

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No. 8B
Date of Meeting August 3, 2021

DATE: July 21, 2021

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Don Esterbrook, Deputy Chief Executive Officer

Project Manager: Hughes Wike, Engineering Project Manager II

SUBJECT: Construction Authorization for SIM Yard Charging Stations and Electric Trucks Project

A. ACTION REQUESTED

As referenced in NWSA Resolution No. 2020-02, Exhibit A, Delegation of Authority Master Policy, Paragraph 8.c.iii., states project costs exceeding \$300,000 require approval from Managing Members.

Request construction authorization in the amount of \$460,000, for a total authorized amount of \$560,000, for electrical system infrastructure work required to support the South Intermodal (SIM) Yard Charging Stations and Electric Trucks Project, Master Identification No. 201119.01.

B. SYNOPSIS

Responding to a customer need, the NWSA applied for and was awarded a DERA grant in the amount of \$782,482 to support the implementation of six electric terminal tractors at the SIM yard, to be purchased and owned by Rail Management Services (RMS). The NWSA has also been earmarked to receive \$132,000 in incentive funding from Tacoma Power's Cargo/Material Handler Equipment and Hostler Trucks program to fund the infrastructure components of this project. Both of these funding awards were accepted by Managing Members in November of 2020.

The SIM Yard Charging Stations and Electric Trucks Project is separated into two parts; 1) purchase of the six electric terminal tractors and charging cabinets and 2) installation of electrical infrastructure to support charging. RMS will manage purchase of the electric terminal tractors and charging stations and the NWSA will manage installation of the electrical infrastructure needed to support the charging. As detailed in Section E, the total project cost (equipment purchase and infrastructure installation) is estimated to be approx. \$2.2 million.

This request is to authorize funds needed for the charging infrastructure installation project. The NWSA will be reimbursed by RMS for costs incurred after installation is complete.

C. BACKGROUND

The SIM Yard Charging Stations and Electric Trucks Project is an opportunity to advance the NWSA's environmental stewardship mission and support a customer in their efforts to both increase operational efficiency and advance their own environmental performance. By winning and accepting grant and incentive funding, managing the grant, and managing the infrastructure improvement project, the NWSA and Port of Tacoma will enable an impactful introduction of clean technology that would not otherwise happen.

Commercial Drivers

The main commercial drivers for the NWSA are responding to a customer need for new terminal tractors, helping to get the most efficient equipment possible, improving NWSA managed infrastructure with modern amenities, and to further the NWSA's environmental reputation.

In addition to being zero emissions, electric equipment is cheaper to operate than diesel because electric drivetrains are more efficient than diesel drivetrains, electric equipment has fewer moving parts and requires less maintenance than diesel equipment, and electricity is cheaper per unit of energy than diesel. Therefore, if the upfront cost to purchase electric equipment and install charging infrastructure can be reduced to near enough the cost of an equivalent diesel unit through grants or other means, the total cost of ownership of the electric equipment can be less than diesel. RMS is motivated to implement electric equipment by these potential cost savings and the benefits to their environmental reputation.

The infrastructure improvements resulting from this project will make the SIM Yard facility more "future proof" by providing electric tractor charging amenities. It also supports the current tenant's nation-wide effort to electrify their terminal tractors.

Finally, implementing zero emission equipment helps further the NWSA's reputation as a "green gateway", increasing our portfolio of clean technology and success stories that can be marketed.

Environmental Drivers

The NWSA recently adopted an update to the Northwest Ports Clean Air Strategy which lays out an aspirational vision to phase out emissions from seaport activities by 2050. This expands on the 2017 Greenhouse Gas (GHG) Resolution policy previously adopted by Managing Members that sought to reduce GHG emissions 80% by 2050. Achieving this vision will involve adopting zero emission technology across ocean-going vessels, cargo handling equipment, trucking, rail, harbor vessels, fleets, and facilities.

The SIM Yard Charging Stations and Electric Trucks Project is an exciting early implementation action under the Northwest Ports Clean Air Strategy. Not only does the project provide significant emission reductions by replacing Tier 2 and Tier 3 diesel engines with zero emission, battery electric versions, but it also provides valuable demonstration experience in our gateway. We hope that the demonstration of the technology at the SIM Yard will provide confidence for other operators to adopt the technology in the future.

Technology Background

Terminal tractors (also known as yard tractors, yard goats, hostlers, yard trucks) are pieces of cargo handling equipment used to move containers on chassis to and from container stacks and rail cars.

Battery-electric terminal tractors are an emerging technology in port applications, and as such, significant financial incentives are needed to make the technology accessible to private operators. The purchase price of a new battery-electric terminal tractor is roughly three times greater than a comparable new, Tier 4 diesel machine and requires substantial infrastructure upgrades to support charging. While operational costs for battery-electric terminal tractors (fuel/energy and maintenance) are lower than for diesel machines, the 7-year total cost of ownership for battery-electric machines is estimated to be greater than diesel machines by nearly \$200,000 in the “San Pedro Bay Ports Clean Air Action Plan 2018 Feasibility Assessment for Cargo-Handling Equipment”¹, indicating that the purchase price is currently a significant barrier to adoption. The assessment also shows that operating battery-electric terminal tractors can be economically viable, given the proper incentives, demonstrating the need for DERA funding.

The customer who will be purchasing and implementing the electric terminal tractors in their operations, RMS, has deployed this technology in other areas of the country, including Chicago and New York, and are confident that the electric terminal tractors can “do the job.”

D. PROJECT DESCRIPTION AND DETAILS

The SIM Yard Charging Stations and Electric Trucks Project is separated into two parts: 1) purchase of the six electric terminal tractors and charging cabinets, and 2) installation of electrical infrastructure to support charging. The purpose of this memo and authorization request is to address construction costs for the infrastructure portion of the project.

Project Objective

The objective of this project is to provide electrical system infrastructure necessary to supply power to 6 electric yard trucks operating on the SIM Yard.

Scope of Infrastructure Project

The scope of work will include:

- Design and specifications for public works contracting
- Project and construction management
- Advertisement and award of construction contract
- Installation of new electrical infrastructure including service panel, meter, conduit, cabling, and 6 charging stations
- Construction of concrete equipment pads and protective bollard system

¹ <https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/>

- Trenching and pavement replacement
- Tacoma Public Utilities (TPU) transformer upgrade
- Inspection, testing, permitting, and commissioning

Scope of Work for this Request

Authorization for this infrastructure project includes all tasks necessary for the completion of the construction stage, including the use of internal and external engineering services, construction, and procurement.

E. FINANCIAL IMPLICATIONS

The summary of all project costs can be found below along with the projected financial impacts to the NWSA. Given that the levels of grant and incentive funding and RMS’s commitment to cover the remaining costs, the only net costs to NWSA once all reimbursements have been made are staff costs to manage the grant and incentive funds.

