BRIEF

Access to fuel infrastructure to enable aviation's decarbonization

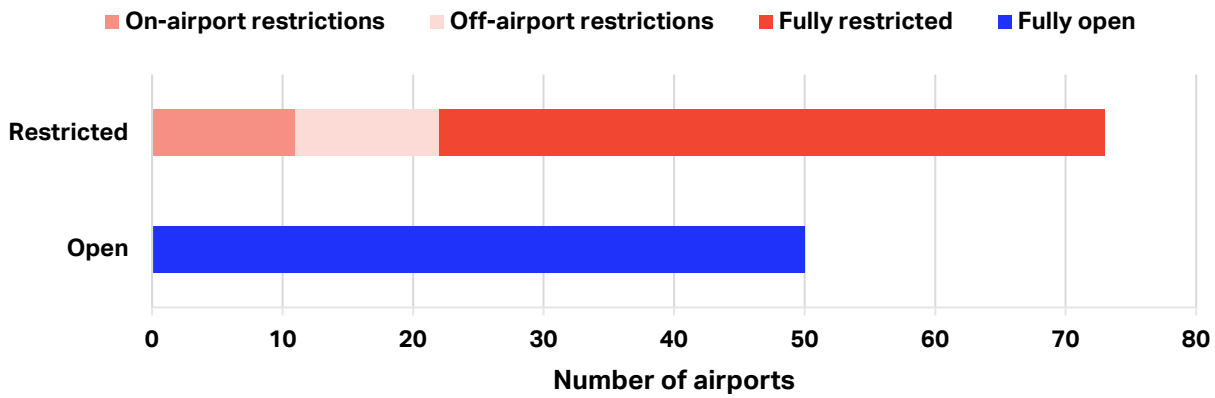
INTRODUCTION

There are many hurdles that need to be overcome on the road to aviation's decarbonization, the most urgent of which is to ramp up the production of sustainable aviation fuel (SAF). Once produced, the product must be delivered to airports for aircraft to use. This must be achieved at a fair price, by promoting open markets and free competition. Given that sustainable aviation fuels cost 2-5 times more than conventional jet fuel (CAF), all additional layers of costs associated with their use must be minimized. How fuel is supplied to airports has always been important, but giving new SAF producers and distributors access to fuel infrastructure outside and inside airports is a new imperative upon which airlines' decarbonization depends.

Who owns the infrastructure through which the fuel is delivered to the airport tends to determine that airport's fuel cost structure. Ownership structures that award monopolistic or cartel-like pricing power are associated with higher fuel prices at the airport. On the other hand, where access is free there tends to be more competition and lower prices.

We have surveyed the ownership structure of the fuel infrastructure at 123 of the largest airports in different parts of the world, covering 48% of global fuel uplift. Of these, 59% present some form of restricted access to the infrastructure, due to ownership by a single fuel supplier or by a limited group of fuel suppliers, with the remainder providing open access (Figure 1). While there is no one-size-fits-all solution to such ownership structures, we conclude that the issue needs to be addressed with great urgency in certain cases, as it might not only enable SAF distribution but also be an important way in which to de-risk investing in SAF production.

Figure 1 Overall distribution of type of access to fuel infrastructure across a sample of 123 airports[1]



Source: IATA Sustainability and Economics

[1] A list of the airports included in our sample can be found in Table 1 in the Appendix.

AVIATION FUEL INFRASTRUCTURE

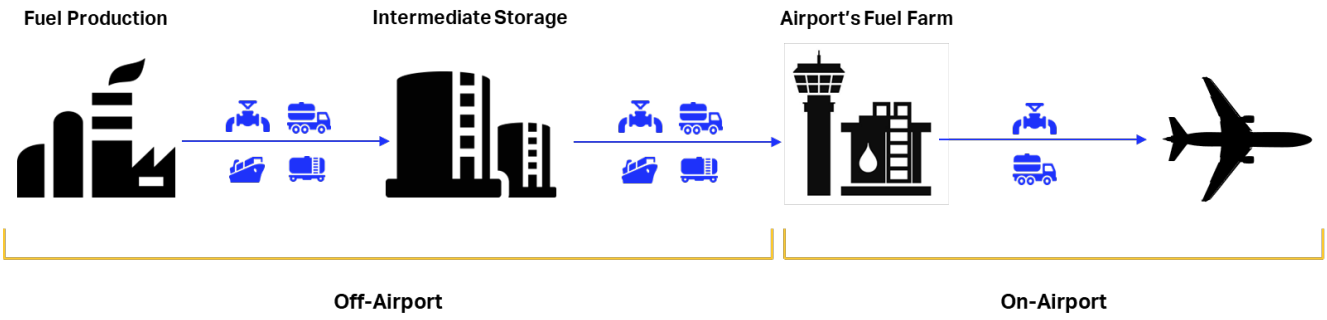
Aviation fuel infrastructure is made up of a network of facilities both within and upstream of the airports. The network forms a supply chain designed to maintain a constant flow of fuel to satisfy the operational needs of airlines at airports (Figure 2).

