

# Transition Finance | Case Study 5: Japan Airlines Co., Ltd.

## Overview

### ■ Corporate Profile

|          |   |
|----------|---|
| Industry | Aviation  |
| Location | Japan   |
| Business | Japan Airlines Co., Ltd. operates international and domestic passenger services, cargo and mail services, and other businesses. |

### ■ Bond Outline

|                    |   |                           |
|--------------------|---|---------------------------|
| Issue date         | March 1st, 2022   | Later than April, 2022    |
| Issuance amount    | 10 billion yen  | 10 billion yen –(planned) |
| Term to maturity   | 5 years   | 10 years (planned)        |
| Structuring Agency | Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.<br>Daiwa Securities Co. Ltd. |                           |
| Evaluation Agency  | Sustainalytics  |                           |

### 3rd Party Evaluation

- Governance, strategy, decarbonization goals, and intentions for reporting transition progress at Japan Airlines Co., Ltd.(JAL) are in overall conformity with the Basic Guidelines.
- It has set a target for sustainable aviation fuel (SAF) of 10% of total fuel load by FY2030, which is one of the key measures for achieving net zero CO2 emissions. This has received a positive evaluation.
- In addition, JAL has a strong governance structure in place to execute its climate transition strategy, and has indicated its intention to provide transparent disclosure of its related investment plans and climate-related impacts.

### Candidate for Use of Proceeds

#### Use of Proceeds

- Upgrading to fuel-efficient aircraft (Introducing latest aircraft such as Airbus A350)

#### Basis for decision

- Higher fuel efficiency than conventional aircraft
- Credibility of net zero strategy
  - ✓ Target: Net zero CO2 emissions by FY2050
  - ✓ Target: 10% SAF by FY 2030
  - ✓ Activities: Operation of flights with domestically produced SAF, investment in SAF manufacturer
  - ✓ Activities: Innovating operations to reduce CO<sub>2</sub> emissions

#### Expected effect on CO<sub>2</sub> reduction

- - 15-25%
- Increasing with growing use of SAF (SAF can be used without additional structural modification of fuselage)

#### Transition eligibility

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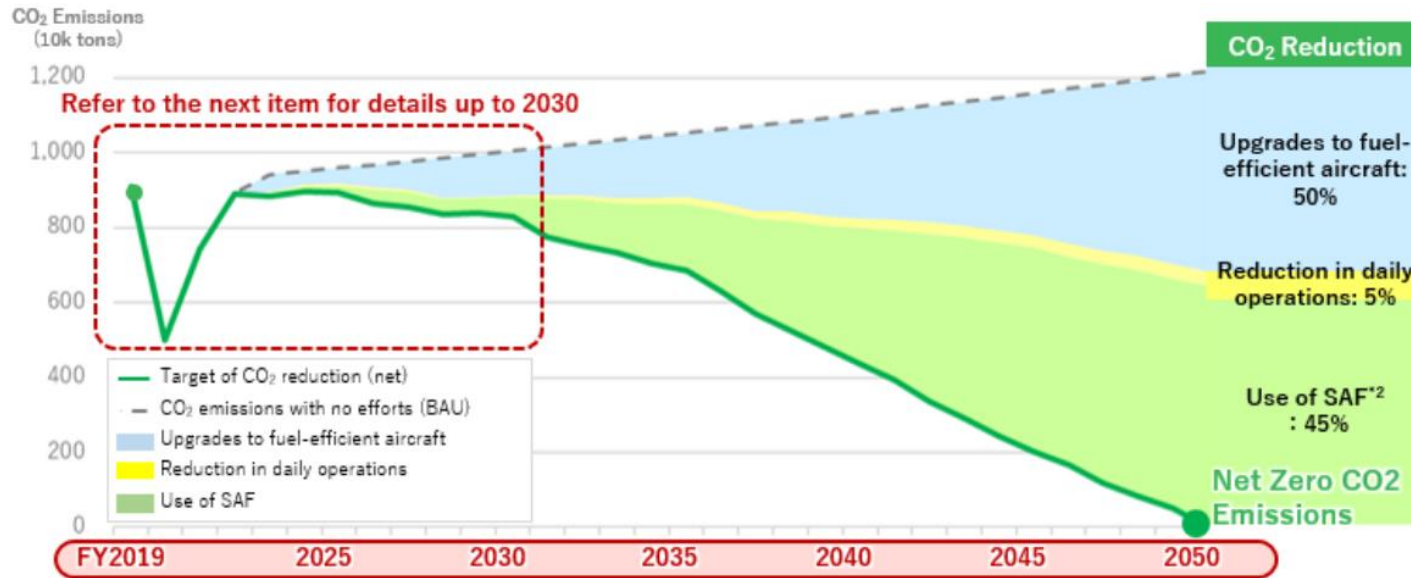
## Alignment with the Four Elements in Basic Guidelines on Climate Transition Finance

