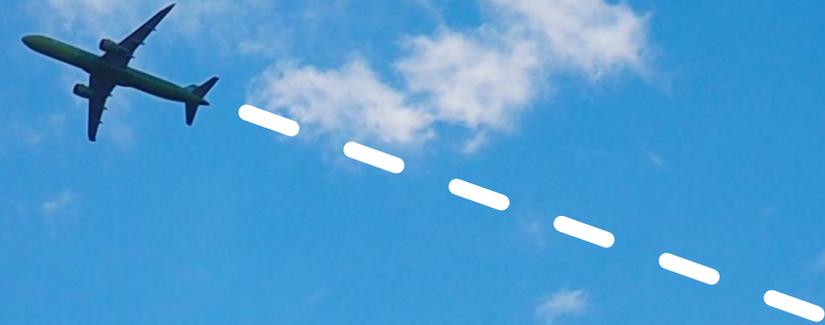


Unlocking Sustainable Aviation Fuels with Book and Claim



**Madison Carroll, Executive Director, Council
on Sustainable Aviation Fuels
Accountability (CoSAFA)**

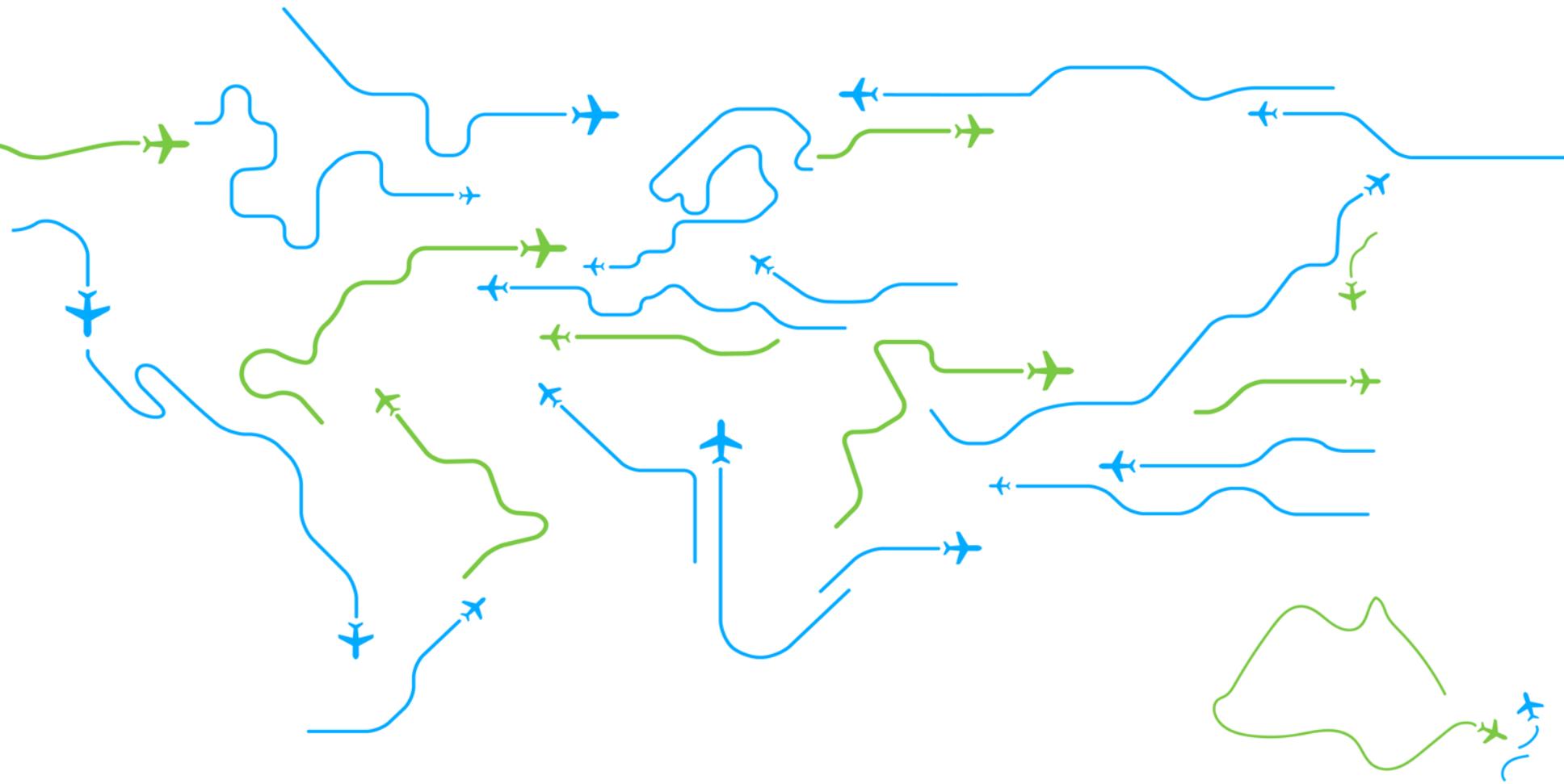
**Chris Lindberg, Senior Analyst,
Centre for Greening Government,
Treasury Board of Canada Secretariat**

