

KLM													
Sector	Revenue	Emissions	Pledge	Transparency	Integrity								
Transport aviation	€ 10.7 bn (2022)	11.3 MtCO ₂ e (2022)	Committed to the well below 2-degree pathway of SBTi.	Moderate	Low								
1. Tracking & disclosure of emissions				Transparency & Integrity									
11.3 MtCO ₂ e in 2022		Subsidiaries are covered.		<table border="1"> <caption>Emissions by Source</caption> <thead> <tr> <th>Source</th> <th>Emissions (MtCO₂e)</th> </tr> </thead> <tbody> <tr> <td>S1</td> <td>9,10</td> </tr> <tr> <td>S2</td> <td>0,03</td> </tr> <tr> <td>S3</td> <td>2,29</td> </tr> </tbody> </table>		Source	Emissions (MtCO ₂ e)	S1	9,10	S2	0,03	S3	2,29
Source	Emissions (MtCO ₂ e)												
S1	9,10												
S2	0,03												
S3	2,29												
Major emissions sources	The KLM Group reports that 92 percent of its emissions come from the burning of aviation fuels during flights (S1) and the upstream production of these fuels (S3).												
Disclosure	<ul style="list-style-type: none"> - Improved disclosure of emissions in the 2019 base year. - S1, S2 (location based) & selected S3 categories disclosed. - Non-CO₂ climate forcers acknowledged but not disclosed. - No annual and actual breakdown for S3 disclosed. KLM chose to report 2019 data due to the impact of COVID. 												
2. Setting emission reduction targets				Transparency	Integrity								
Headline target or pledge	Committed to the well below 2-degree pathway of SBTi		High	Low									
Short- & medium-term targets (up to 2030)	Several interim (2030) targets identified												
Scope coverage	1 2 3	<ul style="list-style-type: none"> • S1 and selection of S3: <ul style="list-style-type: none"> - Absolute reduction target (12%) - Intensity reduction target (30%) - Increase share of SAF (10%) • S2: <ul style="list-style-type: none"> - Carbon-neutral ground operations 	High	Low									
Own emission reductions (compared to full value chain in 2019)	- 10% by 2030												
Long-term vision (beyond 2030)	No separate emissions reduction commitment communicated besides the net-zero pledge		Low	?									
Scope coverage	1 2 3												
Own emission reductions (compared to full value chain in 2019)	?	by 2050											
3. Reducing own emissions				Transparency	Integrity								
Emissions reduction measures	Several measures for its flight and ground operations identified. Also working on measures beyond its own operations. The measures mainly focus on reducing emissions from aviation fuels (S1 and S3).		Moderate	Low									
Renewable electricity procurement	Whilst KLM mentions that it only uses renewable electricity, the company provides a moderate level of detail on the pursued renewable energy constructs.		Moderate	?									
4. Climate contributions & offsetting				Transparency	Integrity								
Responsibility for unabated emissions	Offsetting claims with contentious impact and coverage		Poor	Low									
Climate contributions	- No climate contributions identified.		N/A	Low									
Offsetting claims today	- KLM offers customers the opportunity to offset emissions.		Moderate	Low									
Offsetting plans for the future	The 2030 reduction targets are to be achieved without offsetting. Unclear whether and to what extent KLM intends to rely on offsetting for its net-zero 2050 target.		Low	?									

RATINGS **Transparency** refers to the disclosure of information. **Integrity** refers to the quality and credibility of the approach. **Overall** Average of sections 1-4 ■ High ■ Reasonable ■ Moderate ■ Low ■ Very Low; **Sections 1-4** Average of criteria in each section ■ ■ ■ ■ ■; **Rating criteria** See methodology for rating criteria ■ ■ ■ ■ ■.