Fuel supply is a key component of an airport's operations, and it is subject to rigorous safety regulations set forth by national regulatory bodies, and international standards such as JIG[2] 1 and 2, ASTM[3] D1655, and EI[4] 1550, among others. At the airport, fuel supply is facilitated through dedicated infrastructure commonly referred to as a "fuel farm" that is comprised of a series of components including fuel receipt plants, storage tanks, and loading bays for bowsers. The fuel farm is sometimes connected to a network of pipelines (hydrant system) for direct distribution to each gate. The size of a fuel farm varies depending on how robust the supply chains upstream from the airport are, the number and type of flights operating at each airport, and growth projections.

The development of these on-airport facilities represents a substantial financial investment and demands meticulous long-term planning to anticipate future operational demands. The scalability and adaptability of the fuel farm's design directly influence the airport's growth trajectory. Moreover, continuous maintenance and periodic upgrades are imperative to sustain its optimal functionality. It is important to emphasize that effective management of fuel infrastructure profoundly impacts an airport's operation and growth potential. Achieving a delicate balance between operational efficiency and financial sustainability – while ensuring safety – underscores the complicated dynamics of fuel supply within the aviation industry.

On the other hand, off-airport infrastructure encompasses all the necessary facilities for transporting jet fuel from its origin at a refinery to the airport's fuel farm. This process is influenced by various factors including geographical restrictions, operational scale, and the infrastructure capacities in each country. Understanding the off-airport supply chain is crucial in comprehending the complexities of aviation fuel logistics.

Figure 2 Aviation fuel supply chain



Source: IATA Sustainability and Economics

Generally, off-airport fuel transport could involve the use of ships, barges, pipelines, trucks, and railcars; often times a combination of multiple modalities. An important component of this supply chain are the storage facilities located outside an airport, commonly referred to as intermediate tanks, which allow suppliers to store the necessary product to maintain a steady flow feeding the airport. In many cases, the absence of this infrastructure increases the risk of fuel supply disruption which results in product shortages at the airport.

[2] Joint Inspection Group (JIG): https://www.jig.org/standards-publications/
[3] ASTM International: https://www.astm.org/products-services/standards-and-publications.html
[4] Energy Institute (EI): https://publishing.energyinst.org/topics/aviation

As the industry moves towards decarbonization, fuel infrastructure becomes especially critical. The legal framework and regulations that define access to it will ultimately determine whether an airport can get adequate SAF supply, potentially placing those locations with infrastructure access challenges at a disadvantage. Given the complexity of fuel logistics, implementing necessary changes may not be swiftly accomplished and hence, it is important to have this matter in consideration within each State's decarbonization strategies.

OWNERSHIP OF JET FUEL INFRASTRUCTURE

Fuel infrastructure is provided under diverse ownership and management models around the globe. Some airports retain ownership and operational control of the fuel farm, occasionally subcontracting its management to third-party entities, while others are owned by private companies or collaborative ventures of suppliers or airlines. Similarly, infrastructure outside the airport can be owned and controlled by governments or private parties. The ownership model and the governing regulations at any given location have a direct impact on how open or restricted the access to these essential facilities is, and ultimately, on the level of competition in aviation fuel supply, SAF included.

Whereas some redundancy in supply upstream from the airport may be desired to ensure a robust supply chain, on-airport infrastructure use is most efficient when centralized. Duplication of fuel farms or hydrant networks is not cost-efficient and would invariably result in underutilization of assets and restricted competition, as it generally predetermines market shares of fuel suppliers based on their storage capacity.

