Port of Seattle

COMMISSION AGENDA MEMORANDUM

Item No. 8b

ACTION ITEM

Date of Meeting February 26, 2019

DATE: February 15, 2019

TO: Stephen P. Metruck, Executive Director

FROM: Michael Ehl, Director, Airport Operations
Wayne Grotheer, Director, Aviation Project Management

SUBJECT: Rental Car Facility Bus Purchase (CIP #800810) and Employee Parking Bus Purchase (CIP #800956)

Amount of this request: $16,275,000
Total estimated project cost: $16,838,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) procure new buses for the rental car facility shuttle operation at Seattle-Tacoma International Airport; (2) procure new buses for the employee parking shuttle operation at Seattle-Tacoma International Airport; and (3) enter into a long-term agreement to establish a contract for future bus requirements for a period of 10 years. The amount of this request is $16,275,000. The total estimated cost for both projects is $16,838,000.

EXECUTIVE SUMMARY

The purpose of this project is to purchase 24 new compressed natural gas (CNG) buses to be fueled by renewable natural gas (RNG)—18 buses for employee parking and six for the Rental Car Facility (RCF) shuttle operation. The principal motivators for the fleet purchase are (a) the mandatory retirement of model-year 2002 CNG buses from employee parking and RCF shuttle fleets, (b) modest growth in rental car transactions, and (c) potential expansion of employee parking.

In evaluating options, the port considered cost, feasibility, and environmental impacts. The bus fleet contributes about 12 percent of port-controlled (scope 1 and 2) greenhouse-gas emissions at the airport. Alternatives focused on Century-Agenda carbon-reduction goals and included procuring new electric buses, refurbishing CNG buses to be fueled by RNG, and procuring new CNG buses to be fueled by RNG. These are described further in the alternatives analysis below.

The Rental Car Facility project (CIP #C800810) and the Employee Parking project (CIP #C800956) were included in the 2018-2022 capital budget and plan of finance as a business

plan prospective project with a total combined budget of $19,881,000. The original CIP budget was higher due to the assumption of purchasing electric buses.

JUSTIFICATION

Rental Car Facility

Although Sea-Tac rental car activity has experienced mixed results over the past three years, overall rental transactions have increased about 20 percent since 2012—the initial operating year for the consolidated RCF. The growth in transaction activity translates into increased shuttle bus passengers, and without additional buses, presents a challenge to Aviation Operations commitment to meet the five-minute peak service standard agreed upon by the Port and rental car industry.

Employee Parking

More than 12,000 airport and airline employees park in the Airport's North Employee Parking Lot and use the Port's employee bus system to travel to and from work. The current fleet of 11 CNG buses is approaching its 20-year useful life and must be replaced by Q2 2022. The lead time for new buses is 24 months, so the Port must execute a contract to order 18 new buses by Q3 2019. The quantity of 18 new buses includes the 11 replacement buses, three additional buses for maintenance (industry standard practice of 20 percent), and four additional buses to support future expansion of employee parking. At the request of the airlines, Aviation Operations could expand its employee parking offerings to other lots with four new buses. The new buses would be integrated into the employee parking fleet and coordinated with the existing operation.

The port's carbon-reduction goals, described in Century Agenda Strategy 4 (be the greenest and most energy-efficient port in North America), were an important factor in the alternatives analysis for this procurement.

Diversity in Contracting

Century Agenda Strategy 3 calls for use of the Port's influence as an institution to promote women and minority business enterprise (WMBE) growth, small business growth, and workforce development. We have engaged the Diversity in Contracting Department to assist in identifying potential Woman and Minority Business Enterprise (WMBE) vendors to help inform them of this potential procurement. This effort, through PortGen activities, is in support of Resolution 3737 to increase WMBE participation in Port's contracting efforts.

DETAILS

Of the 24 buses purchased, 16 buses would replace the existing CNG buses that must be retired in 2022, 4 buses are required to meet the industry standard practice for maintenance of 20 percent spare capacity, and 4 buses would support future expansion of employee

parking offerings to other locations (if needed). The Port must retire the existing 16 buses in June 2022 due to the de-certification of the CNG fuel tanks on each bus due to their age.

Rental Car Facility

Due to the immediate need for increased system capacity, five CNG buses were loaned from the existing employee parking bus fleet in 2015. The on-loan employee parking buses are model year 2002 and the 20-year legal useful life of the fuel tanks expires in Q2 of 2022. Thus, five new buses are required to replace these retiring units plus one additional bus for maintenance. Industry standard practice for fleet operations includes a 20-percent maintenance factor. In this case the Port recognizes a need for five additional buses plus one for maintenance for a total of six. Table 1 describes the composition of the RCF bus fleet now and as proposed.