Item	Cost
<i>Electric Terminal Tractors and Charging Cabinets</i>	
Terminal Tractor Remanufacture (6 @ \$252,750 EA)	\$1,516,500
Charging Cabinets (6@ \$6,000 EA)	\$36,000
Sales Tax (10.3%)	\$159,908
Total: Trucks + Charging Cabinets	\$1,712,408
<i>Infrastructure Project</i>	
Design ¹	\$100,000
Construction Contract ²	\$353,686
Construction Soft Costs ³	\$106,314
Infrastructure Project Total	\$560,000
Total Project Cost	\$2,272,408
<i>DERA Funding</i>	<i>(\$782,482)</i>
<i>Tacoma Power Incentive Funding</i>	<i>(\$132,000)</i>
<i>RMS Share</i>	<i>(\$1,357,926)</i>
Net Cost to the NWSA⁴	\$0

¹Includes port staff costs

²Includes contingency

³Includes sales tax, consultants, port staff, testing and inspection, and other misc. costs.

⁴Does not include staff costs to manage the grant and incentive

Estimated Cost of Infrastructure Project

The total infrastructure project cost including all stages is estimated at \$560,000.

Estimated Cost for This Request

The total estimated cost of construction for this infrastructure project is \$460,000. If the cost of this estimate is anticipated to exceed the authorized amount, additional Managing Member authorization will be requested.

Estimated Sales Tax

The total estimated sales tax to be paid to local and state governments for this project is \$36,430.

Infrastructure Project Cost Details

Phase	This Request	Total Previous Requests	Total Project Cost	Cost to Date	Remaining Cost
Design	\$0	\$100,000	\$100,000	\$75,986	\$24,014
Construction	\$460,000	\$0	\$460,000	\$0	\$460,000
Total	\$460,000	\$100,000	\$560,000	\$75,986	\$484,014

Source of Funds

The current Capital Investment Plan (CIP) allocates \$560,000 for this infrastructure project.

In support of the overall SIM Yard Charging Stations and Electric Trucks Project, Managing Members accepted grant funds in the amount of \$782,482 from the EPA Diesel Emission Reduction Act (DERA) grant program and \$132,000 in incentive funds from Tacoma Power's Cargo/Material Handler Equipment and Hostler Trucks program. A funding commitment agreement with RMS (Attachment A) has also been established to address additional cost-sharing and pass through of grant funds.

Financial Impact

Project costs will be expensed as incurred. Any funds received from RMS will reduce the project cost. Grant funds will be recorded non-operating income as reimbursement is requested from the granting agency.

Schedule

Bid Advertisement	August 2021
Bid Opening	September 2021
Contract Award	September 2021
Substantial Completion	December 2021

F. ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS

Alternative 1) Do Nothing. Rail Management Services (RMS) would continue operation with diesel engine yard trucks. Declining to move forward with this project could result in a loss of

close to \$800,000 in grant funding along with opportunities for TPU incentive, tenant cost-sharing, and environmental benefits of operating zero-emission yard tractors.

Alternative 2) Proceed with construction of charging station infrastructure and remanufacture of yard trucks. Potential reduction of GHGs and diesel particulate matter by approximately 259 tons per year and 1.41 tons per year, respectively.

Alternative 2 is the recommended course.

G. ENVIRONMENTAL IMPACTS/REVIEW

Permitting: Contractor will obtain an over-the-counter (OTC) construction permit.

Remediation: Project site is located in the former City of Tacoma landfill area. Trenching depths will be relatively shallow; however, appropriate controls will be implemented to ensure any uncovered contaminated material is properly handled and disposed.

Stormwater: Stormwater Best Management Practices (BMPs) and project-specific Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented.

Air Quality: The SIM Yard charging stations and electric trucks project supports achievement of our GHG Resolution and Northwest Ports Clean Air Strategy goals.

H. ATTACHMENTS TO THIS REQUEST

- Attachment A – RMS Funding Commitment Agreement

I. PREVIOUS ACTIONS OR BRIEFINGS

<u>Date</u>	<u>Action</u>	<u>Amount</u>
December 22, 2020	Executive Authorization	\$100,000
November 3, 2020	Managing Members Authorization – Grant Fund Acceptance	-
July 2020	“Friday Packet” memo – Notification of award of DERA funds	-
February 2020	“Friday Packet” memo – Notification of application for DERA funds	-
TOTAL		\$100,000

TACOMA SOUTH INTERMODAL YARD ELECTRIC YARD TRACTOR PROJECT
RAIL MANAGEMENT SERVICES FUNDING AGREEMENT

WHEREAS Rail Management Services (RMS) has need to upgrade six (6) yard tractors in its existing fleet operating at the Tacoma South Intermodal (SIM) yard.

WHEREAS RMS's preferred method of upgrading these terminal tractors is to remanufacture them to battery-electric versions if grant or other funding is available to offset the cost.

WHEREAS the electrification of cargo handling equipment is a central strategy for achieving the Northwest Seaport Alliance's (NWSA) air quality and climate goals under the NWSA's Greenhouse Gas (GHG) Resolution and the Northwest Ports Clean Air Strategy.

WHEREAS the NWSA has applied for and been offered a Diesel Emission Reduction Act (DERA) grant in the amount of \$782,482 to support the remanufacture of the yard tractors to battery electric, purchase of charging stations, and purchase of charging pedestals.

WHEREAS the NWSA has been offered incentive funding from Tacoma Power in the amount of \$132,000 to support installation of charging infrastructure for the electric yard tractors.

WHEREAS the NWSA is willing to manage the installation of charging infrastructure.

WHEREAS RMS is willing to manage the remanufacture of the terminal tractors and purchase of the charging stations.

NOW THEREFORE pursuant to the terms of this Agreement, RMS agrees to fund all aspects of the project not covered by the external funding sources listed above, an estimated total commitment of \$1.3 million once all reimbursements are made as described below.

Project Description:

The scope of the project is twofold: 1) to remanufacture six (6) terminal tractors from diesel to battery-electric; and 2) to install charging infrastructure to enable daily operation of the electric tractors at the TAC SIM yard facility.

Roles and Responsibilities:

RMS shall manage the remanufacture of six (6) electric terminal tractors and purchase of the associated charging units. All requirements of the federal DERA grant, attached hereto as Exhibit 1 and incorporated herein, must be followed. The NWSA and RMS will enter into a subsequent program participant agreement summarizing compliance procedures for all grant requirements. RMS will retain ownership of the electric terminal tractors and charging infrastructure.