Source: SEO Amsterdam Economics' interpretation of identified public documentation from KLM

KLM

KLM Royal Dutch Airlines is an airline company headquartered in the Netherlands (Amstelveen). The company is part of the Air France-KLM Group and partner in the SkyTeam airline alliance. In 2022, the company published its first Climate Action Plan. In the 2023 update of that report, it renewed its ambitions, further defined its pathway to 2030, did a first screening of S3 emissions in 2019 and described its efforts to reduce GHG emissions (2022a). The KLM Group mentions that it adheres to the industry's IATA commitment to be net zero in 2050 and supports the initiative of the ICAO to set a long-term goal to be in line with a 1.5°C pathway. The company has outlined some interim targets for 2030 and mentions that it is working on shaping its outlook towards 2050.

About the tracking and disclosure of the GHG emissions of the KLM Group

- In 2022, the total direct GHG emissions (S1) from the KLM Group are estimated at 9.1 MtonCO₂e (2022b, p.259). This first category covers emissions from both flight (mainly conventional aviation fuel) and ground operations. The indirect GHG emissions (S2) from the KLM Group for 2022 are estimated at 0.03 MtonCO₂e (2022b, p.259) using a location-based approach. This scope covers emissions from the generation of purchased electricity. Lastly, the S3 emissions from the KLM Group are estimated at 2.3 MtonCO₂e (2022b, p.259). It is important to note that these estimations only contain upstream categories, namely upstream emissions from fuel production and upstream emissions from sustainable aviation fuel. We did not find any mention of downstream categories in this report. The total amount of GHG emissions reported by KLM for 2022 therefore is 11.3 MtonCO₂e. This is the total amount after correcting for SAF use.
- In its 2023 update of the Climate Action Plan, the KLM Group mentions that it has taken steps to enhance its methodology and data collection process for S3 estimations. It reports that its S3 emissions for 2019 were approximately 27 percent (4.5 MtonCO₂e) of the total emissions. In that year, the total GHG footprint was estimated at 16.6 MtonCO₂e (2022a, p.15). The company does not disclose a full breakdown of the individual S3 categories (only a few are mentioned in the text), which limits the possibility of tracking the GHG emissions over time. However, it is important to note that the KLM Group has made progress in reporting its 2019 S3 emissions since the previous edition of this monitor. The targets that the KLM Group has set use a 2019 base year. Therefore, it is considered a *good practice* that the company has taken steps to enhance its insights in the GHG emissions for that year.
- Lastly, about the scope: non-CO₂ climate forcers are acknowledged but currently not disclosed (2022a, p.9).

About the climate objectives of the KLM Group

- The KLM Group implicitly states it "is committed" (2022a, p.33) to achieve net zero by 2050. Moreover, KLM is "exploring the net zero pathway of the SBTi" to further validate its own goal for 2050 (2022a, p.33). Meanwhile the company is working on several initiatives to shape its outlook towards 2050. Whilst KLM wants to achieve net zero, at this moment the company does not specify the actual long-term absolute reduction targets, or whether and to what extent it may intend to rely on neutralisation measures to bring its GHG emissions to net zero by 2050. The Air France-KLM Group (2022b, p.7) mentions that it aims to reach net-zero emissions by using all levers, notably fleet modernization (KLM, 2021) and the use of sustainable aviation fuels. Also in this report the extent of offsetting in 2050 remains unclear. IATA mentions that its strategy to net zero will rely (for 19 percent) on offsetting and carbon capture technologies (IATA, 2023). It is unclear whether the KLM Group is also committed to this strategy.

- The KLM Group has established multiple interim targets, including an intensity-based target and an absolute target. Specifically, the KLM Group has committed to reducing well-to-wake (from extraction to combustion) S1 and S3 jet fuel CO₂ emissions by 30 percent per Revenue Tonne Kilometre ¹(hereafter: RTK, intensity target, base year 2019) and the group has set an absolute reduction target of 12 percent by 2030 compared to 2019 (KLM, 2022, p. 16-17). It is worth noting that these targets exclusively cover the jet fuel emissions generated by KLM's flight operations (92 percent of the total carbon footprint), that offsetting is not counted towards the overall CO₂ reduction, and that the targets do not include non-CO₂ effects (2022a, p.17). The KLM Group mentions that an overall S3 target will be defined and published in its 2024 Climate Action Plan. Lastly, the group reports that it is aiming for zero CO₂ emissions from ground operations (2022a, p.18). In 2019, the KLM Group has set a target of net-zero carbon emissions for all ground operations by 2030 (2022a, p.27).