Table 1: RCF Bus Fleet Composition Summary

	Existing Fleet	**Retirements**	**New Fleet (as proposed)**
No. of 2011 buses	29	0	29
No. of 2002 buses on-loan	5	5	0
No. of new buses	N/A	N/A	6
Total No. of RCF Buses	34	N/A	35

Employee Parking

The procurement will establish an agreement for future RNG/CNG bus requirements for a period of ten years. This procurement will provide the Port flexibility to buy additional buses as needed, but subject to future authorization. If battery technology advances within the ten-year period, and RNG/CNG buses become a less attractive option, the Port will explore an alternative procurement.

Schedule

The existing model-year 2002 CNG buses face mandatory retirement in June 2022 due to the de-certification of the CNG fuel tanks on each bus—a regulatory requirement for CNG fuel systems of a certain age and configuration. To continue the Rental Car Facility and Employee Parking shuttle operations the established schedule for bus replacement must be met.

Activity	
Execute Bus procurement contract	2019 Quarter 3
Bus delivery	2021 Quarter 3
In-use date	2021 Quarter 4

Cost Breakdown	This Request	Total Project
Rental Car Facility Bus Purchase	$4,123,000	$4,403,000
Employee Parking Bus Purchase	$12,152,000	$12,435,000
Total	$16,275,000	$16,838,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

All three project alternatives provide significant environmental benefits to the Port. Replacing the CNG buses with electric buses or CNG buses fueled with RNG will reduce the greenhouse gas emissions from airport activities by up to four percent. Port staff completed a decision analysis that resulted in the recommendation for Alternative 3, new CNG buses fueled by RNG for the RCF and Employee Parking. There is a federal incentive program that supports RNG production for transportation and many organizations in Washington and other states routinely purchase RNG for use in their transportation fleets.

The three alternatives were evaluated and scored for the following objectives:

(1) Complies with Century Agenda Scope 1+2 greenhouse gas goals.
(2) Minimizes impacts to current operations.
(3) Minimizes current operational costs, initial capital costs, and 20-year total cost of ownership (TCO).

Risks were identified for each alternative, including their probability and seriousness. The risk assessment was used in the final evaluation and selection of the recommended alternative. Environmental benefits were calculated and compared among the alternatives. TCO was calculated over a 20-year period that includes Electric and refurbished CNG bus replacements in year 13, and new CNG bus life of 20 years.

RNG Availability

The Port recently issued a request for proposal (RFP) for RNG that closes on April 12. While the Port recognizes the uncertainty in procuring RNG, nearly 100 facilities are currently generating and selling RNG to customers across the nation and dozens more are in a substantial state of development.

In addition, the U.S. Environmental Protection Agency expanded the Renewable Fuel Standard in 2014 to allow RNG used for transportation vehicles such as fleets to qualify for federal credits (Renewable Identification Numbers, or RINs). These credits provide additional financial incentives for developers and potential sources (e.g., wastewater treatment plants) to produce the fuel.

California provides additional incentives through their state program, the California Low Carbon Fuel Standard Program. However, many organizations outside California routinely purchase RNG for use in their transportation fleets, including Dallas Fort Worth Airport, and Recology Cleanscapes, who run 80 trucks on RNG and operate the second-largest waste

hauling fleet in the Seattle region. RNG may be available outside of California due to market saturation as available supply surpasses current demand. Similarly, some producers outside California may choose to sell RNG to local or regional customers to limit the cost of transporting the gas on interstate pipelines.

Alternative 1 – Purchase 26 new electric buses (6 for RCF, and 20 for Employee Parking) and 16 new chargers (6 for RCF, and 10 for Employee Parking), including the associated infrastructure.

Cost Implications: Total estimated cost for this option is $36.6 million ($9.7 million for RCF, and $26.9 million for Employee Parking).

Pros:

(1) Reduces approximately 1200 metric tons of CO_2/year. This alternative emits 20 metric tons more than Alternatives 2 and 3 because Port electricity has some carbon associated with it, while RNG does not.
(2) Quietest bus operation.
(3) Opportunity for drivers and maintenance staff to learn new skills associated with this emerging bus electrification technology.
(4) Opportunity to pursue FAA Zero Emissions Vehicle (ZEV) grant funding for the Employee Parking operation.

Cons:

(1) Bus electrification is an emerging technology, which inherently carries risk. This technology is likely to improve significantly over the next ten years.
(2) Charging significantly increases the time needed to prepare buses for operation.
(3) Project costs for the electric buses are more than double the costs for CNG. Comparatively higher costs unique to this alternative include electric buses and the design and installation of charging infrastructure.
(4) Higher weight of electric buses could require strengthening of RCF 5th floor and Access Bridge. This is a risk, which will require evaluation by a design consultant during the design phase.
(5) Additional training will be required for bus drivers and maintenance staff.

This is not the recommended alternative.

