



## South Korea's SAF Expansion Drives Climate Action and Market Leadership

Release Date: 10 September 2024

Dept. in Charge: **Airworthiness Division, Korea Office of Civil Aviation, MOLIT**

Contact: Annie KIM / Global Media Communicator, MOLIT / [audiis2@korea.kr](mailto:audiis2@korea.kr) / +82 44 201 3056

- Joint Announcement of the “SAF Expansion Strategy” by Government Ministries
- First Commercial Flight Powered by Korean-Made SAF Takes Off, 4<sup>th</sup> in Asia and 20<sup>th</sup> Worldwide

On August 30 (Friday), at Incheon International Airport's Terminal 2 in Korea, the Ministry of Land, Infrastructure and Transport (MOLIT, Minister PARK Sangwoo) and the Ministry of Trade, Industry and Energy (MOTIE, Minister AHN Dukgeun) **jointly announced the “SAF Expansion Strategy”** with aviation and oil industry representatives in attendance. This strategy aims to **reduce carbon emissions** in international aviation and **foster new industries**.

The **International Air Transport Association (IATA)** defines Sustainable Aviation Fuel (SAF) as a **biofuel** that is produced from **renewable sources**, such as plant and animal-based biomass, or via a process that captures carbon directly from the air. SAF is chemically similar to conventional jet fuel but offers **significant reductions in carbon emissions by up to 80%**. It is fully compatible with existing aircraft engines and fueling infrastructure, **requiring no modifications for use**.

SAF is widely recognized as the **most effective solution** for decarbonizing international aviation. To tackle the climate crisis, **19 countries** have adopted SAF for **commercial flights**, with some even **mandating its use in fuel blends\***.

\* Norway was the first to implement a 0.5% SAF blending mandate in 2020, while France began with 1% in 2022 and increased it to 1.5% in 2023; The EU is set to implement a 2% mandate in 2025, with targets of 6% by 2030, 34% by 2040 and 70% by 2050; Singapore and India plan a 1% mandate by 2026 and 2027, respectively, while Japan aims for 10% by 2030.

As the **world's largest exporter** of aviation fuel, Korea has increasingly recognized the **need for strong support policies** to seize the global SAF market as a key driver of future growth. According to IATA, the **global SAF market** is **expected to surge** from 240,000 tons in 2022 to 18.35 million tons by 2030.

MOLIT and MOTIE, the **two main governmental bodies leading Korea's SAF efforts**, have closely collaborated with the aviation and oil industries, relevant organizations, and experts to develop the "SAF Expansion Strategy," which includes a **mid- to long-term vision** and **comprehensive support measures** for promoting SAF in Korea.

The **eight key elements** of the "SAF Expansion Strategy" are outlined as follows:

### **1. Launch of Commercial Flights with SAF from 2024**

Starting August 30, Korean airlines began using **domestically produced SAF**, certified by the International Civil Aviation Organization (ICAO), for **international scheduled flights** departing from local airports. This move positions Korea as the **20<sup>th</sup> SAF fueling country** listed on the ICAO website.

The airlines will determine **operating routes, schedules, and blending ratios**, and will enter contracts with domestic oil companies to purchase SAF.

#### **\* Weekly fueling with a 1% SAF blend in 2024 for flag carriers below:**

- Korean Air (from August 30): Incheon → Haneda
- T'way Air (from September 2): Incheon → Kumamoto
- Asiana Airlines (from September 7): Incheon → Haneda
- Eastar Jet (from October): Incheon → Kansai
- Jeju Air (from fourth quarter): Incheon → Fukuoka
- Jin Air (from fourth quarter): Incheon → Kitakyushu

## 2. Promotion of Voluntary SAF Use by 2026 on Public-Private Cooperation

On August 30, MOLIT, MOTIE, Incheon International Airport Corporation (IIAC), Korea Airports Corporation (KAC) as well as Korean airlines and oil companies **signed a Memorandum of Understanding (MOU)** to promote the **domestic use of SAF**.

**Nine airlines** participated in the MOU, including the six flag carriers mentioned above, as well as Air Busan, Air Premia, and Aero K. The **five oil companies** engaged in the MOU are S-Oil, SK Energy, HD Hyundai Oilbank, GS Caltex, and Hanwha TotalEnergies Petrochemical.

MOLIT and IIAC are set to roll out **a range of incentives** to drive SAF adoption and transform the Incheon International Airport into a greener aviation hub. Key measures include **increasing credits for airlines** that use SAF when acquiring international traffic rights, and providing support for **SAF fueling flights**.

## 3. Mandatory SAF Blending from 2027

ICAO is poised to implement the Carbon Offsetting and Reduction Scheme for International Aviation (**CORSIA**) across **all 193 member countries** starting in 2027. CORSIA is a scheme that requires airlines to purchase carbon offsets if their **emissions exceed 85%** of the 2019 international aviation carbon emissions levels. Currently, 126 countries, including **Korea**, are **participating voluntarily**, and **from 2027**, all member countries will be **required to comply**.