Independently from the ownership or operation structure, the greatest objective for those overseeing the aviation fuel supply chain should be the efficient and secure supply of jet fuel. With this in mind, below are three main existing models to consider:

Ownership by a third party: In this case, the fuel facilities are owned by a government entity or a private company that does not take part in the sale of aviation fuel, fully allowing open access to the infrastructure since there are no conflicts of interest or vertical integration involved. Depending on the case, an independent operator can be appointed to oversee day-to-day operations.

Regardless of the type of administrative structure adopted, this ownership model is preferred for both on- and off-airport infrastructure as it avoids perverse incentives that could restrict access to the infrastructure for suppliers who may consider entering the market.

Ownership by an airline consortium: Predominantly observed in the United States and Canada (see Chart 3), the airline consortium ownership model sees airlines collectively owning, operating, or leasing on-airport fuel facilities through a legally constituted entity such as a Limited Liability Company (LLC). This arrangement gives airlines influence over infrastructure decisions and an opportunity to align them with their operational imperatives. Notably, the consortium model fosters an environment of open access, enabling multiple suppliers to use the facilities based on a fair and transparent fee structure. This promotes healthy competition, bolsters price competitiveness, and supports a reliable supply of jet fuel.

Ownership by a single supplier or a group of suppliers: In this scenario, a single company or a group of companies for which the sale of aviation fuel is their main business, invests in the construction and operation of the airport fuel farm or off-airport fuel facilities.

Given its private ownership status, regulatory authorities typically exert minimal influence over the entity's decision-making processes, affording it greater autonomy in operational and commercial matters. Consequently, the infrastructure provider may be able to freely define access fees and exercise sole discretion over inventory allocations within its facilities.

In this case, access to the infrastructure by firms external to the ownership structure tends to be limited, and so too is the government's ability to grant such access. Private companies that invest in the construction of the infrastructure have legitimate claims to decide on matters concerning their property. However, in the particular case of airports, this can restrict competition by denying access or making access too onerous, hence pricing out potential suppliers. It is also possible that the infrastructure provider imposes inflated fees that allow it to cross-subsidize its own fuel supply business, thereby enjoying an unfair competitive advantage.

Figure 3 Airline fuel consortia at airports in the USA and Canada

Source: Airlines for America

OPEN ACCESS

Open access to fuel infrastructure allows any counterparty to use existing facilities inside and/or outside the airport to store and mobilize jet fuel. Supply chains that have open access to fuel infrastructure, from the time the product enters the country until it arrives at the airport and is finally delivered to the plane, are characterized by lower fuel prices thanks to healthy competition. Additionally, they typically benefit from having a more efficient and secure product flow as a result of the diversification of supply sources. Open access is usually accompanied by a strong and clear regulatory framework that allows free competition and prohibits monopolies.

Los Angeles International Airport (LAX) is a good example of open access to the infrastructure. LAX's fuel farm is administered under an airline fuel consortium model, that allows access for any supplier requesting to have its own inventory on-airport, which also facilitates the supply of SAF. This airport is the current leader in SAF supply in the United States, having inventories since 2022, currently from 2 suppliers. Off-airport, LAX

benefits from having the freedom to transport fuel through multiple pipelines dedicated to Jet A or, if necessary, the use of trucks to transport the product.

The consortium model is not the only one that facilitates access to infrastructure. **John F. Kennedy Airport (JFK)** is open for access by any supplier. The fuel farm is owned by the airport which contracts an expert third party to run day-to-day operations. At JFK, an airline advisory committee maintains open communication with the airport authority on issues related to the operation; however, the committee is not entitled to make decisions on investments or costs. Open access to the airport infrastructure will favor the supply of SAF in the future as any competitor can hold inventory in the fuel farm. Regarding off-airport access, JFK Airport receives its fuel through a free-to-access pipeline that is owned by the government.

In Asia, the fuel infrastructure at **Bangkok International Airport (BKK)** is owned by a publicly listed company that allows open access to the fuel farm and ensures competition between suppliers, enabling continuous supply. This company has multiple shareholders, including the airport, fuel suppliers, airlines, as well as corporate and public investors. Aviation fuel can be transported to the airport via pipelines, barges, or trucks, in all cases there is open access to them: this redundancy ensures a robust supply chain. BKK serves as a good example of how a third-party entity can own the infrastructure and ensure healthy competition, which can be achieved due to the absence of any conflicts of interest.