Alternative 2 – Purchase 24 Refurbished CNG Buses (6 for RCF, and 18 for Employee Parking), fueled with RNG.

Cost Implications: An estimated $441,000 in costs to date will need to be expensed if this option is pursued. The total estimated cost for this option is $11.6 million ($3.1 million for RCF, and $8.5 million for the Employee Parking).

Pros:

(1) Reduces 1220 metric tons of CO_2/year.
(2) No operational changes required.
(3) No new infrastructure required.

(4) Lowest initial cost and low 20-year TCO due to the lowest bus cost.
(5) Bus electrification is an emerging technology that is likely to improve significantly over the next ten years. This alternative allows the Port to delay transition to electric and allow technology to mature. This reduces cost and overall risk.

Cons:

(1) High potential for increased bus down time due to part availability, additional preventive maintenance and increased risk of failure of original equipment not replaced as part of the refurbishment (i.e., dashboard components, rebuilt transmission, original wiring, etc.).
(2) Large variance in quality between the three major bus refurbishment companies.
(3) Delayed opportunity in learning to use an emerging technology (electric buses).
(4) No opportunity to pursue FAA Zero Emissions Vehicle (ZEV) grant funding for the Employee Parking.

This is not the recommended alternative.

Alternative 3 – Purchase 24 new CNG Buses (6 for RCF, and 18 for Employee Parking), fueled with RNG.

Cost Implications: An estimated $441,000 in costs to date will need to be expensed if this option is pursued. The total estimated cost for this option is $16.8 million ($4.4 million for RCF, and $12.4 million for the Employee Parking).

Pros:

(1) Reduces 1220 metric tons of CO_2/year.
(2) No operational changes required.
(3) No new infrastructure required.
(4) Low initial cost and the lowest 20-year total cost of ownership due to 20-year bus life.
(5) Bus electrification is an emerging technology that is likely to improve significantly over the next ten years. This alternative allows the Port to delay transition to electric and allow technology to mature. This reduces cost and overall risk.

Cons:

(1) Higher initial cost than alternative 2, refurbished bus.
(2) Delayed opportunity in learning to use an emerging technology (electric buses).
(3) No opportunity to pursue FAA Zero Emissions Vehicle (ZEV) grant funding for Employee Parking.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary	RCF C800810	Employee Parking C800956	Total
COST ESTIMATE			
Original estimate	$1,800,000	$18,081,000	$19,881,000
Budget Increase/(Decrease)	$2,603,000	($5,646,000)	($3,043,000)
Revised estimate	$4,403,000	$12,435,000	$16,838,000
AUTHORIZATION			
Previous authorizations	$280,000	$283,000	$563,000
Current request for authorization	$4,123,000	$12,152,000	$16,275,000
Total authorizations, including this request	$4,403,000	$12,435,000	$16,838,000
Remaining amount to be authorized	$0	$0	$0

Annual Budget Status and Source of Funds

The Rental Car Facility project (CIP #C800810) was included in the 2019-2023 capital budget and plan of finance as a business plan prospective project with a total budget of $1,800,000. The original CIP budget was lower as it only included four buses rather than the current quantity of six. The budget increase was transferred from the Non-Aeronautical Allowance #C800754. The funding source for this project will be the Customer Facility Charges (CFC).

The Employee Parking project (CIP #C800956) was included in the 2019-2023 capital budget and plan of finance as a business plan prospective project with a total budget of $18,081,000. The original CIP budget was higher due to the assumption of purchasing electric buses. The budget decrease was transferred to the Non-Aeronautical Allowance C800754. The funding source for this project will be the Airport Development Fund and future revenue bonds.

Financial Analysis and Summary

	RCF C800810	Employee Parking C800956
Project cost for analysis	$4,403,000	$12,435,000
Business Unit (BU)	Rental Car Facility	Employee Parking
Effect on business performance (NOI after depreciation)	NOI after depreciation will decrease.	NOI after depreciation will increase in 2022. Current NOI will decrease due to write off of $215,000.
IRR/NPV (if relevant)	Recommended alternative has the lowest NPV of the total cost of ownership.	Recommended alternative has the lowest NPV of total cost of ownership.
CPE Impact	N/A	N/A

Future Revenues and Expenses (Total cost of ownership)

Rental Car Facility shuttle bus expenses are recovered through CFCs paid by rental car customers as part of their rental agreement. Operational and maintenance costs for the RCF facility are not anticipated to change due to this project if the recommended alternative is selected.

Employee parking operates on a cost recovery basis and costs for this project will be recovered through increased monthly parking fees. The operational and maintenance costs for the NEPL are not anticipated to change due to this project if the recommended alternative is selected.

ATTACHMENTS TO THIS REQUEST

(1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

January 8, 2019 – The Commission was briefed on the contents of this action.