CoSAFAMethod.org

**8:25 - 8:45am
Wednesday, November 27, 2024**

**Scaling Up Bio 2024 Conference
Fairmont Château Laurier
1 Rideau Street, Ottawa, Ontario**

COSAFA



Council on Sustainable Aviation Fuels Accountability

Capturing SAF's Value Through - Tracking, Documentation, and Accounting

Generally Accepted and Commonly Understood Principles for SAF Transactions that provide:



Clarity, consistency, and comparability of SAF environmental information



Recognized and accepted by regulatory agencies globally

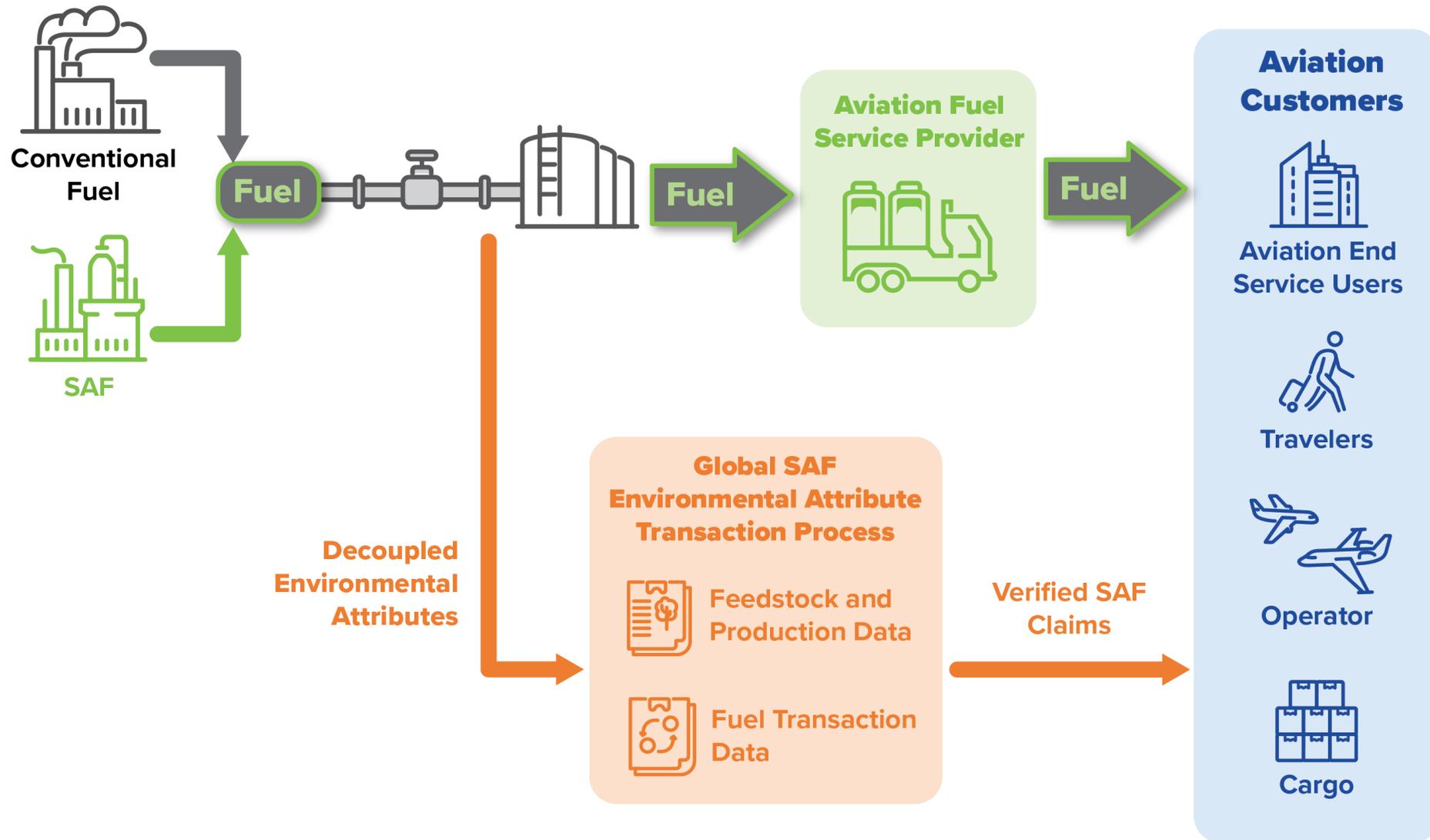


Interoperable with

- Individualized book and claim systems, registries, and ledgers
- Varied compliance requirements



What is Book and Claim?



Book and Claim Requires

- Standardized, transparent transaction and accounting rules
- Standardized reporting
- Auditing
- Alignment with regulatory and voluntary market requirements
- Marketplace for buyers and sellers



Book and Claim in Action:

The Government of Canada's Low- Carbon Fuel Procurement Program

Greening Government: Part of Canada's climate change commitments

International



Mitigate: Keep global temperature increase to well below 2 degrees Celsius

Adapt: Enhance adaptive capacity, strengthen resilience, and reduce vulnerability

Treasury Board Secretariat

Policy on Green Procurement

This policy requires that the procurement of goods and services actively promote environmental sustainability.

Expand all Collapse all

- ▶ 1. Title
- ▶ 2. Effective date
- ▶ 3. Application
- ▶ 4. Context
