

INTER OFFICE MEMO

To: Board of Directors

Date: September 11, 2019

From: J. Scott Mitchell
Chief Operating Officer

Reviewed by: 

SUBJECT: Retrofit Batteries and Battery Management System – 1600 Series Buses

BACKGROUND: In 2016, County Connection purchased four (4) prototype electric buses from Gillig using a 2012 Clean Air Grant for use on the Route 4 in Walnut Creek.

SUMMARY OF ISSUES: The 2016 buses were built by Gillig using XALT batteries with a 4C battery management system and BAE drivetrain. County Connection has experienced an unacceptable level of battery system problems due to battery management, which has resulted in limited availability of the buses and a high rate of service interruptions and accelerated battery degradation.

XALT has stopped using 4C for their battery management system making it difficult to support. County Connection has been working with Gillig to resolve these issues. Gillig has recommended, and County Connection staff agrees, the best way to resolve these issues is to retrofit the 1600 batteries and management system to match the 1800 series buses that have improved range and reliability and use a different battery management system and battery pack. The cost to retrofit four (4) buses with new batteries and management system with a three (3) year warranty is \$594,126.

Gillig is willing to take on \$364,126 of the cost. The remaining \$230,000 will be paid for by County Connection using a LCTOP Grant that is programmed to support the electric vehicles.

FINANCIAL IMPLICATIONS: LCTOP: \$230,000

RECOMMENDATIONS: The A&F Committee recommend that the Board of Directors adopt Resolution No. 2020-07 authorizing the General Manager to enter into an agreement with Gillig to retrofit four (4) 1600 series electric buses, with the cost to County Connection not to exceed \$230,000.

ACTION REQUESTED: The A&F Committee recommend that the Board of Directors at its September 19, 2019, meeting, adopt Resolution No. 2020-07 authorizing the General Manager to enter into an agreement with the Gillig Corporation to retrofit four (4) electric buses with new battery pack and battery management system, with the cost to County Connection not to exceed \$230,000.

RETROFIT COST

Description	Remarks	Per Unit	Extended
XALT Parts	Refer to XALT Quote	\$ 86,746	\$ 346,984
XALT NRE	Commissioning	\$ -	\$ -
XALT Add'l 3 Year Warranty		\$ 3,387	\$ 13,548
Telematics Kit - Additonal Years		TBD	TBD
GILLIG Parts	HV Cables	\$ 6,400	\$ 25,600
	Rear Panel	\$ 4,700	\$ 18,800
	AV Harness	\$ 4,500	\$ 18,000
GILLIG Labor (Eng, Mfg)	40 Hrs/Unit	\$ 4,000	\$ 16,000
BAE Labor	40 Hrs/Unit	\$ 4,200	\$ 16,800
Complete Coach Labor		\$ 22,493	\$ 89,970
Towing		\$ 1,400	\$ 5,600
10% Risk			\$ 42,824
TOTAL			\$ 594,126

Open Points

- 1-year real time monitoring from XALT
- Charges for Ongoing SW & Troubleshooting support from BAE, XALT, WAVE, EFACEC

GILLIG



RESOLUTION NO. 2020-07__

**BOARD OF DIRECTORS, CENTRAL CONTRA COSTA TRANSIT AUTHORITY
STATE OF CALIFORNIA**

* * *

**AUTHORIZING AWARD OF A CONTRACT
TO GILLIG, LLC TO PROVIDE BATTERY AND BATTERY MANAGEMENT SYSTEM
RETROFIT SERVICES**

WHEREAS, the County of Contra Costa and the Cities of Clayton, Concord, the Town of Danville, Lafayette, Martinez, the Town of Moraga, Orinda, Pleasant Hill, San Ramon and Walnut Creek (hereinafter "Member Jurisdictions") have formed the Central Contra Costa Transit Authority ("County Connection"), a joint exercise of powers agency created under California Government Code Section 6500 et seq., for the joint exercise of certain powers to provide coordinated and integrated public transportation services within the area of its Member Jurisdictions;

WHEREAS, in 2016, County Connection purchased four (4) prototype electric buses from Gillig Corporation ("Gillig") using a 2012 Clean Air Grant for use on the Route 4 in Walnut Creek;

WHEREAS, the 2016 buses use XALT Energy ("XALT") batteries with a 4C battery management system, and County Connection has experienced an unacceptable level of battery system problems due to poor battery management, which has resulted in limited availability of the buses and a high rate of service interruptions and accelerated battery degradation;

WHEREAS, XALT has stopped using 4C for their battery management system, making it difficult to obtain support for the battery system problems;

WHEREAS, Gillig has recommended, and County Connection staff agrees, that the most beneficial way to resolve these issues is to retrofit the 1600 batteries and management system to match the Gillig 1800 series buses, which have improved range and reliability and use a different battery management system and battery pack;

WHEREAS, the cost to retrofit the four (4) buses with new batteries and management system with a three (3) year warranty is \$594,126, with the understanding that Gillig will be responsible for \$364,126 of the cost, and the remaining \$230,000 will be paid for by County Connection using a LCTOP grant that is programmed to support the electric vehicles; and

WHEREAS, Administration and Finance Committee recommends that the Board of Directors authorize award of a contract to Gillig for the battery and battery management system retrofit of four (4) 1600 series electric buses, for the not-to-exceed cost of \$230,000.

NOW, THEREFORE, BE IT RESOLVED that the Central Contra Costa Transit Authority Board of Directors authorizes award of a contract to Gillig Corporation for the battery and battery management system retrofit of four (4) 1600 series electric buses, for the not-to-exceed cost of \$230,000; and

BE IT FURTHER RESOLVED that the General Manager is authorized to execute the Agreement with Gillig in a form approved by legal counsel.

Regularly passed and adopted this 19th day of September 2019, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Candace Andersen, Chair, Board of Directors

ATTEST:

Lathina Hill, Clerk to the Board