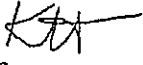

MEMORANDUM

TO: STEVE GIESBRECHT, BOROUGH MANAGER
FROM: KARL HAGERMAN, UTILITY DIRECTOR 
SUBJECT: FY23 SUPPLEMENTAL BUDGET REQUESTS
DATE: 9/26/2022
CC: JODY TOW, FINANCE DIRECTOR
DEBRA THOMPSON, CLERK
PROJECT FILE

Please find the details of supplemental budget requests to the electrical and water budgets for FY23 below.

PMPL

The department had budgeted for an overhaul of one of our larger generators in this budget year. However, upon consultation with industry mechanics that were at our plant to work on other engines, it is prudent to shift our attention to the EMD-16 that is in need of more immediate work. This unit had overheated many years ago and there are now signs that the internals are wearing to the point that a failure could occur. The funding for the EMD 20 overhaul will be shifted to this project and additional funds are requested to fully fund the work on the 16 cylinder EMD. Line item transfers and requested funds are detailed below:

Establish new line item titled "EMD-16 Rebuild" with a budget of \$325,000.

Transfer \$162,000 from 410 000 506524 - "EMD 20-1 Overhaul" to new "EMD 16 Rebuild"

Transfer an additional \$163,000 from Electric Fund reserves to "EMD 16 Rebuild"

Additionally, upon receipt and review of the generation load study produced by Electric Power Systems (EPS), it is prudent to rebuild and refurbish the Caterpillar 398 generator in order to maintain it's capacity in our system. It was a department plan to retire this unit and replace its capacity with new generation at Scow Bay, but with the high cost and lengthy timeline of adding new generation the department is going to rebuild the engine and clean/refurbish the generator to provide additional years of service. The unit is operational at this time but at a reduced capacity. This unit is one of our smallest generators but it is used frequently to meet systems peaks during an operational run.

Establish a new line item titled "CAT 398 Rebuild" with a budget of \$200,000

Transfer \$200,000 from Electric fund reserves to "CAT 398 Rebuild".

WATER DEPT

The water department has been working on addressing the ADEC requirement of eliminating a potential cross connection issue at the water storage tank piping. A solution has been designed and approved by the ADEC but due to extended periods of design and approval, spanning

multiple budget years, the current FY23 budget is not sufficient to construct the full project as designed. A concrete vault must be built to allow access to the underground piping at all times and in the event there is a need to bypass the storage tank in times of extreme emergency. The budget request is below.

Increase line item 420 000 506522 "Storage Tank Piping" to \$25,000. (an increase of \$15,000)

WASTEWATER DEPT

The wastewater department has been planning to install a small pump station at the municipal building to address periodic backups into the building without having to excavate the Haugen Drive/Nordic Drive intersection. The pump station has been purchased but electrical installation of the pump station power and control cabinet was budgeted in FY22 and not moved forward to FY23. The wastewater budget must be increased to accomplish the installation of the station.

Increase line item 430 000 506526 "Municipal Building Sewer" to \$20,000 (from reserves).

Additionally, an old plan to reconstruct the sewer parts shed at public works has resurfaced and is now possible due to increased production and capabilities of the Building Maintenance staff. Wastewater would like to provide funding through the supplemental process to purchase supplies and materials for reconstruction of this building. The labor and equipment required to construct the building will be supplied by Public Works/Building Maintenance.

Increase line item 430 000 501480 "Repairs and Maintenance" to \$34,600 (allocates \$25,000 to the sewer shed reconstruction)(from reserves).

Thank you for your consideration.



MARINE SYSTEMS, INC.

801 NW 42nd St., Suite 211, Seattle, WA 98107 Phone (260) 784-3302 Fax (260) 784-3358



To: Petersburg Municipal Power and Light
P.O. Box 329
11 South Nordic Drive
Petersburg, AK. 99833
United States
Email: aday@petersburgak.gov

Customer Account # 10142/ Quote #6240992

Dear Adam Day,

Marine Systems, Inc. appreciates the opportunity to provide you with the following estimate of repairs to the Gen Unit at Petersburg Power Plant in Petersburg AK.

