

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No.	<u>5A</u>
Date of Meeting	<u>November 3, 2020</u>

DATE: October 21, 2020

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Jason Jordan, Director, Environmental and Planning Services

Project Managers: Graham VanderSchelden, Environmental Project Manager II, and
Mike Reilly, Director, Business Development

SUBJECT: DERA Grant and Tacoma Power Incentive Funds to Support Electric Yard Tractors at the SIM Yard

A. ACTION REQUESTED

Requesting Managing Member Authorization to accept 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 to support the implementation of six (6) all electric yard tractors by Rail Management Services and associated charging infrastructure at the South Intermodal (SIM) yard and to enter in to a sub-agreement with RMS to pass through grant funds.

B. SYNOPSIS

Responding to a customer need, the NWSA applied for and has been awarded a DERA grant in the amount of \$782,482 to support the implementation of 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.

This is a transformational opportunity, as to our knowledge, this would be the first permanent deployment of electric cargo handling equipment at a cargo facility in the Tacoma/Seattle gateway. The project would result in the avoidance of 22,998 gallons of diesel fuel annually, resulting to reductions in diesel particulate matter (DPM) emissions of 1.4 tons per year and 260 tons of GHGs per year. The resulting public health benefit is estimated at \$860,000 annually or \$5,160,000 over the estimated 6-year remaining useful life of the existing terminal tractors. The project supports achievement of the NWSA's 2017 Greenhouse Gas (GHG) resolution goals and goals of the Northwest Ports Clean Air Strategy. In addition to the environmental benefits, implementing the electric trucks will increase RMS's operational efficiency by reducing fueling and maintenance costs.

While roles and responsibilities need to be finalized in a sub-agreement with RMS after Managing Members accept the grant, the current plan is for implementation of the project to occur in two parallel efforts, with RMS managing the remanufacture of existing terminal tractors to battery-electric, zero emission versions and purchase of the charging cabinets and the NWSA, through the Port of Tacoma Project Management Team, managing installation of charging infrastructure. RMS will retain ownership of the terminal tractors and infrastructure and as such, has committed to paying remaining costs for the electric terminal tractors and charging infrastructure not covered by the grant or incentive. The only projected cost to the NWSA, once all reimbursements have been made, is for staff time to manage the grant and incentive.

C. MOTIVATION

This project is an opportunity to advance NWSA's environmental stewardship mission and support a customer in their efforts to both increase operational efficiency and advance their own environmental performance, all without necessitating capital outlay from the NWSA. 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 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 over 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. RMS has already implemented battery-electric terminal tractors in New York and Chicago.

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

Since 2007, the Ports of Tacoma and Seattle have been members of the Northwest Ports Clean Air Strategy (NWPCAS), an international collaboration with the Vancouver Fraser Port Authority (VFPA) working towards reducing air pollutant and greenhouse gas emissions from port-related activities in the joint Puget Sound-Georgia Basin Airshed. The NWSA joined the NWPCAS upon its formation in 2015. In the early days of the NWPCAS, ports were primarily focused on modernizing the fleets of diesel vehicles and equipment, replacing old unregulated engines with newer ones that had modern emission controls, and implementing cleaner fuels such as ultra-low sulfur marine fuels.

As of the 2016, Puget Sound Maritime Air Emissions Inventory, NWSA has reduced its emission intensity (emissions per ton of cargo moved) of diesel particulate matter by 80% and emission intensity of GHGs by 19% since 2005. Absolute emissions (not normalized to cargo throughput) were down 80% and 16% respectively. The great success of the first 10 years of NWPCAS implementation are the result of environmental leadership by the ports and strong collaboration with industry and governments.

Recognizing that there is still work to do to address air quality and climate impacts, the NWSA Managing Members passed a GHG Resolution in 2017, setting aggressive targets to align the NWSA's goals with the Paris Climate Agreement goal to limit global temperature increase to 2° Celsius. These targets, relative to a 2005 baseline are:

- Reduce all emissions by 50% by 2030;
- Reach carbon neutrality (i.e., net zero emissions) for “Scope 1” and “Scope 2” emissions (i.e., emissions from operations and energy usage, over which ports have direct control) by 2050;
- Reduce “Scope 3” emissions (i.e., emissions not under direct port control) by 80% by 2050.

Furthermore, since passing the GHG resolution, NWSA staff and the staff of the home ports have been working with partners at VFPA to update the NWPCAS. The draft updated NWPCAS seeks to eliminate air and climate pollution from port activities by 2050, recognizing the urgency of reducing local exposure to diesel particulate pollution, especially in disproportionately impacted near port communities and port workers. The most recent climate science from the Intergovernmental Panel on Climate Change (IPCC)¹ emphasizes the importance of reaching carbon neutrality before 2050 in order to minimize the impacts of climate change, providing additional urgency.