About reducing the GHG emissions of the KLM Group

In its Climate Action Plan, we identified several efforts to reduce emissions:

- For its flight operations (2022a, p.7):
 - a. Fleet renewal and radical innovation: the KLM Group mentions it has a fleet renewal plan in place until 2040, which will contribute 12 percent to KLM's 2030 goal of lowering its RTK by 30 percent (2022a, p.7).
 - b. Flight operational efficiency: the KLM Group states that increasing the operational efficiency will reduce its intensity target by 2-4 percent in 2030. Other operational efficiency gains (such as route optimization, weight reduction and redesigning the EU airspace) could reduce this target by a further 4 percent in total. We note that this last efficiency gain lies outside of the decision realm of the individual airlines (EASA, 2023).
 - c. According to the KLM Group, an increase in the share of sustainable aviation fuels (hereafter: SAF) would contribute a further 8 percent to its 2030 intensity target.
- For its ground operations:
 - d. The KLM Group is "trailing electric alternatives to traditional ground power units" (KLM, 2022a, p.27).
- Beyond the focus of its own actions:
 - e. The measures also include working with its suppliers and customers, with measures including 'sustainable trucking', 'sustainable catering', and 'sustainable clothing/uniforms' (2022a, p.30).

About the use and procurement of renewable energy

According to the Climate Action Plan 2023, the KLM Group took a major step in 2019 by switching to green electricity. We did, however, not identify extensive details on its pursued renewable energy supply constructs. For greater transparency one could think of mentioning the location where the green energy is being generated, the type of renewable energy construct or PPA and the volume of electricity procured through each construct (NCI 2023, paragraph 3.3). We did identify, however, that the volume of renewable electricity is based on the purchase of EU Certificates of Origin coming from wind energy (KLM, 2022b, p.267)

About the climate contributions and offsetting of the KLM Group

- Concerning offsetting, the KLM Group currently offers "individual and corporate customers the opportunity to reduce or (partially) offset the CO₂ emission from their flight on a voluntary basis, by purchasing additional SAF or carbon credits" (2022a, p.38).² These contributions are invested directly into projects, including reforestation

¹ We note that this indicator might have some downsides - for example, if the KLM Group increases its prices (at the same activity level), its reduction target is de facto less restrictive.

² KLM states that it is active on several fronts. It charges passengers an additional fee for blending 1 percent sustainable fuel, which costs passengers a few euros to several tens of euros per ticket. The airline has also established a fund that enables travellers to voluntarily donate for the use of sustainable fuel. However, the interest in this initiative is low: only 2 percent of passengers participate (FD, 2023).

projects in Panama, Uganda or Colombia that are certified, in this case with the Gold Standard for the Global Goals label. However, as mentioned above (see the overview table), these compensations do not contribute to reaching KLM's goals for 2030 (they do not contribute to reaching the SBTi target). For previous targets, these offsets were counted towards KLM's CO₂ reductions. Lastly, it is unclear whether offsetting will be used to reach the 2050 target.

- The implementation of an internal CO₂ pricing system. The internal price was € 60 per tonne CO₂ in 2022, and € 80 per tonne CO₂ in 2023. The internal price is currently only used for fleet and fleet-related investments decision-making and will be evaluated this year (2023).
- Other measures, such as competing in the Sustainable Flight Challenge, substituting flight for rail for destinations within 700 km of Amsterdam, in particular Brussels, Paris, London, Frankfurt, Duesseldorf and Berlin, as part of the 'Actieagenda Trein en Luchtvaart' initiated by the Dutch government (Rijksoverheid 2020), engagement with industry stakeholders ("Influencing the industry at a European level").

Sources:

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KLM

Low

Integrity assessment for short- and medium-term target(s) towards 2030

What do the short- and medium-term targets actually mean?

What are the targets for the short to medium term?

