



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 10b

**ACTION ITEM**

**Date of Meeting** November 16, 2021

**DATE:** October 6, 2021

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Stephanie Meyn, Sr. Environmental Program Manager, Aviation  
Arlyn Purcell, Director, Aviation Environment & Sustainability

**SUBJECT: Memorandum of Understanding Between the Port of Seattle and King County for a Feasibility Study Related to Municipal Solid Waste Conversion to Liquid Fuels**

**ACTION REQUESTED**

Request Commission authorization to authorize the Executive Director to enter into a Memorandum of Understanding (MOU) with King County (the County) to jointly manage a technical and economic feasibility study of regional municipal solid waste (MSW) conversion to liquid fuels including sustainable aviation fuel; and (2) To authorize the Executive Director to advertise, award, and execute a contract on behalf of the parties in the MOU to conduct the MSW-to-fuel feasibility study.

The funding for this study was previously authorized by the Commission on November 17, 2020 as part of the Port Commission's 2021 Budget Amendment No. 2, and was included in the 2022 Budget.

**EXECUTIVE SUMMARY**

In 2017, the Commission set a 10-year goal of having 10% of the fuel used at Sea-Tac Airport (SEA) to be made from sustainable sources found in the region. In 2019, the Port funded Washington State University (WSU) to identify potential feedstocks to produce Sustainable Aviation Fuel (SAF) to meet the goal. WSU found that municipal solid waste (MSW) was the most readily available and economically viable sustainable feedstock in the region.

On November 17, 2020, the Port allocated up to \$250,000 from the \$5 million set-aside in the Sustainable Aviation Fuels and Air Emissions Reduction Fund to evaluate the technical, logistical and financial feasibility of partnering with the County and other potential regional partners on converting regional MSW to sustainable liquid fuels, including on-road, maritime, and aviation.

Lines 1640-1645 of the adopted 2021-2022 King County Biennial Budget includes the following expenditure restriction for the Solid Waste Division: "Of this appropriation \$250,000 shall be expended or encumbered solely to evaluate the technical, logistical and financial feasibility of partnering with the Port of Seattle to direct some or substantially all of the municipal solid waste

Meeting Date: November 16, 2021

and other material received at county solid waste facilities to the Port of Seattle sustainable aviation fuel project for conversion into sustainable jet fuel and other fuels.”

This Memorandum of Understanding (MOU) forms a partnership with the County to conduct this jointly funded feasibility study and outlines the roles and responsibilities of each party.

As described in the MOU, the Port will conduct the procurement process. We expect to begin that process immediately upon executing the MOU, which is why authorization to advertise, award, and execute a contract is also included in this action.

### **JUSTIFICATION**

This project supports the following Century Agenda and Commission goals and objectives:

- (1) Be the greenest and most energy-efficient port in North America
- (2) Reduce Scope 3 greenhouse gas emissions 50 percent below 2007 levels by 2030
- (3) Power every flight fueled at SEA with at least a 10% blend of sustainable aviation fuel (SAF) by 2028.

The most viable feedstock or source of sustainable fuel in this region is MSW, and the County is uniquely positioned in this region to help meet the demand for renewable fuels as we decarbonize the transportation sector, and air travel. This work will also help support economic development of the clean energy sector in this region and could help meet the production volume thresholds required in the Washington Clean Fuel Standard.

### ***Diversity in Contracting***

Diversity in Contracting Department will be contacted regarding this procurement to establish women- and minority-owned business enterprise goals and inclusion in this procurement.

### **DETAILS**

The Scope of Work for the study was developed by the County and Port staff in parallel with the MOU and will be immediately integrated into the advertisement.

To help guide the study, we anticipate forming a Technical Advisory Committee of fuel and waste experts who do not have a conflict of interest with the potential respondents to the advertisement. This approach is similar to the Sustainable Aviation Fuels Infrastructure Feasibility Study that was conducted in 2016 with the technical support of Boeing, Alaska Airlines, and the president of SEA’s fuel consortium.

### ***Scope of Work***

The purpose of this work is to evaluate the feasibility of directing some or all of the MSW and other material received at the County and other regional (western WA and OR) solid waste facilities to a potential future sustainable fuel production facility. The study will provide insight into the potential costs and benefits from building and operating a renewable fuel production facility that uses regionally-generated MSW.

Meeting Date: November 16, 2021

While the entire scope of work won't be released until contract advertising, the main areas for this feasibility study include:

- Potential waste-to-fuel technologies, including the specific waste stream and pre-treatment needs
- Quality and quantity of the County's and western Washington/Oregon waste stream suitable for conversion to liquid fuels
- Capital and operating expenses of a fuel production facility including siting and transportation costs of the finished fuel to Seattle-Tacoma International Airport (SEA) and other key fuel hubs, along with any revenue generated from waste, tipping fees, and sales of other fuel production co-products
- Benefits of co-locating or coordinating with other waste handling and/or fuel processing facilities, waste management companies, and fuel end-user(s),
- Changes required to waste management plans, policies, or regulations within county, regional, and state government to accommodate a waste-to-fuel facility
- Impact of diverting MSW on County Solid Waste Division (SWD) current operations and finances including the existing contract for renewable natural gas generated by Cedar Hills Regional Landfill
- Potential equity and social justice implications for host communities, emissions, employment, etc.,
- Options for future land and facility ownership and operation.

***Schedule***

The combined value of the Port and the County's contribution classify this procurement as a Category (CAT) 3. The schedule to advertise and execute is the following:

*Activity*

Commission authorization	Q4 2021
Advertise	Q1 2022
Contract execution	Q2 2022
Substantial completion	Q4 2022
Final report	Q1 2023

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

1. Do not sign the proposed MOU with the County but continue to conduct the study. The Port could pursue the procurement and conduct the study without a partnership with the County. This alternative requires the Port to reduce the funding and corresponding SOW for this study, including specific analyses needed to understand the costs and benefits of locating a SAF facility in King County. This would reduce the likelihood that the results

Meeting Date: November 16, 2021

would help the Port achieve its environmental goals and carbon reduction objectives. This is not the recommended alternative.

2. Do not sign the MOU and do not conduct the study. This alternative does not meet the Commission’s expectation to use up to \$250,000 to collaborate with the County on a study, and would not advance the Port’s advocacy on SAF to help meet Century Agenda goals. This is not the recommended alternative.
3. Sign the proposed MOU and conduct the study in partnership with the County. This alternative ensures that the study includes both the expertise and funding support provided by the County and provides robust results. *This is the recommended alternative.*

***Annual Budget Status and Source of Funds***

The funding for this study was previously authorized by the Commission on November 17, 2020 as part of the Port Commission’s 2021 Budget Amendment No. 2, and was included in the 2022 Budget.

King County will pay the Port in one lump sum using funds from their adopted 2021-2022 King County Biennial Budget at the time of contract execution for 50% of the total contract value, as described in the MOU.

**ATTACHMENTS TO THIS REQUEST**

- (1) Memorandum of Understanding with King County
- (2) Presentation Slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

November 17, 2020 – The Commission allocated up to \$250,000 from the \$5 million set-aside in the Sustainable Aviation Fuels and Air Emissions Reduction Fund in the Port Commission’s Budget Amendment No. 2.