An interesting case is **Sydney Airport (SYD)**, where the fuel farm is owned by the airport and access is granted to any supplier looking to enter the market. However, concerning the infrastructure upstream from the airport, SYD is supplied via two pipelines that connect directly to the fuel farm, which are owned by different private companies that restrict access to new suppliers. Consequently, if a new player aims to enter the market, it would most likely have to do so using bridger trucks, which makes the operation significantly more expensive. This also has an impact on the supply of SAF, which requires efficient transportation to minimize additional emissions.

For additional examples of airports with open access to infrastructure, refer to Table 1 in the Appendix.

RESTRICTED ACCESS

Restricted access to fuel infrastructure on- and off- airport is often characterized by ownership of the critical infrastructure by a single fuel supplier or a joint venture of fuel suppliers whose main business is the sale of aviation fuel. This ownership model has the power to hinder or fully prevent competition. As a general rule, if a prospective new entrant has to face disproportionate entry costs or undergo excessive or unreasonable burden to obtain permits from entities that have a conflict of interest, then the airport in question can be considered as a restricted or closed market.

In the context of achieving net zero emissions by 2050, enabling the supply of SAF to airports from any source depends on unimpeded access to critical infrastructure. Restrictions at any point in the supply chain pose significant barriers to efficient and effective deployment of SAF.

As mentioned above, supply monopolies in some cases can be permitted by governments, as is the case with **Beijing Capital Airport** in China, **Soekarno-Hatta International** in Indonesia, **Hamad International** in Qatar, and Ezeiza in Argentina, where government companies are the owners of on- and off-airport infrastructure, which severely restricts competition. In addition, there may exist legal restrictions preventing potential competitors from building their own infrastructure. This is problematic in several ways: firstly, because there is only one source of product, should anything fail in any part of the supply chain, the continuity of operations at the airport is disrupted; secondly, fuel prices tend to be much higher due to the lack of anti-trust regulations, putting these airports at a disadvantage relative to other airports where supply competition exists. The connectivity of these airports would be adversely impacted in the long term if higher fuel prices persist.

Another model that naturally restricts access is the consortium of fuel suppliers. An example of this is **Amsterdam Airport Schiphol (AMS)** in the Netherlands, which manages its airport's fuel farm through a Joint User Hydrant Installation (JUHI) structure established over 40 years ago, allowing only member suppliers to hold inventory at the airport. To become a member, a supplier must buy a share in the consortium, which is subject to approval by existing members. This can be a problem for future suppliers wanting to offer SAF at the airport, adding extra costs to the already expensive product. Regarding off-airport infrastructure, AMS receives the jet fuel from an open-access pipeline, but due to the limitations of accessing the airport, it is considered a restricted market.

In **São Paulo/Guarulhos–Governor André Franco Montoro International Airport (GRU)** in Brazil, the fuel farm is owned by a joint venture (or "pool") of 3 aviation fuel suppliers. Access to this infrastructure was restricted until 2023, when the Agência Nacional de Aviação Civil (ANAC) issued resolution 717 indicating: "ANAC may determine measures that promote competition in fuel supply and resale activities at the aerodrome". However, this resolution has not yet been implemented and details on economic regulation of the infrastructure is still pending publication. Off-airport infrastructure is owned by a subsidiary of the main fuel producer and importer (Petrobras), which creates additional barriers to entry for potential new entrants.

For additional examples of airports with restricted access to infrastructure, refer to Table 1 in the appendix.

CONCLUSION

Aviation fuel is a crucial element in the air transport value chain. Ensuring its reliable supply at competitive prices should not only be a priority for airlines but also for governments and airport operators. The price of fuel influences air ticket costs and airlines' seat offer, making it a pivotal factor in the competitiveness of markets. Consequently, locations with higher operating expenses may find themselves at a disadvantage compared to those with more favorable cost structures.

Recognizing the complexities of fuel infrastructure management, it is unrealistic to expect a one-size-fits-all model applicable at all airports. However, a thorough evaluation of the existing structure on a case-by-case basis is essential, prioritizing a supply chain supported by multiple sources of fuel and open access to the infrastructure. This will enable any potential new entrants to utilize on- and off-airport facilities for fuel storage and distribution, promoting competition and ensuring a robust supply chain.

