

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
STAFF BRIEFING

Item No.	<u>3b</u>
Date of Meeting	<u>December 8, 2015</u>

DATE: November 30, 2015
TO: Ted Fick, Chief Executive Officer
FROM: Elizabeth Leavitt, Director Aviation Planning and Environmental Services
Stephanie Meyn, Sr. Environmental Program Manager
SUBJECT: Aviation Biofuels MOU between the Port, Alaska Airlines, and Boeing

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to execute a Memorandum of Understanding between the Port, Alaska Airlines, and Boeing to conduct an Aviation Biofuels Infrastructure Feasibility Study.

SYNOPSIS

Aviation biofuel is the key to meeting the Port's Century Agenda goal to reduce aircraft-related emissions at Sea-Tac Airport by 25%. Earlier this year, Commissioners directed staff to develop a framework to advance the airport's integration and adoption of aviation biofuel.

In response to this request, the Port of Seattle, Alaska Airlines and the Boeing Company are developing an agreement to work collaboratively towards this effort. The three parties agree that evaluating biofuel blending and other necessary infrastructure to deliver aviation biofuel to Sea-Tac Airport will be a joint effort. The Port is seeking to formalize this understanding via a memorandum of understanding (MOU).

On December 8, Commission will be briefed on the content of the MOU. The value of the work associated with this agreement (Aviation Biofuel Infrastructure Feasibility Study) is \$250,000 and is anticipated to be completed by Q4 2016.

BACKGROUND

The Port's Century Agenda Goal is to reduce aircraft-related carbon emissions at Seattle-Tacoma International Airport by 25% (by ~2035). The key strategy to reduce these emissions is through the use of aviation biofuel. In addition, the Port recognizes that recent and preliminary research suggests that using aviation biofuels may reduce other air pollutant emissions from aircraft including soot or fine particles. The aviation biofuels initiative is another demonstration of the Port's commitment to protecting air quality, as shown in other Port programs including the NW Seaport truck scrappage program, the airport's electric Ground Support Equipment (eGSE) and our pre-conditioned air (PC Air) initiatives.

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

November 30, 2015

Page 2 of 5

Historically, the Port of Seattle has been a leader in supporting research and development of aviation biofuels, and as models of other airports and airlines using biofuel emerge (Los Angeles, Amsterdam, Oslo), we are also developing a market-support role.

At present, aviation biofuels are not produced in Washington state and must be imported by truck, rail, or barge. The fuel must then be blended with regular petroleum-based jet fuel (as required by fuel standards/law) before it is considered a “drop-in” fuel that can be used in aircraft and regular fueling infrastructure.

For aviation biofuels to be cost-competitive, they need to be delivered to the wing of the aircraft in the most efficient manner. Therefore, biofuels must be integrated into the existing fuel supply infrastructure including the pipeline, fuel tank farm and the hydrant system.

As leaders in aviation biofuels, the Port, together with Alaska Airlines and the Boeing, have determined that the key first step to biofuel adoption and integration is to conduct an Aviation Biofuels Infrastructure Feasibility Study to identify the best approach to deliver blended biofuel to Seattle-Tacoma International Airport.

Biofuel infrastructure will make Sea-Tac Airport an attractive option for any airline committing to using biofuel, and will assist in attracting biofuel producers to the region as part of a longer-term market development strategy.

JUSTIFICATION AND DETAILS

This year, Commissioners directed staff to develop a framework to advance the airport’s integration and adoption of aviation biofuel. Staff examined several ways in which to accelerate aviation biofuel adoption. Staff determined that a key first step to a broad-based biofuel program is to ensure that biofuels can be efficiently and effectively delivered to the airport.

In light of this, staff will oversee this study in order to fully identify and evaluate costs and infrastructure necessary to ensure that aviation biofuels can be successfully blended and delivered to aircraft at Sea-Tac prior to pursuing a more comprehensive biofuels program.

MOU Objectives are to:

- Formalize a partnership between the Port, Alaska Airlines, and the Boeing Company
- Provide a formal platform for the partners to work collaboratively to identify and evaluate the necessary infrastructure for delivering aviation biofuels for all airlines to use at Sea-Tac
- Be the first airport in North America to systematically evaluate and develop infrastructure to bring aviation biofuels to the airport
- Send a market signal that the Port of Seattle and its partners are preparing to be one of the first airports in the nation to develop a commercial-scale program

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

November 30, 2015

Page 3 of 5

Scope of MOU

The memorandum of understanding includes the following items:

- A statement of each partner's emission reduction goal
- A statement of the collective goal of the partners
- Roles and responsibilities
- Timeline

Schedule

Execute MOU	Dec. 2015
Request for Proposals published for Feasibility Study	Apr. 2016
Contract award	Jun. 2016
Completion of work/study	Nov. 2016

Commission briefings and stakeholder engagement will occur throughout the duration of the project.