Implementing zero emission cargo handling equipment technology at port facilities is a major component of achieving the vision of phasing out emissions by 2050. Early adoption and demonstration of electric and other zero emission technology is important for building confidence in the technology with operators, creating a bigger market and thereby driving commercialization of the technology, and providing lessons learned to improve future implementation.

¹ <https://www.ipcc.ch/sr15/>

To our knowledge, this project would be the first instance of electric cargo handling equipment being deployed at a cargo facility in the Tacoma/Seattle gateway, a significant milestone in our efforts towards phasing out port-related air pollution.

D. 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”², 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 NWSA has the opportunity in this project to facilitate adoption of this zero-emission technology that would otherwise be unlikely by accepting and “passing through” DERA grant funds.

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, so they are confident that the electric terminal tractors can “do the job.”

E. PROJECT DESCRIPTION

The scope of the project is twofold: to remanufacture six (6) terminal tractors from diesel to battery-electric, zero emission versions and to install charging infrastructure to enable daily operation of the electric tractors. While roles and responsibilities would need to be finalized in a sub agreement with RMS after Managing Members accept the grant, the current plan is for RMS to manage the remanufacture of the terminal tractors and purchase the associated “charging cabinets” (the charging units must be purchased directly from the equipment manufacturer) and the NWSA, through Port of Tacoma’s Project Management team, to manage the installation of all new infrastructure and charging units. RMS will retain ownership of the terminal tractors and the charging infrastructure.

The NWSA will “pass through” DERA grant funds to RMS to pay for up to \$782,482 of the cost of remanufacturing the units and will be reimbursed by Tacoma Power incentive funds, DERA grant funds, and RMS for all costs associated with the infrastructure upgrades.

² <https://cleanairactionplan.org/documents/final-cargo-handling-equipment-che-feasibility-assessment.pdf/>

Technology to be Implemented

The electric terminal tractor specifications and costs used to develop the project are for units sold by the company Orange EV, model name “T-Series Electric Terminal Truck, Extended Duty”³. These tractors have 102 horsepower and have an 81,000 lb. towing capacity, capable of performing all required functions at a port intermodal yard. RMS currently operates this model of electric terminal tractors at other facilities around the country, providing confidence that the technology can be seamlessly integrated into the Tacoma operation.



Scope of Infrastructure Project

The infrastructure project contains electrical elements to bring power to the desired charging location and civil components to construct “charging corrals” for the terminal tractors as well as earthwork for power distribution. The likely elements of the project based on conceptual design include:

- 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, if needed; and
- Inspection, testing, permitting, and commissioning.

³ <https://orangeev.com/t-series-new/>

Schedule

Staff plan to begin work on this project upon authorization of grant acceptance by Managing Members as detailed in the table below. RMS estimates that it will take approximately 90 days to remanufacture the terminal tractors and plan to do three at a time to minimize disruption of their fleet. They plan to start the remanufacture of the first set of three tractors 90 days before the estimated completion of the charging infrastructure and the second set once the first set is complete and operating. All electric terminal tractors are expected to be in operation by Q4 2021.

Milestone	Estimated Date
Executive authorization request to complete project design	November 2020
Complete design	March 2021
Managing Member construction authorization	March 2021
Construction contract bid opening	April 2021
Begin construction	May 2021
Begin remanufacture of first three tractors	TBD: 90 days before expected infrastructure completion date
Substantial completion of charging infrastructure	Q3 2021
Begin remanufacture of second group of three tractors	TBD: Upon delivery of first three tractors
All electric terminal tractors in operation	Q4 2021

F. DERA GRANT

DERA is a Federal grant program that releases opportunities for funding annually, with programmatic goals of reducing diesel pollution and its impacts on public health, particularly in areas of poor air quality and disproportionately impacted communities. Eligible project types include replacing older, on-road vehicles with newer, cleaner models, replacing older nonroad equipment with newer, cleaner models, installing shore power for ocean-going vessels, engine replacements for locomotives, and other methods of reducing emissions from diesel engines.

Only government entities can apply, but private parties can be beneficiaries of a government entity project. In other words, government entities may apply for funds on behalf of private parties. Each EPA region is given an allotment of funds for each funding cycle. In EPA Region 10 (Washington, Oregon, Idaho, and Alaska) the total available for the 2020 funding opportunity is \$1.8 million and the maximum award any one entity may receive is \$1 million.

The NWSA applied for funding in February of 2020 in the amount of \$782,482 to support the electric terminal tractor project at the SIM yard. Notification that the proposal had been selected by the EPA's regional office was received by staff in June and the final award and grant agreement from the EPA's federal office was received in September.