S1 and upstream S3 emissions:

- Absolute reduction of 12 percent by 2030 (2019 baseline)
- Intensity reduction of 12 percent by 2030 (2019 baseline)

S2 carbon-neutral ground operations by 2030

10 percent of fuel uplifted worldwide must be SAF by 2030

How do these targets equate to emission reductions across the value chain (compared to a 2019 baseline)?

In the previous edition of this monitor, NCI estimated that the interim target of the KLM Group for 2030 likely equals a reduction in CO₂ emissions of 10 percent across all scopes in the period of 2019 to 2030. Given that the absolute 12 percent reduction target covers 92 percent of emissions, and given that the S2 targets only impact 0.03 MtonCO₂e we see no reason to deviate from this previous estimation.

Do these targets cover both the short term (within 5 years) and medium term (up to 2030)?

KLM does not commit to any earlier interim targets after 2023 within a five-year horizon.

Do these emission reduction commitments align with a 1.5°C trajectory for the sector according to available literature?

Global benchmarks:

The IPCC's Sixth Assessment Report stresses that global CO₂ emissions must be reduced by net 48 percent by 2030, compared to 2019 levels, to stand a reasonable chance of limiting global warming to 1.5°C (IPCC, 2022). In the same period, global GHG emissions must decrease by 43 percent and global methane emissions by 34 percent. The Sixth Assessment Report thus reaffirms the findings of the IPCC's Special Report on 1.5°C (IPCC, 2018). Based on the scientific insights from the latter report, the Hague District Court ordered Shell to reduce CO₂ emissions across all emission scopes by net 45 percent by 2030 below a 2019 baseline (The Hague District Court, 2021). The KLM Group does not meet these global benchmarks, but operates in a particularly hard-to-abate sector.

Sector-level benchmarks:

The 10 percent reduction across its value chain was based on KLM's absolute target of a 12% reduction of S1 and upstream S3 emissions. Notably, this absolute emission reduction falls short of the sector-wide absolute emission reduction benchmarks. For instance, the IEA's Net Zero by 2050 report states that CO₂ emissions from aviation should decrease 28% in total by 2030 from 2019 levels (IEA, 2021, p. 199).

KLM's intensity target has been evaluated by SBTi and rated as consistent with keeping global warming well below 2°C. It is worth mentioning that SBTi's "well below 2°C" rating is based on the IEA's Energy Technology Perspectives (ETP) report, which highlights a 6 percent reduction in CO₂ emissions from aviation from 2019 to 2030 (IEA, 2020).

Low Integrity assessment for long-term target(s) (post-2030)**What do the long-term targets actually mean?****What are the targets for the long term beyond 2030?**

The Air-France KLM Group wants to be net zero by 2050, but does not present any deep emission reduction targets in addition to this headline/pledge, leaving room for contentious neutralisation measures to achieve this target (see also IATA 2023). We also did not identify any long-term targets for the KLM Group.

How do these targets equate to emission reductions across the value chain (compared to a 2019 baseline)?

No assessment possible

Do these emission reduction commitments align with a 1.5°C trajectory for the sector according to available literature?**Global and sector-level benchmarks:**

The company neither explains why it considers the 2050 net-zero CO₂ target aligned with the Paris Agreement's temperature limit of 1.5°C, nor does it specify to which degree the target relies on offsetting and carbon dioxide removal. However, IATA states that it will use offsetting as a measure to reach net zero in 2050 (IATA, 2023). The IEA's Net Zero by 2050 report shows that CO₂ emissions from aviation should decrease by 80% between 2019 and 2050 (IEA, 2021, p.199). The CAT's fair share pathway shows that the global aviation sector as a whole needs to reduce CO₂ emissions by around 90% between 2019 and 2050 to be in line with global 1.5°C-aligned scenarios and reach zero CO₂ emissions shortly after 2060 (CAT, 2022). Furthermore, the ICCT has found that cumulative emissions from international aviation will break the sector's 1.5°C carbon budget even under scenarios that assume widespread investments in reduction technologies and a peak in fossil jet fuel by 2025. The ICCT's most ambitious scenario shows a reduction of 94% of the aviation sector's CO₂ emissions between 2019 and 2050 and is compatible with a 1.75°C target (Graver et al., 2022).
