SAF in Canada

CAAFI Conference
Jun 3, 2022
Canada’s progress
Canada’s Recent Climate Commitments and Signals

2030 Emissions Reduction Plan (March 2022):
- Required under the Canadian Net-Zero Emissions Accountability Act, to reduce GHG emissions by 40 to 45% below 2005 levels by 2030.
- Commits to developing a whole-of-government approach to the long-term decarbonization of aviation, informed through ongoing engagement with industry and other stakeholders on a renewed action plan to reduce emissions from aviation.
- Working with international partners to increase ambition in International Civil Aviation Organization (ICAO) emission reduction goals and measures.

Strengthened Climate Plan (December 2020):
- “Work with aviation stakeholders to accelerate technology development and deployments of commercially ready solutions, including low carbon fuel and electric equipment at aviation hubs.”
- “Support global efforts to reduce emissions in the air and marine sectors.”

Joint Statement with US DOT (February 2021):
- Work together on a shared vision for aviation decarbonization consistent with goal of net zero emissions for our economies by 2050, and robust standards that integrate climate protection and safety.
- Advance development and deployment of high integrity SAF and other clean technologies, building on existing partnerships, and pursue policies to increase the supply and demand of SAF.
A renewal of Canada’s Action Plan

**Current plan expires in 2022**

- Established in 2012
- **1.8%** annual fuel efficiency improvement
- Cumulative **18%** improvement
- But, overall emissions grew by **50%** over same period due to increased demand

**New ambitious plan - target release before ICAO41**

**A Vision for 2050**

- Long-term vision for net-zero emissions by 2050
- Identifies **WHAT** measures need to be advanced to get there (wedge chart)

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<tr>
<th>2022</th>
<th>2030</th>
<th>2050</th>
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<tbody>
<tr>
<td><strong>Long-term Vision</strong></td>
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<tr>
<td><strong>Action Plan</strong></td>
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**An Action Plan (operational plan)**

- Nearer-term action plan (2022-2030)
- Identifies **HOW** Action Plan members will advance measures
  - Could set a near term target(s) and identify other supporting measures and commitments
  - Define how progress will be measured and reported
  - Establish governance
Regulatory Updates

Carbon Pricing

- $50 in 2022, $15 a year until $170 in 2030
- Carbon levy applied in certain provinces for jet fuel used in province
- Carbon levy not yet applied to inter-provincial aviation
- Working to remove carbon levy from SAF

Low Carbon Fuel Standards

- Federal Clean Fuel Regulations for domestic fuel use effective Jan 1, 2023
  - SAF can generate credits - voluntary
- British Columbia is adding jet fuel to Low Carbon Fuels Act as of Jan 1, 2023
  - Consultation with first nations and industry has kicked off to develop regulations
Facilitate the production and use of sustainable aviation fuels (SAF) that are:

- Affordable
- Low-carbon/Sustainable
- Made-in Canada

Accelerate commercial production and deployment of SAF in Canada by:

- Catalyzing the ecosystem and activate value chains
- Designing and promoting public policy, strategies and a roadmap for SAF development in Canada
- Acting as a neutral and balanced technical expert
- Providing the “go-to-place” for SAF deployment in Canada

The Canadian aviation sector needs SAF to remain competitive in a net-zero future
C-SAF key elements

- Established by the airline members of the **fuel consortia** who own and operate fuel distribution and handling facilities at large Canadian Airports.

- C-SAF will be the **voice** of the SAF ecosystem and can **engage** with government.

- C-SAF is **boots-on-the-ground** and not R&D focussed and will partner with other specialized organizations to fill gap.

**SAF Ecosystem**

- Fuel Consortia +60 Airlines
- Producers
- Academia
- Tech/Feed
- Finance/Legal
- OEMs
- Associations
- Airports

Government also invited to join.
Enabling a SAF market in Canada

C-SAF Roadmap will determine how to close the GAP and a policy framework
C-SAF Clean Competitiveness Roadmap

SAF is part of a **system** of the clean chemical/fuel markets - SAF can’t be looked at by itself

- Identify **the priority actions, policies, and investments** necessary to catalyze transition in the aviation sector.
- Build **long-term economic value** and decarbonize the industry.
- Align **the whole supply chain** from upstream resources and capacities to downstream users and markets.
- Get down to **concrete initiatives**.
C-SAF Roadmap - Target Fall 2022

- Rough draft reviewed by a technical committee
- Process to facilitate and engage stakeholders for review and alignment

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<thead>
<tr>
<th>Workstreams</th>
<th>Description</th>
<th>Closing the gap</th>
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<tbody>
<tr>
<td>Feedstocks</td>
<td>agriculture, wood, waste, CO2, and hydrogen.</td>
<td>bring post-HEFA feedstocks online.</td>
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<tr>
<td>Refining</td>
<td>co-processing, and other ASTM pathways for fuel production.</td>
<td>secure new investment.</td>
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<tr>
<td>Technology</td>
<td>advance all the technologies needed for net-zero aviation (hydrogen, electrification, DAC, etc.)</td>
<td>accelerate post-HEFA pathways and build innovation ecosystem.</td>
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<tr>
<td>Sustainability</td>
<td>make the case for Canadian fuels and improve carbon accounting.</td>
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<td>Policy and programs</td>
<td>design the right package of policies to unlock SAF production and use</td>
<td>lower costs, clarify demand, and differentiate SAF from RD.</td>
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C-SAF is working with Transport Canada to adopt the SAF Roadmap into the Action Plan
Creating a SAF market in Canada

SAF Policy will be key!

- **Tailored** for aviation in Canada
- Recognize that SAF is **harder to make** than renewable diesel (and more **expensive**)!
- Consider SAF incentives in **other countries**
- Keep aviation **competitive** in a net-zero world
Thank you!

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