The NWSA will manage the installation of charging infrastructure as well as DERA grant and Tacoma Power incentive funding. The NWSA will draft the required DERA program participant

agreement, manage quarterly grant reporting, and facilitate the submittal of invoices and payment requests.

Project Financial Summary:

The project costs and the sources of funding are shown in the table below. Negative numbers indicate sources of funding.

Item	Cost
Terminal Tractor Remanufacture (6 @ \$252,750 EA)	\$1,516,500
Charging Cabinets (6@ \$6,000 EA)	\$36,000
Sales Tax (10.2%)	\$158,355
Total: Trucks + Charging Cabinets	\$1,710,855
Infrastructure Project Total	\$494,532
Total Project Cost	\$2,205,387
<i>DERA Funding</i>	<i>(\$782,482)</i>
<i>Tacoma Power Incentive Funding</i>	<i>(\$132,000)</i>
RMS Financial Commitment	\$1,290,905

Project Financial Plan:

RMS will pay the vendor directly for all invoiced costs associated with remanufacturing the terminal tractors to battery electric and purchasing the charging stations. The estimate total for these items is \$1,710,855. The NWSA will facilitate the pass through of DERA grant funds to offset 45% of these costs up to \$769,885, as allowed by the DERA grant agreement between the NWSA and the USEPA and DERA program terms and conditions. The NWSA and RMS will enter into a sub award agreement describing the grant terms and conditions and the process for reimbursement. The net costs to RMS for the electric terminal tractors and charging units is therefore estimated to be \$940,970.

The NWSA will pay all costs for required infrastructure upgrades and claim Tacoma Power incentive funding in the amount of \$132,000 and remaining DERA funding in the estimated amount of \$12,597 to offset the costs. RMS will reimburse the NWSA for all costs not covered by the Tacoma Power incentive or the DERA grant. The estimated amount of this reimbursement is \$349,935.

The total estimated financial commitment by RMS for this project is the sum of their net costs for the terminal tractor remanufacture and purchase of charging units in addition to the reimbursement owed to the NWSA for the infrastructure upgrades, estimated at \$1,290,905.

Budget Changes:

RMS's financial commitment is based on estimates that may change as the project proceeds based on favorable or unfavorable developments. For example, the COVID-19 pandemic has injected significant uncertainty into the costs of port capital projects, and value engineering could

decrease costs throughout the design phase. RMS's financial commitment will be adjusted based on any changes in project costs, favorable or unfavorable. The NWSA will consult with RMS once bids for the construction project have been received to ensure alignment on RMS's financial commitment.

Authorization:

RMS Representative



Title

President

Date

11/20/2020

GRANT-SPECIFIC PROGRAMMATIC TERMS AND CONDITIONS

DERA FY2020 National Programmatic Terms and Conditions

A. Substantial Federal Involvement for Cooperative Agreements

EPA will provide substantial involvement in the form of technical assistance, development of outputs, and oversight. Specifically, substantial federal involvement will take the form of monitoring the recipient's project by EPA, participation and collaboration between EPA and the recipient in program content, review of project progress, and quantification and reporting of results.

B. Delays or Favorable Developments:

The recipient agrees that it will promptly notify the EPA Project Officer of any problems, delays, or adverse conditions which may materially impair its ability to deliver on the outputs/outcomes specified in the work plan. This disclosure must include a statement of the action taken, or contemplated, and any assistance needed to resolve the situation. Failure to make satisfactory progress achieving the timeline and/or milestones defined in the approved workplan may result in termination of the award. The recipient agrees that it will also notify the EPA Project Officer of any favorable developments which may enable meeting time schedules and objectives sooner or at less cost than anticipated or producing more beneficial results than originally planned.

C. Final Approved Workplan and Modifications

Recipient agrees to carry out the project in accordance with the final approved workplan. Recipients are required to report deviations from budget or project scope or objective, and must request prior written approval from an Authorized EPA Official for:

- any change in the scope or objective of the project or program (even if there is no associated budget revision requiring prior written approval);
- any change in a key person specified in the application or workplan;
- the disengagement from the project for more than three months, or a 25% reduction in time devoted to the project, by the approved project director or principal investigator;
- the inclusion of costs that require prior approval in accordance with 2 CFR Part 200 Subpart E— Cost Principles or 48 CFR part 31, “Contract Cost Principles and Procedures,” as applicable;
- the transfer of funds budgeted for participant support costs as defined in 2 CFR Section 200.75 Participant Support Costs to other categories of expense;
- unless described in the final approved workplan and budget, the subawarding, transferring or contracting out of any work under the award;
- changes in the approved cost-sharing or matching provided by the recipient; or, the need arises for additional Federal funds to complete the project.

Authorized EPA Officials include Grants Management Officers and Award Officials. Proposed modifications to the approved workplan or budget, including additions, deletions,

or changes in the schedule, shall be submitted in a timely manner to the EPA Project Officer and Grant Specialist to initiate the approval process. Depending on the type or scope of changes, a formal amendment to the award may be necessary. Major project modifications which include changes to the approved types and number of affected vehicles, engines, or equipment, or the approved types of emission reduction technologies to be implemented, or to the approved project location(s) may not be allowed.

D. Use of Funds Restriction:

- D.1. Federal Matching Funds: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for matching funds for other federal grants unless expressly authorized by statute. Likewise, recipient may not use federal funds as costshare funds for the Clean Diesel Funding Assistance Program, including funds received under EPA's State Clean Diesel Grant Program and federal Supplemental Environmental Project (SEP) funds.
- D.2. Emissions Testing: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for emissions testing and/or air monitoring activities (including the acquisition cost of emissions testing equipment), or research and development.
- D.3. Fueling Infrastructure: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for fueling infrastructure, such as that used for the production and/or distribution of biodiesel, compressed natural gas, liquefied natural gas, and or other cleaner fuels.
- D.4. Leasing: Recipient agrees that all vehicles, engines, and equipment purchased with funds under this award, including subawards/subgrants and rebates, will be purchased in full before the end of the project period. Extensions will not be granted for the purpose of extending payments on purchases.
- D.5. Mandated Measures: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for emissions reductions that are mandated under federal law. This refers to specific compliance dates within the mandate, not when the mandate is passed. Voluntary or elective emissions reductions measures shall not be considered "mandated", regardless of whether the reductions are included in the State Implementation Plan of a State.
- D.6. Ownership, Usage and Remaining Life Requirements: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to upgrade engines, vehicles, and equipment that does not meet the following criteria:
 - D.6.1 The existing vehicle, engine, or equipment must be fully operational.
Operational equipment must be able to start, move in all directions, and have all necessary parts to be operational.

