutral future. Let us not underestimate the power of this simple yet transformative concept. Instead, let us embrace it wholeheartedly and pave the way for an electric road freight future.



Would you like to know more about the topic?

Reach out to **john.de-dryver@kuehne-nagel.com** or **Join the Book and Claim community**



# Glossary

| | |
|---|---|
| BEV | Battery-electric vehicles |
| CAPEX | Capital expenditure |
| FCEV | Fuel-cell electric vehicles |
| GHG | Greenhouse gases |
| GLEC | Global Logistics Emissions Council |
| HVO | Hydrotreated vegetable oil |
| ICE | Internal Combustion Engine |
| LETS | Low-Emission Transport Service |
| MBM FW | Market Based Measures Framework for Logistics Emissions Accounting and Reporting |
| SAF | Sustainable Aviation Fuel |
| SBTi | Science-based targets initiative |
| SMF | Sustainable marine fuel |
| TCO | Total cost of ownership |