- ▶ 5. Definitions
- ▶ 6. Policy statement
- ▶ 7. Policy objectives
- ▶ 8. Additional information
- ▶ 9. References

2018: Updated Policy on Green Procurement

Greening Government Strategy: A Government of Canada Directive

From: Treasury Board of Canada Secretariat

On this page

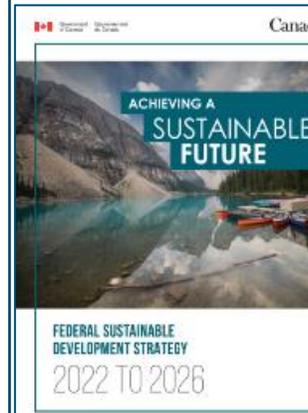
- Overview
- Objective
- Commitments
 - Real property
 - Mobility and fleets
 - Climate-resilient services and activities
 - Procurement of goods and services and materiel management
 - Policy and engagement
 - Oversight and performance management
- Benefits

Overview

In Canada and abroad, the effects of climate change are evident. Warming in Canada is, on average, the global average, and is even more in northern parts of the country. Impacts such as increases in wildfires and flooding; ecosystem changes; coastal erosion; thawing permafrost; and risks to critical infrastructure and impacts to food and water are already being felt in Canada and globally. The science is clear that human activities are driving unprecedented changes in the Earth's climate, which pose significant risks to human health, security, biodiversity

2024: Updated Greening Government Strategy (GGS): Net-zero emissions by 2050, climate-resilient and green operations

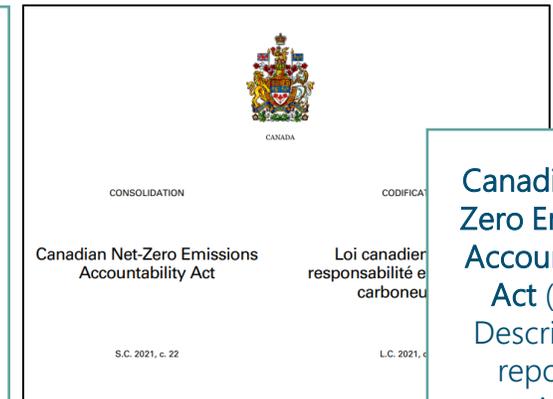
National



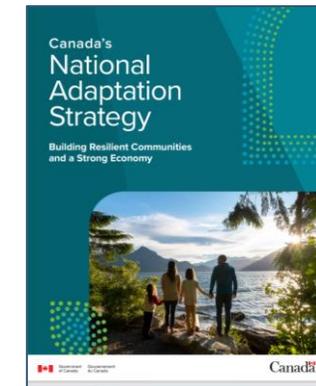
Federal Sustainable Development Strategy (FSDS):
 Goal 13: Take Action on Climate Change and its Impacts
 Goal 12: Reduce Waste and Transition to Zero Emission Vehicles