- D.6.2 The participating fleet owner must currently own and operate the existing vehicle or equipment and have owned and operated the vehicle during the twenty-four months prior to upgrade.
- D.6.3 The existing vehicle, engine, or equipment must have at least three years of remaining life at the time of upgrade. Remaining life is the fleet owner's estimate of the number of years until the unit would have been retired from service if the unit were not being upgraded or scrapped because of the grant funding. The remaining life estimate is the number of years of operation remaining even if the unit were to be rebuilt or sold to another fleet. The remaining life estimate depends on the current age and condition of the vehicle at the time of upgrade, as well as things like usage, maintenance and climate.
- D.6.4 Highway Usage: To be eligible for funding, the existing vehicle must have accumulated at least 7,000 miles during each twelve months during the twenty-four months prior to upgrade. Vehicle mileage may be combined to reach the thresholds below where two vehicles will be scrapped and replaced with a single vehicle.
- D.6.5 Nonroad, Locomotive and Marine Usage: The engine operating hours of two units may be combined to reach the thresholds below where two units will be scrapped and replaced with a single unit.
 - D.6.5.1. Agricultural Pumps: To be eligible for funding, agricultural pumps must operate at least 250 hours during each twelve-month period for the twenty-four months prior to upgrade.
 - D.6.5.2. All Other Nonroad Engines: To be eligible for funding, nonroad engines must operate at least 500 hours during each twelve-month period for the twenty-four months prior to upgrade.
 - D.6.5.3. Locomotive and Marine Usage: To be eligible for funding the existing locomotive and marine engines must operate at least 1,000 hours during each twelve-month period for the twenty-four months prior to upgrade.
- D.7. Fleet Expansion: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for the purchase of vehicles, engines, or equipment to expand a fleet. Engine, vehicle, and equipment replacement projects are eligible for funding on the condition that the following criteria are satisfied:
 - D.7.1 The replacement vehicle/engine/equipment will continue to perform similar function and operation as the vehicle/engine/equipment that is being replaced.
 - D.7.2 The cost of optional components or "add-ons" that significantly increase the cost of the vehicle may not be eligible for funding under the grant; the replacement vehicle should resemble the replaced vehicle in form and function.
 - D.7.3 The replacement vehicle, engine, or equipment will be of similar type and similar gross vehicle weight rating or horsepower as the vehicle, engine, or equipment being replaced.
 - D.7.3.1. Nonroad, Locomotive, and Marine: Horsepower increases of more than 40 percent will require written approval by the EPA Project Officer prior

to purchase, and the applicant may be required to pay the additional costs associated with the higher horsepower equipment.

- D.7.3.2. Highway: The replacement vehicle must not be in a larger weight class than the existing vehicle (Class 5, 6, 7, or 8). Exceptions may be granted for vocational purposes and will require written approval by the EPA Project Officer prior to purchase.
- D.7.4 The vehicle, equipment, and/or engine being replaced must be scrapped or rendered permanently disabled within ninety (90) days of being replaced.
 - D.7.4.1. If a 2010 engine model year (EMY) or newer vehicle is replaced, the 2010 EMY or newer vehicle may be retained or sold if the 2010 EMY or newer vehicle will replace a pre-2009 EMY vehicle, and the pre-2009 EMY vehicle will be scrapped. It is preferred that the scrapped unit currently operates within the same project location(s) as the 2010 EMY or newer vehicle currently operates, however alternative scenarios will be considered. The term “project location” refers to the primary area where the affected vehicles/engines operate. All existing and replacement vehicles are subject to the funding restrictions in this section. All equipment must operate within the United States. Under this scenario, a detailed scrappage plan must be submitted and will require prior EPA approval.
 - D.7.4.2. If a Tier 2 or Tier 3 locomotive, marine, or nonroad vehicle, equipment and/or engine is replaced, the units may be retained or sold if they will replace a similar, lower Tiered unit, and the lower Tiered unit will be scrapped. It is preferred that the scrapped unit currently operates within the same project location(s) as the original Tier 2 or 3 unit currently operates, however alternative scenarios will be considered. The term “project location” refers to the primary area where the affected vehicles/engines operate. All existing and replacement equipment are subject to the funding restrictions in this section. All equipment must operate within the United States. Under this scenario, a detailed scrappage plan must be submitted and will require prior EPA approval.
 - D.7.4.3. Cutting a three-inch by three-inch hole in the engine block (the part of the engine containing the cylinders) is the preferred scrapping method. Other acceptable scrappage methods may be considered and will require prior written approval from the EPA Project Officer.
 - D.7.4.4. Disabling the chassis may be completed by cutting through the frame/frame rails on each side at a point located between the front and rear axles. Other acceptable scrappage methods may be considered and will require prior written approval from the EPA Project Officer.
 - D.7.4.5. Evidence of appropriate disposal is required in a final assistance agreement report submitted to EPA as detailed in term and condition L. Final Report.
 - D.7.4.6. Scrapped engines and equipment and vehicle components may be salvaged

from the unit being replaced (e.g. plow blades, shovels, seats, tires, etc.). If scrapped or salvaged engines, vehicles, equipment, or parts are to be sold, program income requirements apply.

D.7.4.7. For tire replacement projects, the original tires should be scrapped according to local or state requirements, or the tires can be salvaged for reuse or retreading. If salvaged tires are sold, program income requirements apply.

D.8. Replacement Technologies: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for the purchase of engine retrofits, idle reduction technologies, low rolling resistance tires or advanced aerodynamic technologies if similar technologies have previously been installed on the truck or trailer.

D.9. Project Eligibility Criteria: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to fund projects that do not meet the following eligible criteria:

D.9.1 Medium and Heavy-Duty Truck, Transit Bus, and School Bus Project Eligibility

Current Engine Model Year (EMY)	DOC +/- CCV	DPF	SCR	Verified Idle Reduction, Tires, or Aero-dynamics	Vehicle or Engine Replacement: EMY 2018+ (2014+ for Drayage)	Vehicle or Engine Replacement: EMY 2018+ Zero Emission ² or Low-NO _x ³	Clean Alternative Fuel Conversion
older - 2006	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2007 - 2009	No	No	Yes	Yes ¹	Yes	Yes	Yes
2010 - newer	No	No	No	Yes ¹	No	Yes	Yes

¹Auxiliary power units and generators are not eligible on vehicles with EMY 2007 or newer.

²Eligible fuel cell projects are limited to hydrogen fuel cell engine replacements for eligible urban transit buses, shuttle buses and drayage trucks, and hydrogen fuel cell engine replacements for eligible urban transit buses, shuttle buses, and drayage trucks.

³Please see the Low-NO_x Engine Factsheet found at www.epa.gov/dera/national for guidance on identifying engines certified to meet CARB's Optional Low NO_x Standards.