As the industry strives to decarbonize, fuel infrastructure ownership and management becomes increasingly crucial. Airlines' access to SAF hinges on having a model that provides open access to foster competition and innovation. For models where access to the infrastructure is restricted, conflicts of interest tend to emerge regarding the provision of the infrastructure and the sale of products, curtailing distribution and inflating prices. Such restrictions to access can stop, delay, and hinder aviation's achieving its sustainability goals by jeopardizing supply and increasing costs, all of which will ultimately curtail connectivity.

Appendix: Examples of ownership models used globally and their impact on access to infrastructure

Table 1: Examples of fuel infrastructure ownership models and impact on access

Airport code	City	Country	On-airport infrastructure		Off-airport infrastructure		Overall access
			Access	Ownership model	Access	Ownership model	
DXB	Dubai	United Arab Emirates	Restricted	Supplier	Restricted	Supplier	Restricted
LHR	London	United Kingdom	Open	Third Party	Open	Third Party	Open
LAX	Los Angeles	United States	Open	Airline Consortium	Open	Third Party	Open
JFK	New York	United States	Open	Third Party	Open	Third Party	Open
ICN	Seoul	Korea	Open	Third Party	Restricted	Group of Suppliers	Restricted
HKG	Hong Kong	Hong Kong SAR, China	Open	Third Party	Open	Third Party	Open
SIN	Singapore	Singapore	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted
CDG	Paris	France	Open	Third Party	Open	Third Party	Open
FRA	Frankfurt	Germany	Open	Third Party	Open	Third Party	Open
DOH	Doha	Qatar	Restricted	Supplier	Restricted	Supplier	Restricted
IST	Istanbul	Türkiye	Open	Third Party	Restricted	Supplier	Restricted
ORD	Chicago	United States	Open	Third Party	Open	Third Party	Open
PVG	Shanghai	China (People's Republic of)	Restricted	Supplier	Restricted	Supplier	Restricted
AMS	Amsterdam	Netherlands	Restricted	Group of Suppliers	Open	Third Party	Restricted
HND	Tokyo	Japan	Open	Third Party	Open	Group of Suppliers	Open
MIA	Miami	United States	Open	Third Party	Open	Third Party	Open
BKK	Bangkok	Thailand	Open	Third Party	Open	Third Party	Open
MAD	Madrid	Spain	Open	Third Party	Open	Group of Suppliers	Open
NRT	Tokyo	Japan	Open	Third Party	Open	Third Party	Open
TPE	Taipei	Chinese Taipei	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted
DEL	Delhi	India	Restricted	Supplier	Open	Third Party	Restricted
SYD	Sydney	Australia	Open	Third Party	Open	Group of Suppliers	Open
CAN	Guangzhou	China (People's Republic of)	Restricted	Supplier	Restricted	Supplier	Restricted
YYZ	Toronto	Canada	Open	Third Party	Open	Third Party	Open
PEK	Beijing	China (People's Republic of)	Restricted	Supplier	Restricted	Supplier	Restricted
JED	Jeddah	Saudi Arabia	Open	Third Party	Restricted	Supplier	Restricted
GRU	Sao Paulo	Brazil	Restricted	Group of Suppliers	Restricted	Supplier	Restricted
IAH	Houston	United States	Open	Airline Consortium	Open	Third Party	Open