G. TACOMA POWER INCENTIVE FUNDS

To assist with the infrastructure installation, Tacoma Power has earmarked \$132,000 in incentive funds from their Cargo/Material Handler Equipment and Hostler Trucks incentive program for this project. This is another example of Tacoma Power being a great partner and supporter of the NWSA and Port of Tacoma's electrification initiatives, as the SIM project was a significant driver behind the creation this incentive program.

H. FINANCIALS

The summary of 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 (10.2%)	\$158,355
Total: Trucks + Charging Cabinets	\$1,710,855
<i>Infrastructure Project</i>	
Design ¹	\$99,667
Construction ²	\$296,400
Soft Costs ³	\$98,465
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>
<i>RMS Share</i>	<i>(\$1,290,905)</i>
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

I. ENVIRONMENTAL BENEFITS

Based on the engine characteristics and remaining useful life of the existing terminal tractors, the environmental benefits summarized in the table below would be realized. Notably, switching to electric would reduce diesel fuel consumption by 22,998 gallons annually and 137,988 gallons over the remaining 6-year useful life of the existing terminal tractors. This would result in annual reductions in diesel particulate matter emissions of 1.41 tons per year and 8.44 tons over six years, resulting in \$860,000 of public health benefits, or \$5.2 million

over six years.

Monetized public health benefits are a method of translating emission reductions and resulting reductions in negative health outcomes such as premature death, hospitalizations, and missed workdays, among others, into their corresponding economic value.


Project Summary	Result	Outcomes				
Scrap and replace 6 diesel terminal tractor engines with battery electric terminal tractors	Displace approximately 15,331 annual diesel terminal tractor operational hours with electric (zero tailpipe emissions)	<i>Emission Reductions:</i>				
			DPM	GHGs	NO_x	VOCs
		Tons/Yr	1.41	259	5.37	0.43
		Tons/Lifetime*	8.44	1,552	32.21	2.56
		<i>Health benefits:</i>				
		Annual: \$860,000				
		Lifetime: \$5,160,000				
		<i>Reduced diesel fuel consumption:</i>				
		Annual: 22,998 gallons				
		Lifetime: 137,988 gallons				
		<i>Contribute towards keeping Pierce County in attainment of the 24-hour PM_{2.5} NAAQS.</i>				
		<i>Reduce exposure to air pollution in disproportionately impacted communities</i>				
		<i>Progress towards achieving goals of the Northwest Ports Clean Air Strategy</i>				
		<i>Increase public and industry awareness of the electric terminal tractor project and battery electric cargo handling equipment solutions.</i>				

J. ATTACHMENTS TO THIS REQUEST

- DERA Grant Agreement
- Tacoma Power Incentive Application/Grant Agreement

K. PREVIOUS ACTIONS OR BRIEFINGS

- **February 2020:** “Friday Packet” memo – Notification of application for DERA funds
- **July 2020:** “Friday Packet” memo – Notification of award of DERA funds

	U.S. ENVIRONMENTAL PROTECTION AGENCY Grant Agreement		GRANT NUMBER (FAIN): 01J83201		DATE OF AWARD 08/31/2020	
			MODIFICATION NUMBER: 0			
			PROGRAM CODE: DE		MAILING DATE 09/07/2020	
			TYPE OF ACTION New		ACH# PEND	
RECIPIENT TYPE: Special District			Send Payment Request to: Research Triangle Park Finance Center RTPFC-grants@epa.gov			
RECIPIENT: The Northwest Seaport Alliance 1 Sitcum Plaza Tacoma, WA 98421-3000 EIN: 47-4921178			PAYEE: The Northwest Seaport Alliance 1 Sitcum Plaza Tacoma, WA 98421-3000			
PROJECT MANAGER Graham VanderSchelden 1 Sitcum Plaza Tacoma, WA 98421-3000 E-Mail: gvanderschelden@nwseaportalliance.com Phone: 253-592-6791		EPA PROJECT OFFICER Sarah Frederick 1200 Sixth Avenue, Suite 155, 15-D13 Seattle, WA 98101-3188 E-Mail: frederick.sarah@epa.gov Phone: 206-553-1601		EPA GRANT SPECIALIST Lucas DuSablon 1200 Sixth Avenue, Suite 155, 17-CO4 Seattle, WA 98101-3188, 17-CO4 E-Mail: dusablon.lucas@epa.gov Phone: 206-553-2987		
PROJECT TITLE AND DESCRIPTION FY20 NWSA Electric Terminal Tractor Project This agreement will provide assistance to the Northwest Seaport Alliance (NWSA) in its efforts to reduce diesel emissions and exposure in Tacoma, WA. By replacing 6 diesel terminal tractors with 6 battery-electric terminal tractors at the South Intermodal yard in Tacoma, WA, the NWSA will reduce emissions of diesel particulate matter and other pollutants such as nitrogen oxides and hydrocarbons.						
BUDGET PERIOD 10/01/2020 - 12/31/2022		PROJECT PERIOD 10/01/2020 - 12/31/2022		TOTAL BUDGET PERIOD COST \$1,760,675.00		
				TOTAL PROJECT PERIOD COST \$1,760,675.00		
NOTICE OF AWARD						
Based on your Application dated 02/26/2020 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$782,482. EPA agrees to cost-share 44.44% of all approved budget period costs incurred, up to and not exceeding total federal funding of \$782,482. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.						
ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)			AWARD APPROVAL OFFICE			
ORGANIZATION / ADDRESS EPA Region 10 1200 Sixth Avenue, Suite 155 (17-C04) Seattle, WA 98101			ORGANIZATION / ADDRESS U.S. EPA, Region 10 Air & Radiation Division 1200 Sixth Avenue, Suite 155 Seattle, WA 98101			
THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY						
Digital signature applied by EPA Award Official PeggyD Johnson - Chief - Grants Section					DATE 08/31/2020	