D.9.2. Nonroad Engine Project Eligibility

Current Engine Tier	Vehicle/Equipment Replacement: EMY 2020				Zero Emission ³	Verified Retrofit
	Compression Ignition			Spark Ignition		
	Tier 0-2	Tier 3-4i	Tier 4	Tier 2		
Unregulated – Tier 2	No	Yes ¹	Yes	Yes	Yes	Yes
Tier 3	No	No	Yes	Yes	Yes	Yes
Tier 4	No	No	No	No	No	No
Current Engine Tier	Engine Replacement				Zero Emission ⁴	Verified Engine Upgrade
	Compression Ignition			Spark Ignition		
	Tier 0-2	Tier 3-4i	Tier 4	Tier 2		
Unregulated – Tier 2	No	Yes ²	Yes	Yes	Yes	Yes
Tier 3	No	No	Yes	Yes	Yes	Yes
Tier 4	No	No	No	No	No	No

¹Tier 3 and Tier 4 interim (4i) allowed for vehicle/equipment replacement only when Tier 4 final is not yet available from OEM for 2020 model year equipment under the Transition Program for Equipment Manufacturers (TPEM).

²Tier 3 and Tier 4i engines may be used for engine replacement only if Tier 4 is demonstrated to not be available or feasible through a best achievable technology analysis as defined in Section I.B.4.a., below.

³Eligible fuel cell projects are limited to hydrogen fuel cell equipment replacements for eligible terminal tractors/yard hostlers, stationary generators, and forklifts.

⁴Fuel cell engine replacement is not eligible.

D.9.3. Marine Engine Project Eligibility

Engine Category	Engine Horsepower	Current Engine Tier	Engine & Vessel Replacement					Certified Re-manufacture System ³	Verified Engine Upgrade
			Compression Ignition			Spark Ignition	Zero Emission ²		
			Tier 1-2	Tier 3	Tier 4				
C1, C2	<803	Un-regulated – Tier 2	No	Yes	No	Yes	Yes	Yes	Yes
C1, C2	≥804	Un-regulated – Tier 2	No	Yes ¹	Yes	Yes	Yes	Yes	Yes
C1, C2	<803	Tier 3	No	No	No	Yes	Yes	No	No
C1, C2	≥804	Tier 3	No	No	Yes	Yes	Yes	No	No
C1, C2	≥804	Tier 4	No	No	No	No	No	No	No
C3	All	Un-regulated - Tier 2	No	Yes	No	No	No	No	No
C3	All	Tier 3	No	No	No	No	No	No	No

¹Tier 3 engines may be used for engine replacement only if Tier 4 is demonstrated to not be available or feasible through a best achievable technology analysis as defined in Section I.B.4.a., below. Over 800 HP, Tier 3 engines are not eligible for full vessel replacement.

²Fuel cell engine and vessel replacements are not eligible.

³Some marine engine projects may be subject to the restriction on mandated measures.

D.9.4. Locomotive Engine Project Eligibility

Current Locomotive Tier	Engine & Locomotive Replacement				Verified Retrofit	Idle-Reduction ² Technology	Certified Remanufacture System ⁴
	Tier 0-2+	Tier 3	Tier 4	Zero Emission ¹			
Unregulated - Tier 2+	No	Yes ³	Yes	Yes	Yes	Yes	Yes
Tier 3	No	No	Yes	Yes	Yes	Yes	Yes
Tier 4	No	No	No	No	No	Yes	No

¹Fuel cell engine and locomotive replacements are not eligible.

²Automatic engine start-stop technologies are only eligible to be installed on locomotives currently certified to Tier 0 or unregulated, subject to the restriction on mandated measures.

³Tier 3 engines may be used for engine replacement only if Tier 4 is demonstrated to not be available or feasible through a best achievable technology analysis as defined in Section I.B.4.a., below. Tier 3 is not eligible for locomotive replacement.

⁴Some locomotive engine projects may be subject to the restriction on mandated measures.

D.10. Locomotive and Marine Operating Hours: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to retrofit, replace, upgrade or install idle reduction technologies on eligible locomotives or marine engines that operate less than 1,000 hours per year. Engine hours may be combined to

reach the 1000-hour threshold where two engines will be scrapped and replaced with a single engine.

- D.11. Marine Shore Connection: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for marine shore connection system projects that are expected to be utilized less than 1,000 MW-hr/year.
- D.12. Locomotive Shore Connection: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used for locomotive shore connection system projects that are expected to be utilized less than 1,000 hours per year.
- D.13. Tires and Aerodynamics: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase aerodynamic technologies or low rolling resistance tires, unless they are combined on the same vehicle with a new installation of a verified engine retrofit funded under this award. Ineligible costs include aluminum wheels.
- D.14. Battery Electric Powered Replacements: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase power distribution to the pedestal, electrical panels and their installation, upgrades to existing electrical panels or electrical service, transformers and their installation, wiring/conduit and its installation, electricity, operation and maintenance, stationary energy storage systems that power the equipment (e.g. batteries) and their installation, and on-site power generation systems that power the equipment (e.g., solar and wind power generation equipment) and their installation.
- D.15. Grid Electric Powered Replacements: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase power distribution to the property line, electricity, operation and maintenance, stationary energy storage systems that power the equipment (e.g. batteries) and their installation, and on-site power generation systems that power the equipment (e.g., solar and wind power generation equipment) and their installation.
- D.16. Engine Replacements: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase cabs, tires, wheels, axles, paint, brakes, and mufflers.
- D.17. Engine Remanufacture Systems: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase the entire cost of an engine rebuild if a certified remanufacture system is applied at the time of rebuild.

D.18. Electrified Parking Spaces: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase power distribution to the property line, electricity, operation and maintenance, stationary energy storage systems that power the equipment (e.g. batteries) and their installation, and on-site power generation systems that power the equipment (e.g., solar and wind power generation equipment) and their installation.

D.19. Locomotive Shore Power: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase power distribution to the property line, electricity, operation and maintenance, stationary energy storage systems that power the equipment (e.g. batteries) and their installation, and on-site power generation systems that power the equipment (e.g., solar and wind power generation equipment) and their installation.

D.20. Marine Shore Power: Recipient agrees that funds under this award, including subawards/subgrants and rebates, cannot be used to purchase shipside modifications to accept shore-based electrical power, power distribution to the property line, electricity, operation and maintenance, stationary energy storage systems that power the equipment (e.g. batteries) and their installation, and on-site power generation systems that power the equipment (e.g., solar and wind power generation equipment) and their installation.

