



Financing Port Clean Energy Projects

**Washington Public Ports Association
Finance & Administration Seminar
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Overview of Session

Financing Port Clean Energy Projects

Port financing tools

- State law
 - Bonds
 - State grants
- Federal law
 - Tax exempt bonds
 - Federal Grants
 - Direct payments in lieu of taxes
 - Combining the above
- Practice Tips, Resources

Questions?

Clean Energy Infrastructure

- Reducing emissions
 - Port electrification
 - Shoreside electricity connectivity
 - Building electrification/efficiency
 - Clean fleet programs, including clean heavy duty vehicles
 - EV charging stations
 - Other clean energy initiatives
 - Renewable energy facilities, including for community, port, tenant facilities
- Mitigating impacts and building resiliency
 - Carbon capture facilities
 - Green space

Port Examples

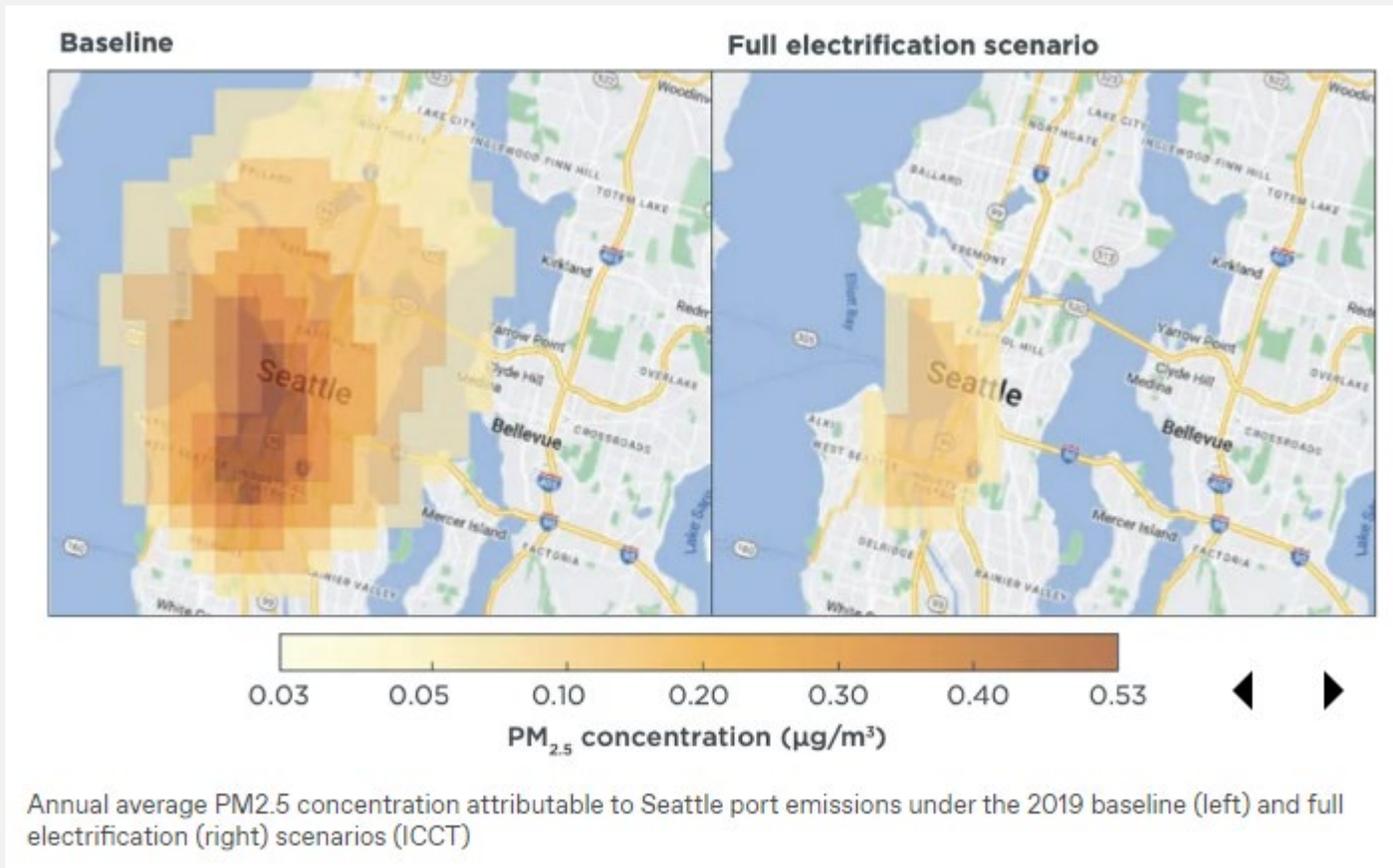
Port of Camas-Washougal

- Port Decarbonization Guide (June 2022)
 - For Port staff, tenants and partners
 - Energy efficiency, building electrification, renewable energy, and electric vehicle charging
- Community solar project
 - 799-kilowatt solar grid at the port's industrial park (via agreement with Clark Public Utilities)
 - Large collection of solar panels from which utility customers purchase units in exchange for credit

Port of Bellingham

- Climate Action Study (comment period)
- Existing projects
 - 336 solar panels on the Bellingham Cruise Terminal (largest public solar array in Whatcom County)
 - EV charging stations, LED lighting upgrades

Port Electrification



ELECTRIFYING PORTS TO REDUCE DIESEL POLLUTION FROM SHIPS AND TRUCKS AND BENEFIT PUBLIC HEALTH: CASE STUDIES OF THE PORT OF SEATTLE AND THE PORT OF NEW YORK AND NEW JERSEY

FEBRUARY 6, 2023

BY: ZHIHANG MENG AND BRYAN COMER, PH.D.