EPA Funding Information

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FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$ 0	\$ 782,482	\$ 782,482
EPA In-Kind Amount	\$	\$	\$ 0
Unexpended Prior Year Balance	\$	\$	\$ 0
Other Federal Funds	\$	\$	\$ 0
Recipient Contribution	\$	\$ 956,367	\$ 956,367
State Contribution	\$	\$	\$ 0
Local Contribution	\$	\$	\$ 0
Other Contribution	\$	\$ 21,826	\$ 21,826
Allowable Project Cost	\$ 0	\$ 1,760,675	\$ 1,760,675

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.039 - National Clean Diesel Funding Assistance Program (B)	Diesel Emissions Reduction Act of 2010 codified at 42 U.S.C. 16131 et seq Further Consolidated Appropriations Act 2020 (P.L. 116-94)	2 CFR 200 2 CFR 1500 and 40 CFR 33

Fiscal									
Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
-	2010BDG096	20	E4	10B4	000AH4	4122	-	-	770,867
-	2010BDG096	19	E4	10B4	000AH4	4122	-	-	11,615
									782,482

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$10,816
2. Fringe Benefits	\$5,408
3. Travel	\$0
4. Equipment	\$1,744,451
5. Supplies	\$0
6. Contractual	\$0
7. Construction	\$0
8. Other	\$0
9. Total Direct Charges	\$1,760,675
10. Indirect Costs: % Base	\$0
11. Total (Share: Recipient <u>55.56</u> % Federal <u>44.44</u> %.)	\$1,760,675
12. Total Approved Assistance Amount	\$782,482
13. Program Income	\$0
14. Total EPA Amount Awarded This Action	\$782,482
15. Total EPA Amount Awarded To Date	\$782,482

Administrative Conditions

1. National Administrative Terms and Conditions

General Terms and Conditions

The recipient agrees to comply with the current EPA general terms and conditions available at:

https://www.epa.gov/sites/production/files/2019-09/documents/fy_2020_epa_general_terms_and_conditions_effective_october_1_2019.pdf

These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at:

<https://www.epa.gov/grants/grant-terms-and-conditions>.

A. Correspondence Condition

The terms and conditions of this agreement require the submittal of reports, specific requests for approval, or notifications to EPA. Unless otherwise noted, all such correspondence should be sent to the following email addresses:

- Federal Financial Reports (SF-425): RTPFC-grants@epa.gov
- MBE/WBE reports (EPA Form 5700-52A): bennett.andrea@epa.gov
- All other forms/certifications/assurances, Indirect Cost Rate Agreements, updates to recipient information (including email addresses, changes in contact information or changes in authorized representatives) and other notifications: wasson.wendy@epa.gov
- Quality Assurance documents, workplan revisions, equipment lists, programmatic reports and deliverables: frederick.sarah@epa.gov
- Administrative questions: dusablon.lucas@epa.gov

B. Extension of Project/Budget Period Expiration Date

EPA has not exercised the waiver option to allow automatic one-time extensions for non-research grants under 2 CFR 200.308 (d)(2). Therefore, if a no-cost time extension is necessary to extend the period of availability of funds the recipient must submit a written request to the EPA prior to the budget/project period expiration dates. **The written request must include:** a justification describing the need for additional time, an estimated date of completion, and a revised schedule for project completion including updated milestone target dates for the approved workplan activities. In addition, if there are overdue reports required by the general, administrative, and/or programmatic terms and conditions of this assistance agreement, the recipient must ensure that they are submitted along with or prior to submitting the no-cost time extension request.