E. Best Achievable Technology: All new nonroad and locomotive engines are now manufactured to meet the EPA Tier 4 standards. All new Category 1 and 2, 804 horsepower and above marine engines are now manufactured to meet the EPA Tier 4 standards. Recipients, subrecipients, or program beneficiaries replacing these nonroad, marine, and locomotive engines are expected to use Tier 4 engines if Tier 4 engines with the appropriate physical and performance characteristics are available. Recipients are required to submit a best achievable technology (BAT) analysis to EPA for approval before Tier 3 or Tier 4i engines can be purchased. Recipients should consult their EPA Project Officer for BAT requirements and approval.

F. Drayage Vehicle Replacement Project Requirements:

F.1. In addition to the applicable requirements for highway vehicles described in E above, recipients replacing drayage vehicles are required to establish and document guidelines to ensure that the scrapped vehicle has a history of operating on a frequent basis over the prior year as a drayage truck.

F.2. The recipient must establish and document guidelines to ensure that all drayage trucks receiving grant funds are operated in a manner consistent with the definition of a drayage truck, defined as any Class 8a and 8b in-use on-road vehicle with a gross weight rating (GVWR) of greater than 33,000 pounds operating on or transgressing through port or intermodal rail yard property for the purpose of loading, unloading or transporting cargo, such as containerized, bulk or break-bulk goods.

G. Emissions Control Technologies

Emissions reduction projects funded by the recipient pursuant to this assistance agreement must use verified technologies and/or must use engines and engine configurations certified by EPA and, if applicable, CARB. Technologies are verified under EPA or California's Retrofit Technology Verification Programs. See the following lists for eligible technologies:

- G.1. EPA verified engine retrofit technologies and engine upgrade technologies: www.epa.gov/verified-diesel-tech/verified-technologies-list-clean-diesel
- G.2. California Air Resources Board (CARB) verified engine retrofit technologies: www.arb.ca.gov/diesel/verdev/vt/cvt.htm
- G.3. EPA verified idle reduction technologies: www.epa.gov/verified-diesel-tech/idling-reductiontechnologies-irts-trucks-and-school-buses
- G.4. EPA verified aerodynamic technologies: www.epa.gov/verified-diesel-tech/aerodynamic-devices
- G.5. EPA verified low rolling resistance tires: www.epa.gov/verified-diesel-tech/low-rolling-resistance-lrr-new-and-retread-tires
- G.6. EPA certified engines and certified remanufacture systems for locomotives and marine engines: www.epa.gov/compliance-and-fuel-economy-data/engine-certification-data
- G.7. EPA Certified Conversion Systems for New Vehicles and Engines and compliant Conversion Systems for Intermediate-Age Vehicles and Engines: www.epa.gov/vehicle-and-enginercertification/lists-epa-compliant-alternative-fuel-conversion-systems
- G.8. CARB Approved Alternate Fuel Retrofit Systems: www.arb.ca.gov/msprog/aftermkt/altfuel/altfuel.htm

Any question as to the eligibility or preference of a retrofit technology, including vehicle/engine/equipment replacements, should be directed to the EPA Project Officer.

H. Program Income:

Program income as defined at 2 CFR §200.80 means gross income received by the grantee or subrecipient that is directly generated by a grant supported activity or earned as a result of the Federal award during the period of performance. Under DERA grants, program income is generally limited to the sale of scrapped or remanufactured engines/chassis or salvaged engine/vehicle/equipment components and does not include revenue generated by recipients or subrecipients through the commercial use of vehicles and equipment purchased with grant funds. "Period of performance" is the time between the start and end dates of the period of performance as included in the Federal award.

Program income earned during the project period shall be retained by the recipient and, in accordance with 2 CFR §200.307 recipient is authorized to use program income to meet the costsharing or matching requirement of the Federal award, including any mandatory or voluntary cost share. The amount of the Federal award remains the same. The recipient will maintain records adequate to document the extent to which transactions generate program income and the disposition of program income. The recipient must provide as part of its final performance report, a description of how program income is being used. Further, a report on

the amount of program income earned during the award period must be submitted with the final Federal Financial Report, Standard Form 425, which is required under the administrative terms and conditions of this agreement.

I. Equipment Use, Management, and Disposition

The equipment use, management, and disposition instructions are applicable to assistance agreement recipients and subrecipients acquiring equipment under this award. State agencies may use, manage and dispose of equipment acquired a Federal award by the state in accordance with state laws and procedures.

Recipient agrees the equipment acquired under this assistance agreement will be subject to the use and management and disposition regulations at 2 CFR §200.313.

Equipment is defined as tangible personal property having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of \$5,000, or the capitalization level established by the non-Federal entity for financial statement purposes (see 2 CFR §200.12 Capital assets). Certified or verified technologies, vehicles, engines and nonroad equipment are considered to be equipment to the extent they fall within this definition.

Recipient agrees that at the end of the project period the recipient will continue to use the equipment purchased under this assistance agreement in the project or program for which it was acquired as long as needed, whether or not the project or program continues to be supported by the Federal award. When acquiring replacement equipment, the non-Federal entity may use the equipment to be replaced as a trade-in or sell the property and use the proceeds to offset the cost of the replacement property. Items of equipment with a current per unit fair market value of \$5,000 or less may be retained, sold or otherwise disposed of with no further obligation to the Federal awarding agency.

J. Procurement Procedures:

The recipient must follow applicable procurement procedures. EPA will not be a party to these transactions. If EPA funds are used to purchase goods or services, recipient agrees to compete the contracts for those goods and services and conduct cost and price analyses to the extent required by the fair and open competition for procurement provisions of 2 CFR §§200.317 – .326. Approval of a funding application does not relieve recipients of their obligations to compete service contracts and conduct cost and price analyses.

K. Quarterly Reporting and Environmental Results

Quarterly progress reports will be required. Quarterly reports will address the progress made achieving the work plan activities and objectives, including:

- procurements, installations and scrappage;
- milestones;
- outputs and outcomes including any project sustainability commitments;
- summary of quarterly and cumulative expenditures;

- up to date fleet description and efforts should be made to track, measure and report the actual vehicle miles traveled, hours of use/operation, and fuel use for all vehicles and equipment involved in the project;
- signed eligibility statements, signed scrappage statements, and BAT analysis submitted to EPA for approval;
- accounting of personnel hours billed to the grant;

A template for the quarterly report is available at: www.epa.gov/dera/national. Quarterly reports are due according to the following schedule. If a due date falls on a weekend or holiday, the report will be due on the next business day.

April 1 – June 30 Reporting Period: report due date July 30

July 1 – September 30 Reporting Period: report due date October 30

October 1 – December 31 Reporting Period: report due date January 30

January 1 – March 31 Reporting Period: report due date April 30

If a project start date falls within a defined reporting period the recipient must report for that period by the given due date. This quarterly reporting schedule shall be repeated for the duration of the award agreement.