|   |  |   |  |
|---|--|---|--|
| <p>Element 1<br/>(Transition Strategy and Governance)</p> | <ul style="list-style-type: none"> <li>Transition strategy: JAL has a transition strategy to achieve net zero CO2 emissions by FY2050, and plans to upgrade to fuel-efficient aircraft, use SAF, and innovate operations to achieve the target.</li> <li>Governance: The Board of Directors oversees and directs the transition strategy.</li> </ul> | <p>Element 3<br/>(Science based Targets &amp; Pathways)</p> | <ul style="list-style-type: none"> <li>Long-term targets refer to ATAG's Waypoint 2050, etc., which is considered to be a scenario consistent with the Paris Agreement.</li> <li>Since the short- and medium-term targets are below the ambitious scenario presented by the TPI benchmark, further emission intensity reductions are recommended.</li> </ul>                           |
| <p>Element 2<br/>(Materiality)</p>                        | <ul style="list-style-type: none"> <li>Transition strategy and targets are clearly related to the environmental materiality in JAL's business model.</li> </ul>  | <p>Element 4<br/>(Transparency)</p>                         | <ul style="list-style-type: none"> <li>Investment plans for FY2021 to FY2025 have been disclosed in the Medium Term Management Plan. The total amount and share of transition strategy investment as a percentage of total company-wide investment will be disclosed.</li> <li>Scope 1 to 3 impacts, including CO<sub>2</sub> emissions, are announced on an ongoing basis.</li> </ul> |

### Transition Strategy and Science-based Targets (Elements 1-3)

- 2025** | Reduce approximately 500,000 tons with total emissions less than FY2019
- 2030** | Reduce total emissions to 90% of FY2019 level (SAF percentage: 10%)
- 2050** | **Carbon neutrality**

JAL's strategy and target for introduction of SAF, etc. are also aligned with the Ministry of Land, Infrastructure, Transport and Tourism's (MLIT) decarbonization roadmap for aviation.



### Upgrading to fuel-efficient aircraft

- Utilize state-of-the-art fuel-efficient aircraft for the time being, and in the future introduce aircraft using new technologies such as hydrogen and electric power

### Innovating operations

- In addition to own efforts (JAL Green Operations), promote industry-wide cooperation among air traffic control organizations, airlines, airport operators, etc.

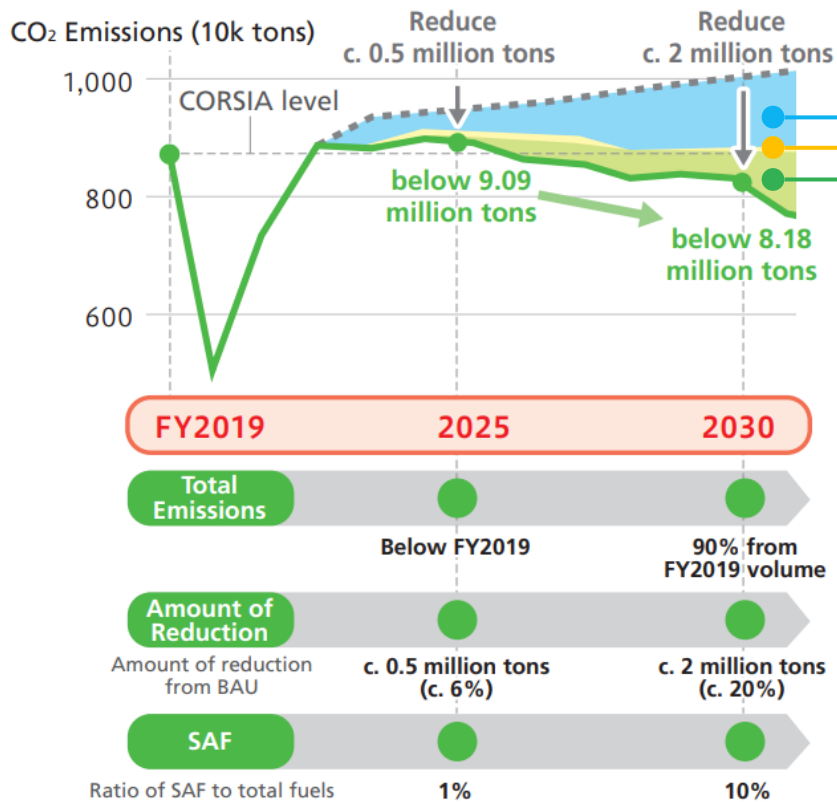
### Use of SAF

- Collaborate with stakeholders to secure SAF supply and reduce costs in pursuit of a decarbonized society