C. Disadvantaged Business Enterprise (DBEs)

UTILIZATION OF SMALL, MINORITY AND WOMEN'S BUSINESS ENTERPRISES

GENERAL COMPLIANCE, 40 CFR, Part 33

The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33 except as described below based upon the associated class deviation.

EPA MBE/WBE CERTIFICATION, 40 CFR, Part 33, Subpart B

A class exception to the following provisions of Subpart B of 40 CFR Part 33 has been issued suspending the EPA MBE/WBE certification program: §33.204(a)(3) providing that an entity may apply to EPA MBE or WBE certification after unsuccessfully attempting to obtain certification as otherwise described in §33.204; and §33.205 through and including §33.211. The class exception was authorized pursuant to the authority in 2 CFR 1500.3(b).

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C

Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply.

Records documenting compliance with the six good faith efforts shall be retained:

- (a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- (b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- (e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- (f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

CONTRACT ADMINISTRATION PROVISIONS, 40 CFR, Section 33.302

The recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302 (a)-(d) and (i).

BIDDERS LIST, 40 CFR, Section 33.501(b) and (c)

Recipients of a Continuing Environmental Program Grant or other annual reporting grant, agree to create and maintain a bidders list. Recipients of an EPA financial assistance agreement to capitalize a revolving loan fund also agree to require entities receiving identified loans to create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Please see 40 CFR, Section 33.501 (b) and (c) for specific requirements and exemptions.

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D

A class exception to the entire Subpart D of 40 CFR Part 33 has been authorized pursuant to the authority in 2 CFR 1500.3(b). Notwithstanding Subpart D of 40 CFR Part 33, recipients are not required to negotiate or apply fair share objectives in procurements under assistance agreements.

MBE/WBE REPORTING- SPECIFIC CHANGES PURSUANT TO CLASS DEVIATION, 40 CFR, Part 33, Subpart E

When required, the recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants and Cooperative Agreements" report (EPA Form 5700-52A) on an annual basis. The current EPA Form 5700-52A can be found at the EPA Grantee Forms Page at <https://www.epa.gov/grants/epa-grantee-forms>.

Reporting is required for assistance agreements where funds are budgeted for procuring construction, equipment, services and supplies (including funds budgeted for direct procurement by the recipient or procurement under subawards or loans in the "Other" category) with a cumulative total that exceed the threshold amount of \$250,000, including amendments and/or modifications. When reporting is required, all procurement actions are reportable, not just that portion which exceeds \$250,000.

Annual reports are due by October 30th of each year. Final reports are due by October 30th or 90 days after the end of the project period, whichever comes first.

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502.

D. Intergovernmental Review Period

In accordance with 40 CFR Part 29, EPA must allow for an intergovernmental review comment period on this grant program. Accordingly, the Grantee may incur costs at its own risk but shall not draw down any funds associated with this award until the process is completed. This includes successful resolution of any issues identified during the comment period.

E. Indirect Costs Not Included (All Organizations) (also listed in General Terms and Conditions)

In addition to the General Terms and Conditions "Indirect Cost Rate Agreements", the cost principles of 2 CFR 200 Subpart E are applicable to this award. Since there are no indirect costs included in the assistance budget, they are not allowable under this Assistance Agreement.

Programmatic Conditions

Programmatic Terms & Conditions can be found as an attachment to the Award Document.

Transportation Electrification Projects Application and Agreement



PROJECT INFO

Customer Port of Tacoma / SIM Charging Stations
Project Address 1738 Milwaukee Way
City Tacoma State WA Zip 98421
Contact Name Graham VanderSchelden
Phone Number 253.592.6791
Email Address gvanderschelden@nwseaportalliance.com

FUNDING INFO

Funding Payable to Northwest Seaport Alliance
Mailing Address 1 Situm Plaza
City Tacoma State WA Zip 98421
Tacoma Power
Account Number 100260991

ELIGIBILITY REQUIREMENTS

- A. Project equipment and location must be preapproved by Tacoma Power.
- B. Equipment must be installed and operational before December 15, 2021.
- C. Installation must occur within the municipal boundaries of the City of Tacoma and comply with permitting requirements.
- D. Electric vehicle supply equipment (EVSE) purchased and installed must meet Tacoma Power specifications.
- E. Project must meet eligibility guidelines described in Attachment A.
- F. Customer must provide documentation verifying project details, including equipment specifications and installation cost.