L. Final Report:

The final project report will include all categories of information required for quarterly reporting, including a final, detailed fleet description. The final project report will also include a narrative summary of the project or activity, the successes and lessons learned for the entire project. project results including specific outputs and outcomes detailed in the project workplan (including any sustainability commitments), and final emissions benefit calculations. To the extent possible, final emission benefit calculations should be based on the actual number and type of technologies, vehicles, equipment and engines implemented under the award and actual vehicle miles traveled, idling and/or operating hours, and fuel use. If actual vehicle miles traveled, idling and/or operating hours, and fuel use are not available, the final report will include a detailed explanation of how these values are derived, as well as any assumptions or default values used, for the purposes of emissions benefit calculations. The final report will also detail the methodologies used for the emission benefit calculation.

The recipient must provide in the final report signed eligibility statements from participating fleet owners in which fleet owners attest to the criterion in term and condition D.6., and which include each vehicle make, model, year, vehicle identification number, odometer/usage meter reading, engine make, model, year, horsepower, engine ID or serial number, and vehicle/equipment registration/licensing number and state. A sample eligibility statement may be found at <https://www.epa.gov/dera/national>.

For projects involving vehicle/engine/equipment replacements the recipient must provide in the final report evidence of appropriate scrappage. Participating fleet owners must attest to the appropriate disposal in a signed scrappage statement. A sample scrappage statement may be found at <https://www.epa.gov/dera/national>. The scrappage statement must include:

Vehicle owner's name and address; Vehicle make, vehicle model, vehicle model year, VIN, odometer reading or usage meter reading, engine make, engine model, engine model year, engine horsepower, engine ID or serial number, as applicable; Name, address, and signature of dismantler; Date engine and/or vehicle/equipment was scrapped; Statement attesting to scrapping of vehicle/engine as defined above; Signature of participating fleet owner. Digital photos as follows: Side profile of the vehicle, prior to disabling; VIN tag or equipment serial number; Engine label (showing serial number, engine family number, and engine model year); Engine block, prior to hole; Engine block, after hole; Cut frame rails or other cut structural components, as applicable; Others, as needed.

For projects that take place in an area affected by, or includes vehicles, engines or equipment affected by federal law mandating emissions reductions, the recipient must provide in the final report evidence that emission reductions funded with EPA funds were implemented prior to the effective date of the mandate and/or are in excess of (above and beyond) those required by the applicable mandate.

The final report shall be submitted to the EPA Project Officer within 90 days after the project period end date or termination of the assistance agreement. A template for the final report is available at www.epa.gov/cleandiesel/clean-diesel-national-grants#reporting.

M. Employee and/or Contractor Selection:

EPA will not help select employees or contractors hired by the recipient.

N. Cybersecurity Condition:

- N.1. The recipient agrees that when collecting and managing environmental data under this assistance agreement, it will protect the data by following all applicable State or Tribal law cybersecurity requirements.
- N.2. EPA must ensure that any connections between the recipient's network or information system and EPA networks used by the recipient to transfer data under this agreement, are secure. For purposes of this Section, a connection is defined as a dedicated persistent interface between an Agency IT system and an external IT system for the purpose of transferring information. Transitory, user-controlled connections such as website browsing are excluded from this definition. If the recipient's connections as defined above do not go through the Environmental Information Exchange Network or EPA's Central Data Exchange, the recipient agrees to contact the EPA Project Officer (PO) no later than 90 days after the date of this award and work with the designated Regional/Headquarters Information Security Officer to ensure that the connections meet EPA security requirements, including entering into Interconnection Service Agreements as appropriate. This condition does not apply to manual entry of data by the recipient into systems operated and used by EPA's regulatory programs for the submission of reporting and/or compliance data.

N.3. The recipient agrees that any subawards it makes under this agreement will require the subrecipient to comply with the requirements in M.2. if the subrecipient's network or information system is connected to EPA networks to transfer data to the Agency using systems other than the Environmental Information Exchange Network or EPA's Central Data Exchange. The recipient will be in compliance with this condition: by including this requirement in subaward agreements; and during subrecipient monitoring deemed necessary by the recipient under 2 CFR 200.331(d), by inquiring whether the subrecipient has contacted the EPA Project Officer. Nothing in this condition requires the recipient to contact the EPA Project Officer on behalf of a subrecipient or to be involved in the negotiation of an Interconnection Service Agreement between the subrecipient and EPA.

O. Mandatory Cost-Share Requirement:

This award and the resulting federal funding share (as shown under "Notice of Award" in the award document) is based on estimated costs requested in the recipient's final approved workplan. While actual total costs may differ than those estimates, the recipient is required to provide no less than the cost-share percentages outlined below, as applicable, of the final equipment costs. EPA's participation shall not exceed the total amount of federal funds awarded or the maximum federal costshare percentages outlined below, as applicable, of the final equipment costs. Recipients must satisfy any applicable cost share requirements with allowable costs as set forth in 2 CFR §200.306. The cost share requirements are as follows:

Eligible Technologies	EPA Funding Limit	Mandatory Cost Share
Drayage Truck Replacement	50%	50%
Vehicle or Equipment Replacement with EPA Certified Engine	25%	75%
Vehicle or Equipment Replacement with CARB Certified Low NOx Engine	35%	65%
Vehicle or Equipment Replacement with Zero-tailpipe Emission Power Source	45%	55%
Engine Replacement with EPA Certified Engine	40%	60%
Engine Replacement with CARB Certified Low NOx Engine	50%	50%
Engine Replacement with Zero-tailpipe Emission Power Source	60%	40%
Certified Remanufacture Systems	100%	0%
Highway Idle Reduction Technologies when combined with new or previously installed exhaust after-treatment retrofit	100%	0%
Highway Idle Reduction Technologies without new exhaust after-treatment retrofit	25%	75%
Locomotive Idle Reduction Technologies	40%	60%
Marine Shore Connection Systems	25%	75%
Electrified Parking Space Technologies	30%	70%
Exhaust After-treatment Retrofits	100%	0%
Engine Upgrade Retrofits	100%	0%
Hybrid Retrofit Systems	100%	0%
Fuel and Additive Retrofits when combined with new retrofit, upgrade, or replacement	Cost differential between conventional diesel fuel	Cost of conventional diesel fuel
Aerodynamics and Low Rolling Resistance Tires when combined with new exhaust after-treatment retrofit	100%	0%
Alternative Fuel Conversion	40%	60%

The eligible acquisition cost for equipment means the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired. Ancillary charges, such as taxes, duty, protective in transit insurance and freight may be included in or excluded from the acquisition cost in accordance with the non-Federal entity's regular accounting practices.