2020 & 2022: Canada's climate plans target net-zero emissions by 2050 and include greening government



Canadian Net-Zero Emissions Accountability Act (2021): Describe and report on emissions reductions strategies for federal gov't operations



2023: First national adaptation strategy guides action to better adapt to and prepare for impacts of climate change

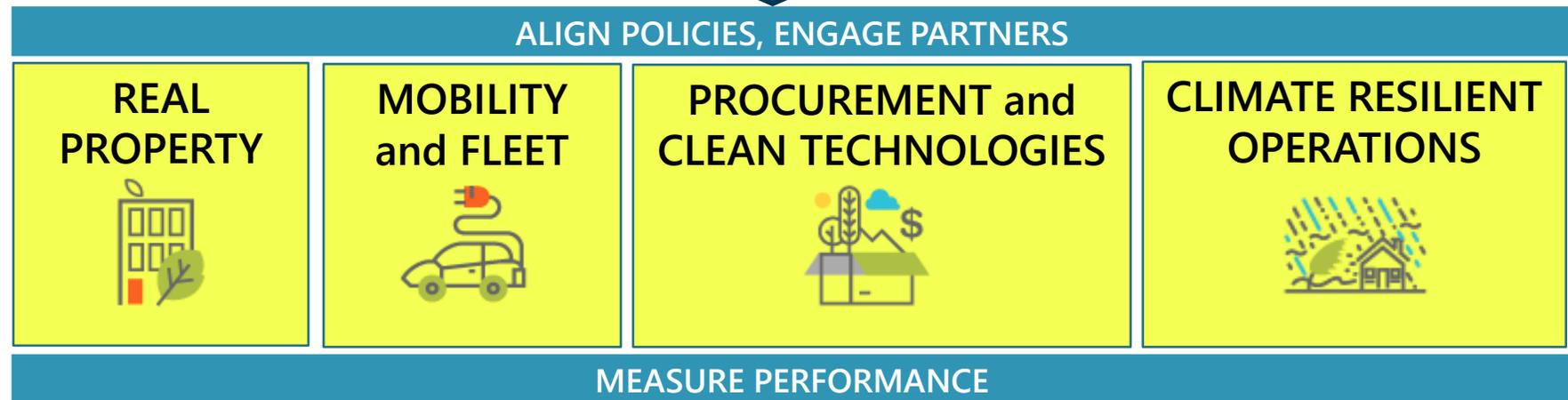
Treasury Board of Canada Secretariat: Centre for Greening Government

Objectives:



- ❖ 40% reduction of real property and conventional fleet emissions by 2025
 - ❖ Net-zero emissions overall by 2050
- ❖ Enhanced climate resilience of critical assets, services and activities by 2035
 - ❖ Overall green government operations

Greening Government Strategy (GGS) developed to get there:



Implementation:

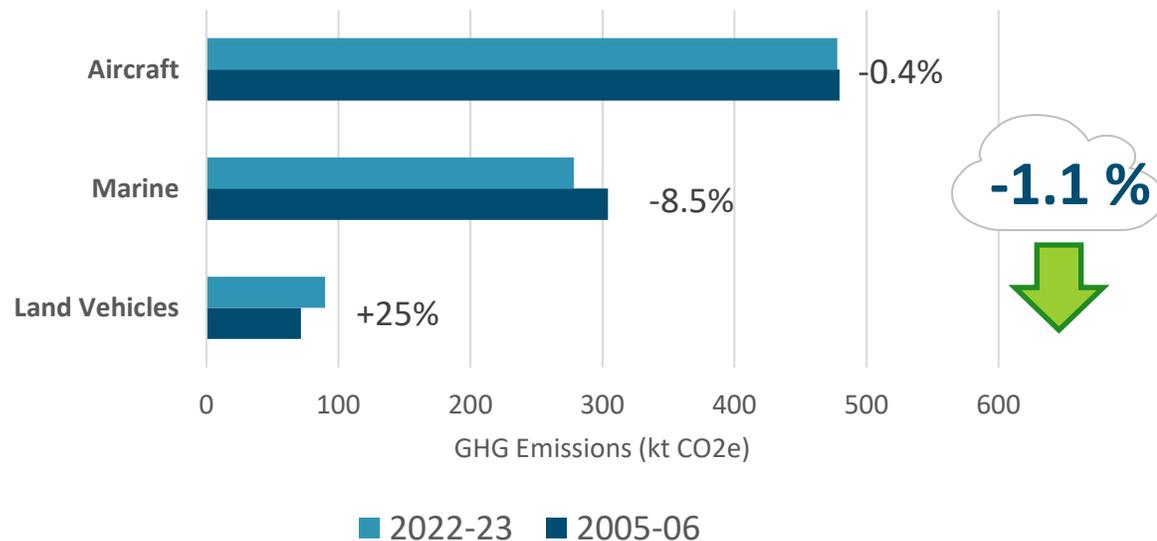
- TBS providing direction, guidance, Greening Government Fund and Low-Carbon Fuel Procurement Program
- Expert depts. providing support (TBS/NRCan/PSPC/NRC/ECCC)
 - DEPARTMENTS TAKING ACTION

Performance:

39.8% reduction in GHG emissions to date (real property and conventional fleet)
1.1% reduction in emissions from National Safety and Security operations

National Safety and Security Fleet (NSSF) – Aviation, marine and land

Canada's NSSF comprises aircraft, marine vessels and tactical land vehicles of National Defence, the RCMP and the Canadian Coast Guard.



- NSSF operations generated ~850 ktCO₂e emissions in 2022-23 (~44% of federal footprint)
 - 69% National Defence, 20% Coast Guard and 11% RCMP
 - 58% aviation (> 200 million litres/yr)
 - 31% marine (> 100 million litres/yr)
- Reducing emissions through:
 - Low-carbon fuels & energy
 - Efficient fleet platforms
 - Operational efficiency
 - Carbon dioxide removal
- By 2030, at least 20% of annual domestic fuel purchases for air & marine will be low-carbon intensity fuels
 - Sustainable aviation fuel
 - Renewable diesel & biodiesel

Federal Low-Carbon Fuel Procurement Program (LCFPP)

\$134.9 million over 8 years starting in 2023-24 to support the purchase of low-carbon intensity liquid fuels (LCFs) for federal marine and air fleets

- Reduce greenhouse gas emissions from the federal fleet on the pathway to net-zero (National Defence, Canadian Coast Guard, Transport Canada)
- Stimulate market demand and help accelerate the transition to clean fuels through federal leadership & procurement

Key activities:

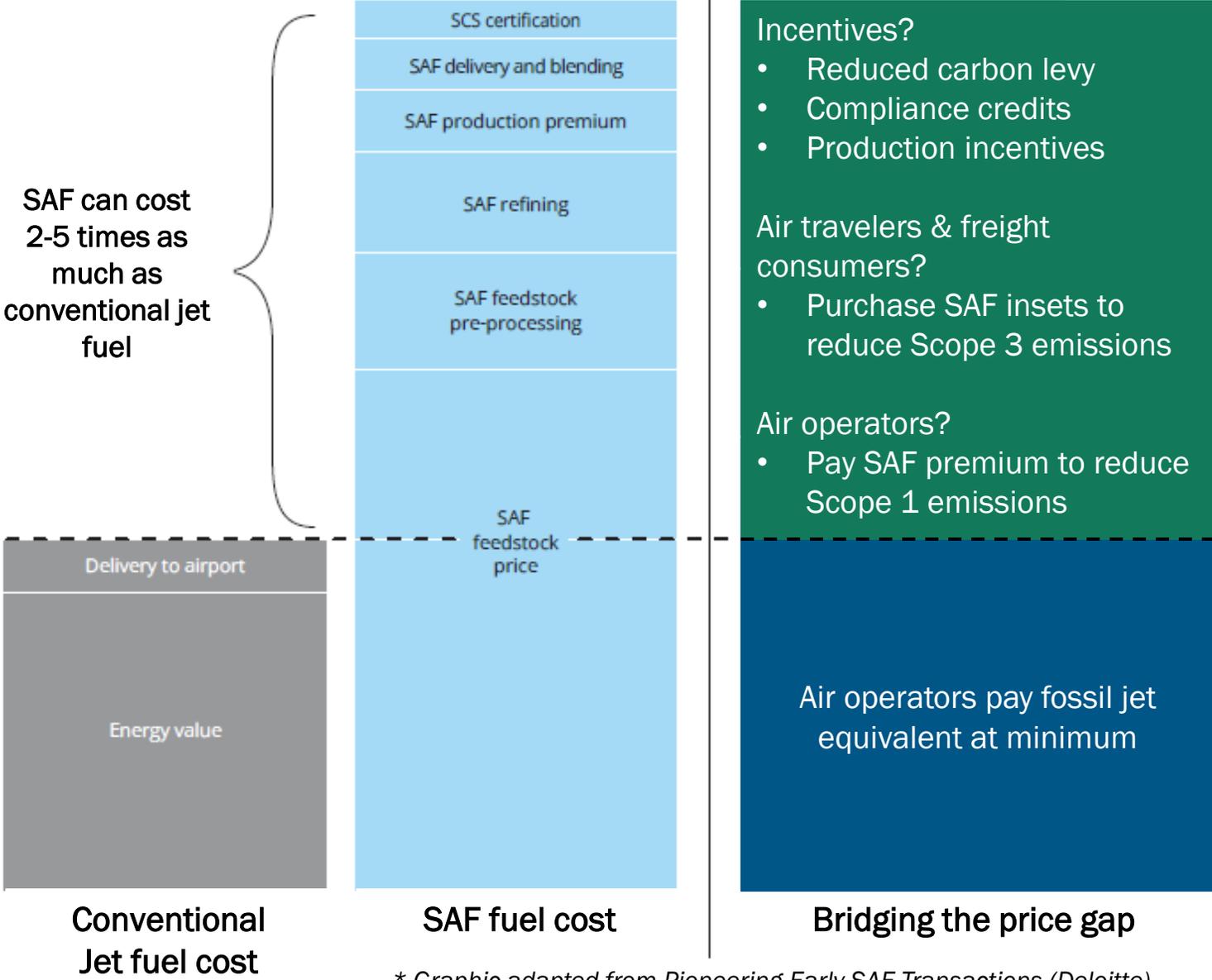
1. Establish flexible procurement mechanisms in locations across Canada
2. Provide funding to depts. to offset cost premium of LCF purchases
3. Work with suppliers and other major public and private-sector end users to increase availability and affordability of LCFs in Canada

Budget 2024 expanded scope to include carbon dioxide removal

Fuel Procurement

- Bulk fuel supplied to federal locations (e.g. Canadian Forces Bases)
- Into-vessel or into-plane refueling at ports and airports
- LCF procurement of both physical, blended fuels and environmental attributes (book and claim)

Book and Claim: Bridging price and logistics gaps



* Graphic adapted from Pioneering Early SAF Transactions (Deloitte)

SAF won't be produced or distributed unless the market is willing to pay

- Governments, operators and aviation end-users have roles to bridge the gap

Book and claim enables accelerated uptake at lower cost

- Reduce logistical barriers (e.g. fuel standards, distribution) and costs
- Consolidate demand from multiple actors in areas with the lowest deployment costs
- Enables claim stacking where allowed (regulated parties, operators, aviation end-users)
- Requires common approaches to tracking, documentation & accounting

SAF Book and Claim Procurement Activities to date

Posted on Canada Buys

- <https://canadabuys.canada.ca/en/tender-opportunities>

Aviation Turbine Fuel containing synthetic hydrocarbon components for CFB Cold Lake

- Closed Oct. 18, 2024 and contract awarded
- Delivery of 6 million litres (ML) of aviation turbine fuel plus supply of the environmental attributes of 6 ML of SAF through book and claim (option for add'l 9 ML)

Delivery of Environmental Attributes Associated with SAF

- Launched Nov 22, 2024 and closes Jan 3, 2025
- Supply the environmental attributes of up to 2.5 million litres of SAF through a book and claim system in the voluntary market