PROJECT DESCRIPTION

Install 6 qty 22 kW chargers to support hostler trucks at Pacific Rail Services / RMS Intermodal. Total 132 kW

PROJECT DETAILS

Project type: Cargo/Material Handling Equipment
of charger heads 6 EVSE Max kW 132 kW Estimated Funding \$132,000

PROCESS TO RECEIVE FUNDING

1. With Tacoma Power's assistance submit a completed and signed Transportation Electrification Funding Application and Agreement.
2. Receive a preapproval email from Tacoma Power. The preapproval email will include the following:
 - A. Notification that your local electric system can support load from your project. In the event your local electric system cannot support your project, Tacoma Power will contact you with next steps.
 - B. An estimated funding amount based on project description.
 - C. A notice that you may proceed with purchase and installation of your EVSE equipment.
3. Install EVSE described in the preapproval email.
4. Complete monitoring and verification protocols described in Attachment A specific to your project type.
5. Submit the following items within 30 days of project completion:
 - A. Copy of the manufacturer electrical specifications for EVSE.
 - B. Copies of all invoices pertaining to the purchase and installation of equipment.
 - C. Completed and signed Transportation Electrification Funding Application and Agreement (this document).

Transportation Electrification Projects Application and Agreement



TERMS AND CONDITIONS

This Transportation Electrification Projects Agreement ("Agreement") is entered into this (date) _____ by and between the City of Tacoma, Department of Public Utilities, Light Division (d/b/a and hereafter referred to as "Tacoma Power") and the Applicant The Northwest Seaport Alliance (hereinafter "Participant"). In consideration of the mutual benefits provided by investments in transportation electrification, Tacoma Power and Participant agree to the following terms and conditions.

1. **General Eligibility Requirements:** To qualify for disbursement of funds from the Electric Vehicle Charging Fund ("Agreement Fund"), the proposed projects must meet the following general eligibility requirements:
 - A. Project equipment and location must be preapproved by Tacoma Power.
 - B. Equipment must be installed and operational before December 15, 2021.
 - C. Installation must occur within the municipal boundaries of the City of Tacoma and comply with permitting requirements.
 - D. Electric vehicle supply equipment (EVSE) purchased and installed must meet Tacoma Power specifications.
 - E. Project must meet eligibility guidelines described in Attachment A.
 - F. Customer must provide documentation verifying project details, including equipment specifications and installation cost.
2. **EVSE Installation:** Participant represents that it has the right to install qualifying EVSE (in accordance with Attachment A) at the location identified in the Application and that all necessary consents from property owners and lessors have been obtained. Participant is solely responsible for the design, implementation, and installation of the EVSE and for ensuring that the EVSE installation (including equipment purchased, work performed, required permits and material disposal, if any) complies with applicable federal, state and local safety, building, electrical, and environmental laws, codes, regulations and standards and any manufacturer instructions. The Participant assumes full responsibility for the design and installation of said EVSE and full financial responsibility for any measures which do not meet the qualifications specified in this Agreement and the associated Application. If future conditions require removal and decommissioning of EVSE, such removal and decommissioning will be at the expense and risk of the Participant.
3. **Schedule:** To obtain Agreement Funds, Participant must submit a fully completed, signed and authorized Transportation Electrification Projects Application and Agreement for preapproval by Tacoma Power. Upon approval participant must submit final cost documentation and installed equipment specifications within 30 days following EVSE installation for funding disbursement.
4. **Agreement Fund Amount and Payment:** The funding amount paid from the Agreement Fund is determined by the project type and outlined in Attachment A. In no event will the funding amount exceed the available Agreement Funds. Tacoma Power will make funding payments following (A) Tacoma Power's verification of approved EVSE equipment and installation and (B) Participant's submission of all required final cost documentation.
5. **Verification:** Participant agrees to assist Tacoma Power's verification of EVSE equipment and installation costs, and anticipated energy consumption used by equipment as follows:
 - A. **Access and Inspection:** Participant shall, upon request, provide Tacoma Power and its representatives: (1) reasonable access to and inspection of the site project site and EVSE installed therein before, during and/or after implementation, and (2) reasonable access to, inspection of, and use of energy consumption data related to the installed EVSE; including release of utility meter and billing data following implementation.
 - B. **Final Cost Documentation:** As a condition of Tacoma Power's reimbursement of installation and equipment costs from the Agreement Fund, Participant agrees to promptly provide to Tacoma Power, upon request, documentation verifying equipment purchased and/or work performed including, but not limited to: sales slips, purchase orders, invoices, and other written documentation pertinent to the EVSE that was installed showing vendor name, brand, model, and dates of purchase and of installation.