FINANCIAL IMPLICATIONS

The Aviation Biofuels Infrastructure Feasibility Study is expected to cost \$250,000. The costs for these services will be accommodated in the Aviation 2016 Annual Operating Budget, and will be recovered through the rates and charges provisions of the 2013-2017 Signatory Lease and Operating Agreement. Alaska Airlines has invested approximately \$350,000 in batch-scale biofuel purchases to demonstrate its commitment to advancing the industry, and will be paying a premium over and above Jet A prices for any future fuel delivered to Sea-Tac. If the Feasibility Study outcome recommends infrastructure improvements to the airport's tank farm, it is expected that the debt service on these improvements will be borne by the members of the fuel consortium (SeaTac Fuel Facilities LLC) in the form of lease payments.

STRATEGIES AND OBJECTIVES

This MOU supports the Airport's strategic objective to lead the U.S. airport industry in environmental innovation and reduce our environmental footprint. In addition, the aviation biofuels initiative is imperative to achieving the Port's Century Agenda objective to reduce aircraft-related carbon by 25% by 2037. The MOU also supports the airport's strategic objective to operate a world-class international airport and maintain valued community partnerships based on mutual understanding and socially responsible practices.

The Aviation Biofuels Infrastructure Feasibility Study will support the Port's strategy to manage our finances responsibly by using the most cost efficient means to secure services that require specialized expertise that cannot be effectively provided by Port staff.

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

November 30, 2015

Page 4 of 5

TRIPLE BOTTOM LINE

Economic Development

This agreement is an unprecedented first step toward developing the region's aviation biofuels sector. The Feasibility Study and MOU with Alaska Airlines and Boeing will send a strong signal that all three partners are committed to creating a market for aviation biofuels in the Pacific Northwest.

Environmental Responsibility

Sea-Tac is a leader in reducing its own environmental footprint, and has worked closely with airlines and partners to reduce emissions from petroleum fuels by investing in electric charging stations for ground support equipment and infrastructure to reduce aircraft idling such as pre-conditioned air.

Aviation biofuels can also significantly reduce carbon emissions as their lifecycle carbon footprint is typically 50 to 80% lower than petroleum Jet A, depending on the source of the biofuel and the process technology used to convert it to jet fuel. As noted above, there is also some preliminary research suggesting that aviation biofuels reduce soot emissions, which will benefit airport communities. This MOU will help accelerate the use of these fuels and take advantage of those benefits sooner.

Community Benefits

The procurement process for the Aviation Biofuels Feasibility Study will ensure that small businesses along with others in the region can compete for the work. The study will also help build a foundation for a commercial-scale aviation biofuel industry. Developing such an industry will produce significant jobs and substantially increase dollars spent in-state. While no specific projections are available for a regional biofuel industry, one national study found that producing 475 million gallons of biofuel in 2009 resulted in 23,000 jobs across the economy, \$4.1 billion in added GDP growth, \$445 million in federal tax revenues, and \$383 million for state and local governments. If we assume 50 million gallons of biofuel will be generated in-state in the future, we can expect that to generate approximately 2,000 jobs across the economy, most of which will be in-state.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) No Action – Do not support the MOU. This is not the recommended alternative.

Cost Estimate: \$0

Pros:

- No cost to the Port

Cons:

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

November 30, 2015

Page 5 of 5

- Inadequate information on infrastructure needed to deliver aviation biofuels at Sea-Tac Airport
- Airlines will be less interested in bringing biofuels to Sea-Tac Airport
- Loss of leadership position in aviation biofuels and fall behind other airports in integrating biofuels

Alternative 2) – Execute MOU. This is the recommended alternative.

Cost Estimate: \$250,000, recovered through the rates and charges provisions of the 2013-2017 Signatory Lease and Operating Agreement.

Pros:

- Be the first airport in the nation to take such an action
- Airlines like Alaska Airlines will consider Sea-Tac Airport an attractive option for biofuel delivery and use
- Provide an analytical, thoughtful approach to biofuel delivery, and make a more informed and efficient infrastructure decision
- Send a positive market signal to aviation biofuel producers
- Fueling infrastructure integration will benefit all airlines.

Cons:

- Financial cost to Port (including staff time)

ATTACHMENTS TO THIS REQUEST

- PowerPoint Presentation
- MOU for execution

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- February 10, 2015 - Commission Briefing: "Strategy for a Sustainable Sea-Tac (S3)"