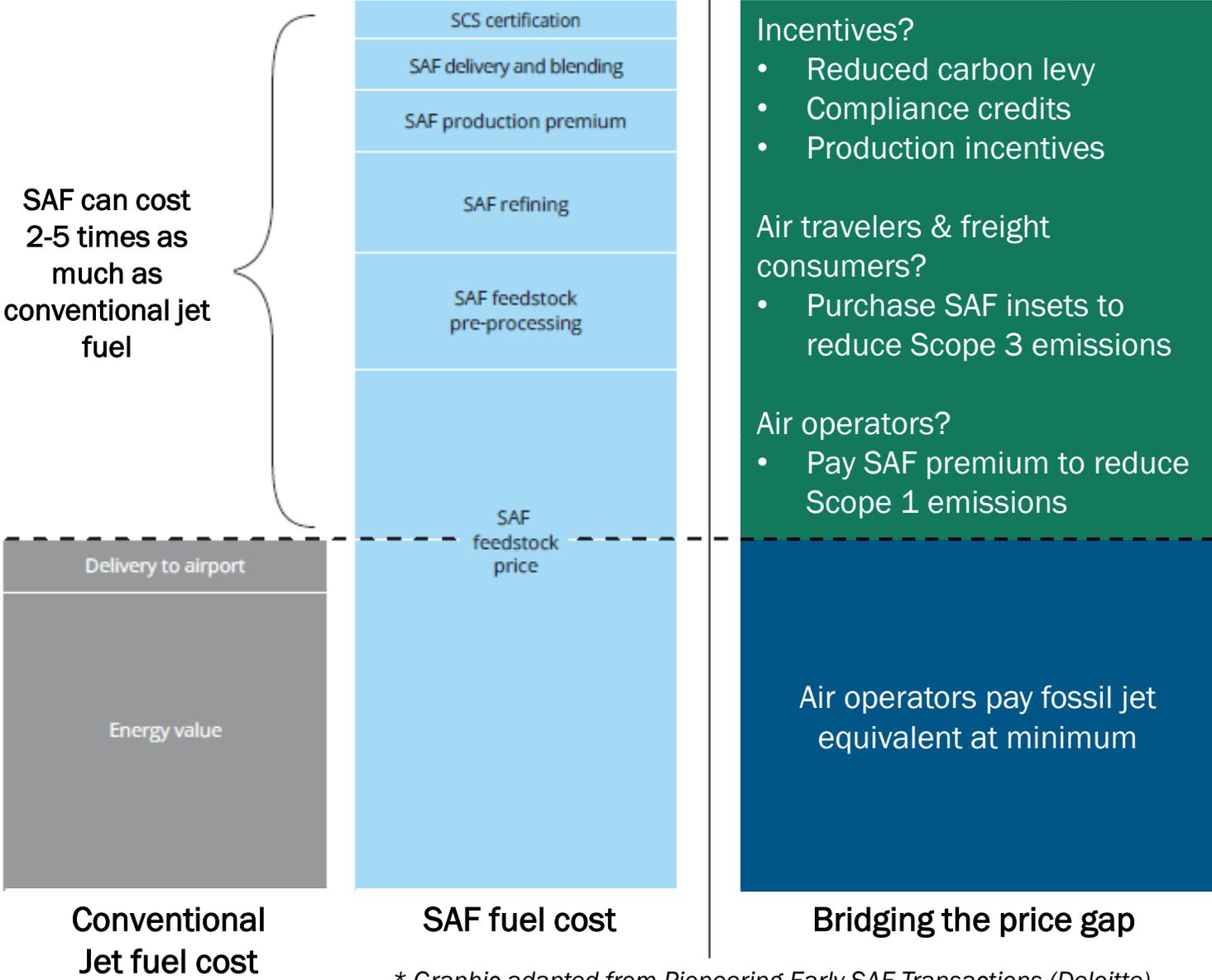
Book & Claim Approach

- SAF approved carbon intensity value (e.g. Clean Fuels Reg.) with >50% reduction
- SAF uplifted to a Canadian airport and sold as conventional fuel
- SAF environmental attributes decoupled & tracked in electronic data system (registry) with substantiating information (e.g. chain of custody, CI, etc.)
- Registry is third-party verified in accordance with relevant guidelines (e.g. ISO 14064)
- SAF attributes assigned to Government of Canada or retired on its behalf
- SAF may also be claimed for regulatory compliance (price must be discounted accordingly)



**Discussion on
challenges,
opportunities and
next steps for
book and claim in
Canada**

Book and Claim: Bridging price and logistics gaps



* Graphic adapted from *Pioneering Early SAF Transactions* (Deloitte)

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