Transportation Electrification Projects Application and Agreement



6. **Limited Role of Tacoma Power:** The purchase and installation of EVSE described in Attachment A are the sole responsibility of Participant. The sole responsibility of Tacoma Power is to provide monies from the Agreement Fund for the purchase and installation of qualifying EVSE. Participant assumes full financial responsibility for any EVSE that do not meet funding qualifications. Participant assumes all risk of use of any EVSE and liability from use of any EVSE. Tacoma Power is not a party to any contract(s) for the purchase of material or labor and shall have no liability whatsoever for contracts between Participant and third party suppliers and/or contractors.
 - A. **No Endorsement:** Tacoma Power does not endorse any particular contractor, manufacturer or product in promoting this funding program. The Participant acknowledges that Tacoma Power in no way influenced the choice of contractor or specific brands of equipment. Participant is solely responsible for the quality of the EVSE installation.
 - B. **No Warranties/Disclaimer:** Tacoma Power makes no express or implied warranties of any kind under this Agreement and makes no representations regarding the results to be achieved by the EVSE to be installed.
 - C. Participant understands and acknowledges that Tacoma Power is simply providing funding from the Agreement Fund to assist Participant in installing EVSE and therefore Participant acknowledges and agrees that (1) Tacoma Power and its representatives shall not be responsible in any way for assuring that the design, engineering, installation, and/or implementation of the EVSE is proper or complies with any laws, codes, or standards, (2) Tacoma Power's verification, inspection and/or monitoring activities are solely for its own program purposes and no warranties to, or reliance by, Participant shall be implied, (3) Participant shall independently evaluate any information provided by Tacoma Power or its representatives related to EVSE, (4) Tacoma Power does not guarantee any particular results, (5) Tacoma Power's decision to release funds from the Agreement Fund to Participant for EVSE Tacoma Power determines as qualifying for said funds, does not act as a warranty, representation or guaranty of any sort in relation to said EVSE, and (6) Participant assumes the risk of any loss or damages that Participant may suffer in connection with the design, installation, or implementation of the EVSE.
7. **Limitation of Liability and Indemnification:** Tacoma Power's entire liability hereunder is limited to payment Agreement funds specified in Attachment A according to the terms and conditions hereof. In no event shall Tacoma Power's total liability in connection with this Application, regardless of legal or equitable basis, exceed the amount of any Agreement funds offered per a completed and authorized Application. Tacoma Power shall not be liable to Participant for any consequential or indirect damages of any kind arising in connection with this Agreement or installation of any equipment.
8. To the fullest extent allowed by law, Participant agrees to indemnify, defend, and hold harmless Tacoma Power and its officers and employees, from and against any and all liabilities, losses, claims, damages, judgments, penalties, causes of action, costs and expenses (including reasonable attorney's fees and costs) arising from or in connection with the willful misconduct or negligence of Participant, its employees, agents and/or contractors in the performance of this Agreement. Participant specifically assumes liability for actions brought by the Participant's own employees against Tacoma Power and, solely for the purpose of this indemnification and defense, the Participant expressly waives any immunity under state industrial insurance law, Title 51 RCW. Participant acknowledges that this waiver was the subject of mutual negotiation. This indemnification shall survive termination of this Agreement.
9. **Termination:** Tacoma Power is not obligated to approve any Application for a payment that may result in Tacoma Power exceeding the Agreement Fund amount allocated for this given type of project. Tacoma Power may terminate this Agreement at any time upon thirty (30) days written notice to Participant.
10. **Hazardous Materials:** Tacoma Power shall have no liability or responsibility for the discovery, presence, handling, removal, or disposal of or exposure of persons to hazardous materials of any kind in connection with Participant's Facilities.

Transportation Electrification Projects Application and Agreement



MISCELLANEOUS

- A. Entire Agreement/Severability:** This Agreement, including Application and Attachment A, comprises the entire AGREEMENT between the Parties regarding the payments for EVSE installation and implementation. All prior communications, representations, promises, or conditions relating to the subject matter of this Agreement are superseded hereby. If any term, condition or provision of this Agreement is declared void, unenforceable or limited in its application by any court or administrative body having jurisdiction, such event shall not affect any other provision, which remaining provisions shall continue in full force and effect in accordance with their terms.
- B. Modification.** No modification or amendment of this Agreement shall be effective unless in writing and signed by the Parties.
- C. Authority to Enter into Agreement:** By signing this Agreement, I represent and warrant that I have read, understand, and agree to the foregoing Terms and Conditions and that I am the owner or duly authorized agent of the owner of the Facility with full power to accept said Terms and Conditions.
- D. Sole Venue and Governing Law:** The sole venue of any legal action arising from this Agreement shall be Pierce County Superior Court of the State of Washington, and this Agreement shall be governed by and construed in accordance with the laws of the State of Washington.
- E. Counterparts Clause:** This Agreement may be executed in any number of counterparts, each of which shall for all purposes be deemed to be an original and all of which together shall constitute one and the same instrument, and in making proof hereof it shall not be necessary to produce or account for more than one such counterpart. A facsimile, pdf, or other form of electronic signature shall be sufficient to bind a Party hereto.

AUTHORIZATION

By signing below I certify that I have read and accept the Terms and Conditions and Technical Eligibility Requirements listed in Attachment A of this funding offer.