As an authorized EMD distributor, Marine Systems, Inc. provides genuine OEM parts. All rebuilt components will conform to OEM dimensions, tolerances, and specifications

GENERATOR ENGINE OVERHAUL

- Disassemble and remove (16) power assemblies and related engine components.
- Inspect crankcase
- Replace water, fuel and oil pumps
- Change thermostats.
- Inspect main bearings, turbo screen, and OST Trip Assembly. Note: Any deficiencies with camshafts, will require a CFR for repairs
- Clean and inspect reusable engine components for power assemblies
- install 16 power assemblies with Viton head seat rings, install injectors and valve bridges
- Reassemble engine including new and remanufactured material. Torque all fasteners to specifications. Check "P" pipe alignment; verify rod thrust.

Quality Performance with Pride



- Wash down top deck area and oil pans, hand wipe oil pan and ensure cleanliness before oil is installed.
- Check camshaft timing, verify flywheel timing pointer, adjust injector and valve timing; adjust fuel racks.
- Measure and record cylinder head to piston clearance.
- Fill engines with cooling water and fuel. Check for fuel and water leaks.
- Test run engines for 1, 3, and 7minute bearing checks.
- Load Test engine.

Scope of Supplies

8	UTEX, STD.POWER ASM, FORK, 14.5:1, 645ET/EB	(ETA 90- 120 Days ARO)
8	UTEX, STD POWER ASM, BLADE, 14.5:1, 645ET/EB	(ETA 90 – 170 Day ARO)
16	INJECTOR, UTEX, MUI, 645ET, 3N	
16	INSERT, LOWER LINER	
32	VALVE BRIDGE ASM, REBUILT	
16	SET, ROCKER ARM, HD	
8	BEARING-CON ROD-LOWER	
8	BEARING-CON ROD-UPPER	
16	RING, HEAD SEAT (VITON)	
16	KIT, CYL. TEST VALVE	
1	BOLT KIT, 16 CYL POWER PACK INSTALLATION	
9	ELEMENT, THERMOSTAT	
1	GASKET, 9 ELEMENT	
9	O-RING	
9	SEAT	
9	SLEEVE	
1	PUMP, FRESH WATER, LHLB	
1	PUMP, FRESH WATER, LHRB	
2	KIT-GASKET	
4	SEAL, COUPLING, 4" PIPE ID	
2	BOLT KIT, FRESHWATER PUMP	
8	BOLT, 5/8-18 X 2 1/2	
2	GASKET	



1	GASKET
2	GASKET, 2" BYPASS VALVE MTG
1	GASKET
60	WASHER, FLAT 1/2
32	WASHER, FLAT 5/8
16	NUT, SEALASTIC 1/2-20
16	NUT, SEALASTIC 5/8-18
1	PUMP, PISTON COOLING/PRESSURE (16 CYL) EB
1	KIT-GASKET
1	BOLT KIT, L/O PUMPS WITH "BOX" STRAINER
1	PUMP, SCAVENGING (16/20-645ET/EB/EC)
1	KIT, GASKET, LO SCAV PUMP
2	GASKET
1	KIT, GASKET, FO MANIFOLD
1	BOLT KIT, L/O PUMPS WITH "BOX" STRAINER
1	PUMP, FUEL, FLANGED, 3.6 GPM AT 1200 R.P.M.
1	COUPLING
1	KEY, 3/16 X 3/4
1	KEY, WOODRUFF #1 - 1/16 X 1/2
2	GASKET, FUEL PUMP FLANGE
4	BOLT, 3/8-16 X 1 1/4
4	WASHER, FLAT 3/8 SAE
2	RAGS, COTTON, 25LB
60	GLOVE, WORK, KNIT
24	BRAKE CLEANER
6	FORM-A-GASKET, NO.2, 3.0OZ TUBE(RPLS PERMATEX-2)
1	SPRAY, ADHESIVE
1	GASKET, JOINT, TURBO SCREEN
1	GASKET, CHAMBER, TURBO SCREEN
24	BOLT, MANIFOLD, 1/2-20 X 2
24	NUT, EXHAUST MANIFOLD, 1/2-20
1	KIT, GASKET, STRAINER ELEMENT
1	KIT, OST GASKET



ESTIMATED COST OF PARTS.....	\$150,278.22
ESTIMATED LABOR COST.....	\$120,400.00
ESTIMATED COST OF EXPENSES.....	\$44,927.00