Airport code	City	Country	On-airport infrastructure		Off-airport infrastructure		Overall access
			Access	Ownership model	Access	Ownership model	
KUL	Kuala Lumpur	Malaysia	Restricted	Supplier	Restricted	Supplier	Restricted
MEL	Melbourne	Australia	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted
CGK	Jakarta	Indonesia	Restricted	Supplier	Restricted	Supplier	Restricted
MEX	Mexico City	Mexico	Open	Supplier	Restricted	Supplier	Restricted
MNL	Manila	Philippines	Open	Third Party	Restricted	Group of Suppliers	Restricted
MUC	Munich	Germany	Open	Third Party	Open	Third Party	Open
BOM	Mumbai	India	Open	Third Party	Restricted	Supplier	Restricted
FCO	Rome	Italy	Open	Group of Suppliers	Open	Group of Suppliers	Open
LGW	London	United Kingdom	Restricted	Group of Suppliers	Restricted	Supplier	Restricted
YVR	Vancouver	Canada	Open	Airline Consortium	Open	Third Party	Open
AUH	Abu Dhabi	United Arab Emirates	Restricted	Supplier	Restricted	Supplier	Restricted
LIS	Lisbon	Portugal	Restricted	Third Party	Restricted	Supplier	Restricted
BCN	Barcelona	Spain	Restricted	Third Party	Restricted	Group of Suppliers	Restricted
MXP	Milan	Italy	Open	Group of Suppliers	Open	Group of Suppliers	Open
ADD	Addis Ababa	Ethiopia	Open	Third Party	Open	Third Party	Open
BOG	Bogota	Colombia	Open	Third Party	Open	Third Party	Open
SGN	Ho Chi Minh City	Vietnam	Restricted	Third Party	Open	Group of Suppliers	Restricted
CUN	Cancun	Mexico	Open	Supplier	Restricted	Supplier	Restricted
RUH	Riyadh	Saudi Arabia	Open	Third Party	Open	Supplier	Open
YUL	Montreal	Canada	Open	Airline Consortium	Open	Third Party	Open
BRU	Brussels	Belgium	Restricted	Group of Suppliers	Open	Third Party	Restricted
TLV	Tel Aviv-Yafo	Israel	Open	Third Party	Open	Third Party	Open
CAI	Cairo	Egypt	Open	Third Party	Open	Supplier	Open
KIX	Osaka	Japan	Open	Third Party	Open	Group of Suppliers	Open
JNB	Johannesburg	South Africa	Open	Third Party	Open	Third Party	Open
DUB	Dublin	Ireland	Open	Third Party	Open	Third Party	Open
CKG	Chongqing	China (People's Republic of)	Restricted	Supplier	Restricted	Supplier	Restricted
SCL	Santiago	Chile	Open	Third Party	Open	Third Party	Open
ORY	Paris	France	Restricted	Group of Suppliers	Restricted	Supplier	Restricted
AKL	Auckland	New Zealand	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted

Airport code	City	Country	On-airport infrastructure		Off-airport infrastructure		Overall access
			Access	Ownership model	Access	Ownership model	
CTU	Chengdu	China (People's Republic of)	Restricted	Supplier	Restricted	Supplier	Restricted
HAN	Hanoi	Vietnam	Restricted	Third Party	Open	Group of Suppliers	Restricted
BNE	Brisbane	Australia	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted
BLR	Bengaluru	India	Restricted	Supplier	Open	Group of Suppliers	Restricted
VIE	Vienna	Austria	Open	Third Party	Open	Group of Suppliers	Open
EZE	Buenos Aires	Argentina	Restricted	Supplier	Restricted	Supplier	Restricted
PTY	Panama City	Panama	Open	Third Party	Open	Third Party	Open
LIM	Lima	Peru	Open	Third Party	Open	Third Party	Open
DPS	Denpasar-Bali	Indonesia	Restricted	Supplier	Restricted	Supplier	Restricted
PER	Perth	Australia	Open	Third Party	Restricted	Group of Suppliers	Restricted
KWI	Kuwait	Kuwait	Restricted	Supplier	Restricted	Supplier	Restricted
ATH	Athens	Greece	Open	Third Party	Restricted	Supplier	Restricted
NKG	Nanjing	China (People's Republic of)	Restricted	Supplier	Restricted	Supplier	Restricted
NBO	Nairobi	Kenya	Open	Third Party	Open	Third Party	Open
WAW	Warsaw	Poland	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted
DAC	Dhaka	Bangladesh	Restricted	Supplier	Restricted	Supplier	Restricted
MAA	Chennai	India	Restricted	Supplier	Open	Group of Suppliers	Restricted
BAH	Bahrain	Bahrain	Restricted	Group of Suppliers	Restricted	Third Party	Restricted
CPT	Cape Town	South Africa	Open	Third Party	Open	Third Party	Open
SJU	San Juan	Puerto Rico	Open	Third Party	Open	Third Party	Open
MCT	Muscat	Oman	Open	Third Party	Open	Third Party	Open
GDL	Guadalajara	Mexico	Open	Supplier	Restricted	Supplier	Restricted
CMN	Casablanca	Morocco	Open	Third Party	Open	Third Party	Open
HYD	Hyderabad	India	Restricted	Supplier	Open	Group of Suppliers	Restricted
CMB	Colombo	Sri Lanka	Restricted	Supplier	Restricted	Supplier	Restricted
MED	Madinah	Saudi Arabia	Restricted	Supplier	Restricted	Supplier	Restricted
AMM	Amman	Jordan	Restricted	Supplier	Restricted	Supplier	Restricted
GIG	Rio de Janeiro	Brazil	Restricted	Group of Suppliers	Restricted	Supplier	Restricted
PUJ	Punta Cana	Dominican Republic	Restricted	Supplier	Restricted	Supplier	Restricted
NGO	Nagoya	Japan	Open	Third Party	Open	Group of Suppliers	Open
BUD	Budapest	Hungary	Restricted	Supplier	Restricted	Supplier	Restricted