Signature _____ Date _____

You may scan signed documents and email them to your representative; alternately, you can mail or drop off directly to our office:

Mail:
ER&D
Tacoma Power
PO Box 11007
Tacoma, WA 98411

Email
rebates@cityoftacoma.org

INTERNAL USE ONLY

Project ID SEP_SMH_RMS Staff Contact Jeremy Stewart Date Rec'd _____

Approved by Energy Research and Development

Signature _____ Date _____

Approved by City Finance

Signature _____ Date _____

Approved as to Form and Legality Deputy/Assistant City Attorney

Signature _____ Date _____

Transportation Electrification

Attachment A

CARGO/MATERIAL HANDLING EQUIPMENT AND HOSTLER TRUCKS

Funding is available to assist Tacoma Power customers purchasing and installing electric vehicle charging equipment (EVSE) serving cargo and material handling equipment. New electric cargo and material handling equipment must replace existing gas, diesel, propane, or natural gas equipment. Tacoma Power must verify local utility equipment is able to handle additional demand from cargo/material handling EVSE. Funding level is determined based on equipment nameplate demand (kW) using the table below:

TOTAL CHARGER KW INSTALLED	FUNDING
Less than 10 kW	\$1,000 total
10kW – 30 kW	\$10,000 total
Above 30 kW	\$1,000 / kW

The payment amount is limited to a maximum of 50% of the documented construction and EVSE equipment costs on the Participant's premise and up to 100% of the documented electrical upgrade costs necessary to serve EVSE load (utility make ready costs).

Tacoma Power requires participants provide two weeks of monitoring and verification after installing equipment and incorporating equipment into daily operations. Participants may meet this requirement by providing two weeks of data in one of two ways:

1. Interval data from utility meter and onboard or EVSE supplied telemetric data (if appropriate data is available).
2. Sub meter the EVSE charging equipment to capture electric interval meter data (must be able to retrieve data).

For questions or assistance, call Jeremy Stewart at (253) 396-3294



Item No: 5A_supp
Date of Meeting: November 3, 2020

DERA Grant and Tacoma Power Incentive Funds to Support Electric Yard Tractors at the SIM Yard

Presenters:

Graham VanderSchelden, Environmental Project Manager II, and
Mike Reilly, Director, Business Development

Action Requested

Requesting Managing Member Authorization to accept 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 to support the implementation of six (6) all electric yard tractors by Rail Management Services and associated charging infrastructure at the South Intermodal (SIM) yard and to enter in to a sub-agreement with RMS to pass through grant funds.



Motivation

Commercial

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



Environmental

- Northwest Ports Clean Air Strategy
- NWSA GHG Resolution
- Community and worker health



Project Summary

Remanufacture Yard Tractors:

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

Infrastructure Project

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



Project Schedule

Milestone	Date
Executive authorization for design	November 2020
Complete design	March 2021
Managing member Construction Authorization	March 2021
Construction bid opening	April 2021
Begin Construction	May 2021
Begin remanufacture of the first three tractors	TBD: 90 days before expected infrastructure completion date
Substantial completion of charging infrastructure	Q3 2021
Begin remanufacture of second group of three tractors	TBD: after delivery of first three tractors
All electric terminal tractors in operation	Q4 2021

DERA Grant and TPU Incentive

DERA Grant

- Total award amount: \$782,482
- \$769,885 would be passed through to RMS



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 (10.2%)	\$158,355
Total: Trucks + Charging Cabinets	\$1,710,855
Infrastructure Project	
Design ¹	\$99,667
Construction Contract ²	\$296,400
Soft Costs ³	\$98,465
Infrastructure Project Total	\$494,532
Totals	
Total Project Cost	\$2,205,387
DERA Funding	(\$782,482)
Tacoma Power Incentive Funding	(\$132,000)
RMS Share	(\$1,290,905)
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

Environmental Benefits

Emission Reductions

	DPM	GHGs	NO _x	VOCs
Tons/Yr	1.41	259	5.37	0.43
Tons/Useful life	8.44	1,552	32.21	2.56

Reduced diesel fuel consumption:

Annual: 22,998 gallons

Useful Life: 137,988 gallons

Monetized health benefits:

Annual: \$860,000

Lifetime: \$5,160,000

Demonstrate ZE yard tractors in the PNW

- Increase confidence and awareness
- Lessons learned



Conclusions

Major milestone: first zero emission cargo handling equipment in our gateway

Opportunity to provide valuable service to our customer

Projects like this are critical to the success of the NWPCAS



Action Requested

Requesting Managing Member Authorization to accept 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 to support the implementation of six (6) all electric yard tractors by Rail Management Services and associated charging infrastructure at the South Intermodal (SIM) yard and to enter in to a sub-agreement with RMS to pass through grant funds.