P. Leveraging

The recipient agrees to provide the proposed leveraged funding, including any voluntary cost-share contribution that is described in its final approved workplan. If the proposed leveraging does not materialize during the period of award performance, and the recipient does not provide a satisfactory explanation, the Agency may consider this factor in evaluating future applications from the recipient. In addition, if the proposed leveraging does not materialize during the period of award performance then EPA may reconsider the legitimacy of the award; if EPA determines that the recipient knowingly or recklessly provided inaccurate

information regarding the leveraged funding the recipient described in its final approved workplan. EPA may take action as authorized by 2 CFR Part 200 and/or 2 CFR Part 180 as applicable.

q. Voluntary Cost-Share

This award and the resulting federal funding of **\$782,482** is based on estimated costs requested in the recipient's final approved workplan. Included in these costs is a voluntary cost-share contribution of **\$978,193** by the recipient in the form of a voluntary cost-share that the recipient included in its final approved workplan. The recipient must provide this voluntary cost-share contribution during performance of this award unless the EPA agrees otherwise in a modification to this agreement. While actual total costs may differ from the estimates in the recipient's application, EPA's participation shall not exceed the total amount of federal funds awarded.

If the recipient fails to provide the voluntary cost-share contribution during the period of award performance, and does not provide a satisfactory explanation, the Agency may consider this factor in evaluating future applications from the recipient. In addition, if the voluntary cost-share contribution does not materialize during the period of award performance then EPA may reconsider the legitimacy of the award; if EPA determines that the recipient knowingly or recklessly provided inaccurate information regarding the voluntary cost-share or overmatch the recipient described in its final approved workplan, EPA may take action as authorized by 2 CFR Part 200 and/or 2 CFR Part 180 as applicable.

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Item No: 8B
Date of Meeting: August 3, 2021

Project Authorization For SIM Yard Charging Stations and Electric Trucks Project

Presenter:
Hughes Wike, PE
Engineering Project Manager II

Project Authorization SIM Yard Charging Stations and Electric Trucks Project

As referenced in NWSA Resolution No. 2020-02, Exhibit A, Delegation of Authority Master Policy, Paragraph 8.c.iii., states project costs exceeding \$300,000 require approval from Managing Members.

Request construction authorization in the amount of \$460,000, for a total authorized amount of \$560,000, for the SIM Yard Charging Stations and Electric Trucks Project, Master Identification No. 201119.01.



Site Layout

SIM Yard Charging Stations and Electric Trucks Project



Background

SIM Yard Charging Stations and Electric Trucks Project

PROJECT OBJECTIVE

- The objective of this project is to provide electrical system infrastructure necessary to supply power to (6) electric yard trucks operating on the SIM Yard.



Background

Remanufacture Yard Tractors:

- Replace 6 diesel units with battery electric
- RMS will manage
- NWSA will “pass through” DERA grant funds to RMS

Infrastructure Project (this request)

- NWSA/POT will manage
- Costs will be reimbursed by
 - Tacoma Power Incentive
 - DERA
 - RMS



Project Description and Details

SIM Yard Charging Stations and Electric Trucks Project

- **The scope of work includes the following:**
 - Design and specifications for public works contracting
 - Project and construction management
 - Advertisement and award of construction contract
 - Installation of new electrical infrastructure including service panel, meter, conduit, cabling, and (6) charging stations
 - Construction of concrete equipment pads and protective bollard system
 - Trenching and pavement replacement
 - Tacoma Public Utilities (TPU) transformer upgrade
 - Inspection, testing, permitting, and commissioning



Project Schedule

SIM Yard Charging Stations and Electric Trucks Project

Activity	Timeframe
Advertise Bids	August 2021
Bid Opening	September 2021
Contract Award	September 2021
Substantial Completion	December 2021



Financial Implications SIM Yard Charging Stations and Electric Trucks Project

- The estimated cost of the construction for this project is \$460,000
- The estimated budget for this project is \$560,000.
- The current Capital Investment Plan (CIP) allocates \$560,000 for this project.
- This work and associated budget is consistent with the NWSA valuation.



Project Benefit

Commercial

- Respond to customer need
- Increase operational efficiency
- Reputational benefits (NWSA and customer)



Environmental

- Northwest Ports Clean Air Strategy
 - Early implementation of ZE tech.
- NWSA GHG Resolution
- Community and worker health



External Support

DERA Grant

- Total award amount: \$782,482

Tacoma Power Incentive

- Total amount: \$132,000
- Can fund up to 50% of infrastructure costs



Financials

Item	Cost
Electric Terminal Tractors and Charging Cabinets	
Terminal Tractor Remanufacture (6 @ \$252,750 EA)	\$1,516,500
Charging Cabinets (6@ \$6,000 EA)	\$36,000
Sales Tax (10.3%)	\$159,908
Total: Trucks + Charging Cabinets	\$1,712,408
Infrastructure Project	
Design ¹	\$100,000
Construction Contract ²	\$353,686
Soft Costs ³	\$106,314
Infrastructure Project Total	\$560,000
Totals	
Total Project Cost	\$2,272,408
DERA Funding	(\$782,482)
Tacoma Power Incentive Funding	(\$132,000)
RMS Share	(\$1,357,926)
Net Cost to the NWSA⁴	\$0

¹Includes port staff costs

²Includes contingency

³Includes sales tax, consultants, port staff, testing and inspection, and other miscellaneous costs.

⁴Does not include staff costs to manage the grant and incentive

Financial Summary

SIM Yard Charging Stations and Electric Trucks Project

Phase	This Request	Total Previous Requests	Total Project Cost	Cost to Date	Remaining Cost
Design	\$0	\$100,000	\$100,000	\$75,986	\$24,014
Construction	\$460,000	\$0	\$460,000	\$0	\$460,000
Total	\$460,000	\$100,000	\$560,000	\$75,986	\$484,014



Environmental Impacts/Review SIM Yard Charging Stations and Electric Trucks Project

Permitting:

Contractor will obtain an over-the-counter (OTC) construction permit.

Remediation:

Project site is located in the former City of Tacoma landfill area. Appropriate controls will be implemented to ensure any uncovered contaminated material is properly handled and disposed.



Environmental Impacts/Review SIM Yard Charging Stations and Electric Trucks Project

Water Quality:

Stormwater Best Management Practices (BMPs) and project-specific Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented.

Air Quality:

The SIM Yard charging stations and electric trucks project supports achievement of our GHG Resolution and Northwest Ports Clean Air Strategy goals.

Conclusion

SIM Yard Charging Stations and Electric Trucks Project

Request construction authorization in the amount of \$460,000, for a total authorized amount of \$560,000, for the SIM Yard Charging Stations and Electric Trucks Project, Master Identification No. 201119.01.