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## Key Points in the Case Study (Element 1: Transition strategy and governance)

### Medium-Term Targets and Initiatives to Achieve Them



### Use of Proceeds

#### Upgrading to fuel-efficient aircraft

FY2030 reduction contribution  
Approx. **60%**

#### Innovating operations

FY2030 reduction contribution  
Approx. **5%**

#### Use of SAF

FY2030 reduction contribution  
Approx. **35%**

## Key Points

- The transition strategy for achieving carbon neutrality in 2050 is aligned with ICAO and the Ministry of Land, Infrastructure, Transport and Tourism's Roadmap to Decarbonization of Aviation.
- The long-term target is ambitious. In addition, although the medium-term targets are somewhat inferior to the benchmarks referred to in the 3rd party evaluation, the overall level is comparable to the current international scenarios of ICAO, ATAG, IEA, and others.
- While the introduction of SAF will be critical to achieving the medium- and long-term targets, a concrete and ambitious target of 10% in FY2030 has been set.
- SAF can also be used for the funded aircraft, which is consistent with the transition strategy. Moreover, the impact of use of proceeds on achievement of the interim targets is shown.
- An example of the effective use of transition bonds in a high-emission industry where decarbonization technologies are not yet established.

# Model Quality Examination Committee | Summary of Results

## Case Study: Japan Airlines Co., Ltd. (JAL) Transition Bond

### Modelability review results: Approval

Appropriate as a model case in terms of committing to net zero CO2 emissions and looking to the use of SAF, which is critical for achieving net zero CO2 emissions

#### Main opinions

##### Transition strategy

- JAL gives the impression it is taking all the necessary measures with a commitment to net zero CO2 emissions in the aviation industry, where emission reductions are difficult to achieve.
- SAF is a key element in the achieving the medium- and long-term targets and transition strategy. It is commendable that quantitative and ambitious targets have been set.
- The funded aircraft can use SAF without any additional changes to its physical structure, which reduces lock-in concern, aligns with the strategy, and will lead to achieving carbon neutrality.

##### Scientific basis

- While the International Civil Aviation Organization (ICAO) has not agreed on net zero in 2050, JAL has committed to an ambitious long-term target and established a transition pathway.
- While the recommendation for the interim target to be raised further is not disputed, it is comparable with other international scenarios, aligns overall with the Paris Agreement, and is recognized as an ambitious target.

##### Other factors/Others

- Since no clear green decarbonization technology exists in the aviation sector yet, selecting it as a model project is significant from the viewpoint of transition.
- It is excellent that the quantitative impact of the use of proceeds on the 2030 target is described.
- There are clear long-term targets and well-established governance.
- It would be desirable to have an explanation of the assumptions and rationale for aviation demand as the background (scenario) for the setting of targets (may be necessary given the impact of the pandemic, trend toward criticizing use of aircraft, etc.).

This document focuses on the contribution of transition finance to the realization of Japan's carbon neutrality by 2050 and the Paris Agreement, and does not cover any of the risks associated with transition finance as a financial instrument. It should be noted that even in the model case of this project, there are credit risks and other risks (in the case of bonds, price fluctuation risks, liquidity risks, etc.) as in ordinary financing.

# (Reference) Japan Airlines Co., Ltd. (JAL) | Implications for Transition Finance

- This is an example of the significance and role of transition finance as a financing tool for companies in the hard-to-abate sector, where the technologies necessary for decarbonization have not yet been established or become widespread.

## Use of Proceeds

## Whether JAL can utilize each sustainable finance candidate (\* At present)

■ Upgrading to fuel-efficient aircraft (Introducing latest aircraft such as Airbus A350)

| Sustainable finance method | Evaluation, Background and Basis   |
|----------------------------|--|
| Green bond                 | × <ul style="list-style-type: none"> <li>No decarbonization technology<sup>1</sup> that qualifies as green has been established and become widespread at present</li> </ul>  |
| Sustainability-linked bond | × <ul style="list-style-type: none"> <li>In the face of uncertainties in decarbonization technology<sup>1</sup> and infrastructure<sup>2</sup> for making it widespread, difficult to set ambitious targets<sup>3</sup></li> </ul> |
| Transition bond            | ○ <ul style="list-style-type: none"> <li>There is credibility that the company is transforming toward net zero over the long term (strategy, targets, governance, information disclosure, etc.)</li> </ul>                         |

1. 100% SAF-powered aircraft, hydrogen-powered aircraft, electric aircraft, etc., 2. SAF distribution networks, etc., 3. Assuming CO<sub>2</sub> emissions and CO<sub>2</sub> emissions intensity falls into this category