Airport code	City	Country	On-airport infrastructure		Off-airport infrastructure		Overall access
			Access	Ownership model	Access	Ownership model	
CCU	Kolkata	India	Restricted	Supplier	Open	Group of Suppliers	Restricted
PRG	Prague	Czechia	Open	Third Party	Open	Group of Suppliers	Open
BSB	Brasilia	Brazil	Restricted	Group of Suppliers	Restricted	Supplier	Restricted
MLE	Male	Maldives	Restricted	Supplier	Restricted	Supplier	Restricted
LOS	Lagos	Nigeria	Open	Third Party	Open	Third Party	Open
HAM	Hamburg	Germany	Open	Third Party	Open	Third party	Open
SJO	San Jose	Costa Rica	Restricted	Supplier	Restricted	Supplier	Restricted
SUB	Surabaya	Indonesia	Restricted	Supplier	Restricted	Supplier	Restricted
UIO	Quito	Ecuador	Restricted	Supplier	Restricted	Supplier	Restricted
SDQ	Santo Domingo	Dominican Republic	Restricted	Supplier	Restricted	Supplier	Restricted
KHI	Karachi	Pakistan	Restricted	Supplier	Restricted	Supplier	Restricted
SAL	El Salvador	El Salvador	Open	Third Party	Open	Third Party	Open
KTM	Kathmandu	Nepal	Restricted	Supplier	Restricted	Supplier	Restricted
MDE	Medellin	Colombia	Restricted	Supplier	Open	Third Party	Restricted
MBJ	Jamaica	Jamaica	Open	Third Party	Open	Third Party	Open
CEB	Cebu	Philippines	Open	Third Party	Open	Third Party	Open
GYE	Guayaquil	Ecuador	Restricted	Supplier	Restricted	Supplier	Restricted
NAN	Nadi	Fiji	Restricted	Group of Suppliers	Restricted	Group of Suppliers	Restricted
BGI	Bridgetown	Barbados	Open	Third Party	Open	Third Party	Open
HAV	Havana	Cuba	Restricted	Supplier	Restricted	Supplier	Restricted
GUA	Guatemala City	Guatemala	Open	Third Party	Open	Third Party	Open
CTG	Cartagena	Colombia	Restricted	Supplier	Open	Third Party	Restricted
MVD	Montevideo	Uruguay	Restricted	Supplier	Restricted	Supplier	Restricted
AUA	Aruba	Aruba	Restricted	Supplier	Restricted	Supplier	Restricted
VVI	Santa Cruz	Bolivia	Restricted	Supplier	Restricted	Supplier	Restricted
POS	Port of Spain	Trinidad and Tobago	Restricted	Supplier	Restricted	Supplier	Restricted
RGN	Yangon	Myanmar	Restricted	Supplier	Restricted	Supplier	Restricted
COR	Cordoba	Argentina	Restricted	Supplier	Restricted	Supplier	Restricted
KIN	Kingston	Jamaica	Open	Third Party	Open	Third Party	Open
ASU	Asuncion	Paraguay	Open	Third Party	Open	Third Party	Open
MGA	Managua	Nicaragua	Open	Third Party	Open	Third Party	Open
LPB	La Paz	Bolivia	Restricted	Supplier	Restricted	Supplier	Restricted
XPL	Tegucigalpa	Honduras	Open	Third Party	Open	Third Party	Open
ULN	Ulaanbaatar	Mongolia	Open	Third Party	Restricted	Supplier	Restricted