MOTIE and MOLIT are considering a mandate for a **1% SAF blend** in all international flights departing from Korea **from 2027 onwards**. Using 1% SAF is expected to cut emissions by about **160,000 tons annually**, based on Korea's international aviation carbon emissions of approximately 20 million tons in 2023. This reduction is equivalent to the **annual carbon emissions of around 53,000 passenger cars**, assuming each car drives 12,000 km per year.

To **minimize the impact of SAF-related costs** on airline fares, MOLIT plans to adjust the allocation of international traffic rights. While SAF usage will be linked to **greater credits** in the allocation process, airlines that do not pass SAF costs onto fares may receive **additional credits**. Additionally, **lower airport facility fees** could be offered to airlines that use SAF, with a related research project currently underway from June 2023 to December 2024.

MOLIT is also considering the introduction of a tentatively named “**Aviation Carbon Mileage Program**,” which would **reward passengers** with mileage or points based on their **SAF flight usage**. A research project on this program is scheduled for 2025.

#### **4. Support for Investing in Domestic SAF Production**

The Korean government is exploring ways to boost **timely investment** in SAF-related R&D projects and facility construction by **expanding tax credits** for **domestic companies**. It also plans to provide incentives to ease the high costs associated with SAF production.

Furthermore, the government intends to broaden the **range of SAF feedstocks** by **relaxing regulations**. The permissible **recycling items** will be expanded to include **used cooking oil, waste animal fats, and food waste**, in addition to the current options of waste plastics, waste tires, and pyrolysis oil. The scope will also be expanded to include **feedstocks for alternative fuels**, in addition to those for petroleum and petrochemical products.

Once investment plans for **domestic SAF production facilities** are confirmed, a **dedicated task force**, involving relevant ministries, local governments, and industry stakeholders, will be established to **streamline permit and approval processes**.

## 5. Advancing SAF Production Technologies Based on Various Feedstocks

In addition to used cooking oil, which is the primary feedstock for SAF production, Korea will jointly explore **international bioresources**, such as animal fats and palm by-products, which can be **utilized with current technology**. The government plans to support **SAF production trials** and **quality verification** for materials that domestic companies wish to use.

Moreover, efforts will focus on securing next-generation SAF production technologies that utilize **raw materials with abundant supply**, such as **microalgae and green hydrogen**, to strengthen feedstock supply capabilities. Microalgae grow rapidly and have high productivity and oil content per unit area, enabling it to produce **large quantities of bioresources** in limited space.

## 6. Strengthening Competitiveness of Biofuel Supply Chain

The **K-Consortium**, which will be composed of leading corporations in relevant industries, will work together to **secure overseas feedstocks** and **build infrastructure for storage and distribution**.

Based on the corporate demand, the consortium will also support the **integration of key SAF infrastructure** for collecting, processing, and refining bioresources, as well as SAF production plants and research institutes.

## 7. SAF-related Legislation and Quality Control

MOTIE has **revised the Petroleum Business Act** and its subordinate regulations, effective August 7, to **support the entire cycle** from feedstock procurement to commercialization and to **designate and operate dedicated institutions**.

The Ministry will also **develop SAF quality standards** and **verify blending ratios**, taking into account the timing of domestic production and deployment.

## 8. SAF-related Carbon Reduction Management System

MOLIT will establish a system to ensure that **carbon reductions from the adoption of SAF by domestic airlines** are effectively reflected in the **carbon offset obligations under CORSIA**. This will involve **formulating subordinate regulations** (notifications) under the International Aviation Carbon Emissions Management Act, enacted on February 20, 2024.

At the launch event for the “SAF Expansion Strategy,” **MOLIT Minister PARK Sangwoo** emphasized that **using SAF is no longer optional but essential** for addressing the climate crisis and achieving sustainable growth in the aviation industry.

He also stated that **Korea will actively promote** international aviation **decarbonization policies**, starting with this policy announcement and the first commercial operation of domestically produced SAF, in order to establish our country as a **leading nation in carbon neutrality** in the **aviation sector**.

**MOTIE Minister AHN Dukgeun** stressed that securing a **one-stop supply capability** of aviation fuel and SAF is crucial for **maintaining Korea’s competitiveness** as the world’s top aviation fuel exporter.

He also mentioned that the government plans to consolidate its **multi-ministerial expertise** to ensure the **seamless implementation** of the policies included in this strategy, aiming to **seize a leading position** in the global SAF market. He added that the Ministry will establish a **collaboration system** with the refining and aviation industries and explore **additional support measures**.

On this day, **Korean Air** commenced the **first-ever** commercial operation of international flight from Incheon to Haneda using **SAF** (1% blend, refueled once a week), which was **domestically produced** by S-Oil and SK Energy.



To **commemorate this milestone**, a **ceremony was held** at Incheon International Airport's Terminal 2, attended by the Ministers of MOLIT and MOTIE, the Chair of the Presidential Commission on Carbon Neutrality and Green Growth, the President & CEO of Incheon International Airport Corporation, as well as CEOs from domestic aviation and oil companies.