Total Estimated cost to make outlined repairs on Unit \$ 315,605.22

- *Estimate based on 2 MSI Techs working at Petersburg Power Plant, Petersburg, AK.*
- *Performing out lined repairs with the assistance of plant personnel Tecs, 20 ,12-hour days*
- *1 Day travel from Seattle.*
- *1 Day Travel to Seattle.*
- *Parts will be invoiced once shipped from Marine Systems Inc. to the job site, labor and expenses will be invoiced following job completion*

CUSTOMER RESPONSIBILITIES

The Customer is responsible for the following:

1. Providing a safe work environment for our service personnel.
2. Providing crane services and/or services to facilitate material movement at the job site.
3. Providing adequate space and working conditions to effectively execute the scope of work.
4. Delays not the fault of Marine Systems, Inc.
5. Delays due to plant orientation and safety classes.
6. Providing adequate ventilation, compressed air for tooling, and lighting.
7. Providing diesel fuel oil for cleaning.
8. Removing and disposing of waste material and fluids associated with the engine services.
9. Removing and replacing any interferences.

NOTE: Marine Systems will not be responsible for removal or replacement of any fluids (oil or coolant)



COMMENTS

1. * Prices are based on the return of useable like-cores for unit exchange items. Core charges would apply for items that are non-rebuildable.
2. Non-exchange items deemed missing or non-rebuildable will be charged as additional.
3. Environmental charges, waiting time, mileage, freight, conversions, **are not** included in the above cost and will be additional.
4. ***All items cleaned, inspected, and reused are not covered by warranty**
5. The customer is responsible for all applicable sales and use taxes related to this order.

CORE CHARGE TERMS

- The following materials (cores) are to be returned to Marine Systems, Inc. Seattle, WA, within 30 Days of the completion of the project. Upon evaluation, core charges will be assessed and applied. All cores must be like in kind, complete, and rebuildable.
- Cores returned after 30 days from the date of sale may result in no credit given, unless prior written authorization is established.
- Cores will be evaluated and may have additional charges for any deficiencies to return the core to a like in kind core.
- MSI EMD power pack pricing is for like in kind Diamond <5> heads or better. Diamond <4> or less heads are subject to upgrade charges.

***All items cleaned, inspected, and reused are not covered by warranty**

Qty.	Part No.	Item Description	Unit Price	Extended Price
8	40122753	FORK PACK UTEX CORE (UTEX)	\$ 2,100.00	\$ 16,800.00
8	40122754	BLADE PACK UTEX CORE (UTEX)	\$ 2,100.00	\$ 16,800.00
32	40145929	VALVE BRIDGE ASSEMBLY (UTEX)	\$ 101.25	\$ 3,240.00
16	099125HD	SET, ROCKER ARM ASSEMBLY (MSI EXCHANGE)	\$ 565.00	\$ 9,040.00
16	8478046	INJECTOR, (MODEL 845E,UTEX)	\$ 450.00	\$ 7,200.00
1	9530407	PUMP, FRESH WATER, LHLB- (MSI EXCHANGE)	\$ 1800.00	\$ 1800.00
1	9530406	PUMP, FRESH WATER, LHRB, (MSI EXCHANGE)	\$ 1800.00	\$ 1800.00
1	9330012	PUMP, PRESSURE - (MSI EXCHANGE)	\$ 2500.00	\$ 2500.00
1	8417074	PUMP, SCAVENGING, (16,20-645, E4, E4B) - (MSI EXCHANGE)	\$ 2500.00	\$ 2500.00
1	8410219-mp	FUEL PUMP (MSI EXCHANGE)	\$ 175.00	\$ 175.00
			TOTAL	\$ 61,655.00



PAYMENT TERMS

Upon establishment of an account with acceptable credit limits, payment is due thirty (30) days after receipt of invoice unless otherwise mutually agreeable payment terms are negotiated.

Marine Systems, Inc. Standard Terms and Conditions are an integral part of this quote. They are included herein by reference and are available at <https://kirbycorp.com/wp-content/uploads/2021/12/MSI-Terms-12.06.21.pdf>

This quote is valid for a period of thirty (30) days.

Thank you for giving us the opportunity to serve you. Should you have any questions or require further information, please contact me at your convenience.

Sincerely,

Chris Straban

MSI West Coast - Service
(206) 788-2132