International Council on Clean Transportation

Port Financing Tools

Governmental Bonds

- Issued by ports to finance port projects
 - Can be issued as tax-exempt bonds
 - Payable from and secured by port funds
- Debt types:
 - General obligation bonds paid from property taxes
 - Limited tax general obligation (LTGO) bonds
 - Unlimited tax general obligation (UTGO) bonds
 - Revenue bonds paid from operating revenues
 - General revenue bonds
 - Special facility bonds
 - Assessment bonds
- Clean energy infrastructure example:
 - EV charging stations for port's vehicle fleet



Private Activity Bonds

- Issued to construct or improve facilities used by a private entity
- Federal tax exemption for bonds issued to finance “exempt facilities”
 - Airports, docks, wharves, and others
 - Subject to legal requirements and restrictions
 - Generally subject to alternative minimum tax (“AMT”)
- General revenue bonds
 - Secured by general operating revenues
- Special facility bonds
 - Payable from specified revenue stream (i.e., lease payments of a particular facility)
 - No recourse to other port revenues
- Clean energy infrastructure example:
 - Lease revenue bonds for electrification/clean energy alternative to fuel facility



Industrial Development Revenue Bonds

- Issued on a conduit basis
 - Port forms an industrial development corporation (“IDC”)
 - IDC issues bonds on behalf of private borrower
 - Bonds secured by direct payments from private borrower
 - No recourse to the port or IDC
- Can finance “small issue manufacturing facilities” on a tax-exempt basis
 - Facility must be used in the manufacturing or production of tangible personal property;
 - \$10 million issuance limit; and
 - \$20 million capital expenditure limit
- Can finance solid waste disposal, other “exempt facilities”
- Clean energy infrastructure examples:
 - Battery, solar, and other manufacturing tenants



Other State Tools: Grants and Loans

State Grants and Loans

- Port decarbonization and electrification projects
 - \$26.5M for port electrification competitive grants
 - \$14M for zero emission shore power infrastructure demonstration project at Northwest Seaport Alliance
 - \$2M for port electrification of at Port of Bremerton
 - \$500K for port electrification at Port of Anacortes
- Zero emission dray truck program pilot
- Additional clean fleet programs
- Public building efficiency improvements
- EV charging infrastructure



Multiple Agencies, Many Resources

Washington State Department of Transportation Zero-Emission Vehicle Grants:
<https://wsdot.wa.gov/business-wsdot/grants/zero-emission-vehicle-grants>

Washington State Department of Commerce:
<https://www.commerce.wa.gov/growing-the-economy/energy/>

Washington State University Green Transportation Funding Opportunities:
<https://energy.wsu.edu/GreenTransportationProgram/FundingOpportunities.aspx>





Other federal tools

Federal grants for ports

Funds for port electrification and other port investments. Bipartisan Infrastructure Law (BIL or IIJA) included funding for clean port infrastructure. Inflation Reduction Act includes another \$4 billion with a focus of electrifying port equipment and heavy-duty vehicles.

- BIL

- DOT Reduction of Truck Emissions at Port Facilities Grant Program (\$400 million)
<https://highways.dot.gov/newsroom/biden-harris-administration-opens-applications-first-year-400m-competitive-grant-program>
- DOT/MARAD: Port Infrastructure Development Program (\$2.25 billion).

- IRA

- EPA Clean Ports Program (\$3 billion) zero-emission port equipment and technology and to help ports develop climate action plans. <https://www.epa.gov/inflation-reduction-act/clean-ports-program>
- EPA Clean Heavy-Duty Vehicles Program.

Multiple agencies, many resources



Northwest Ports Clean Air Strategy

- Vision: Phase out seaport emissions by 2050
 - Doing our part to limit climate change
 - Reduce environmental health disparities

PLAN →

DEMONSTRATE →

TRANSITION

Major Initiatives:

- Electrification Planning
- ZE Cargo Handling Equipment Program
- Shore Power Program
- Clean Truck Program

EPA: <https://www.epa.gov/ports-initiative/funding-opportunities-ports-and-near-port-communities>

— **Webinar:** <https://www.epa.gov/system/files/documents/2022-07/electrifying-ports-webinar-2022-05-23.pdf>

USDOT Rural Funding EV: <https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-funding-and-financing/funding-matrix>

USDOT MARAD Small Ports:

<https://www.maritime.dot.gov/sites/marad.dot.gov/files/2023-03/PIDP%20FY23%20Small%20Projects%20at%20Small%20Ports%20Economic%20Viability.pdf>

Inflation Reduction Act: Tax Credit Programs

Direct payments for clean energy projects

A key provision in the IRA makes states, local governments, 501(c)(3) nonprofit organizations, tribal governments and other tax-exempt entities (“tax-exempt entities”) eligible to receive a number of clean energy federal tax credits as direct payments.

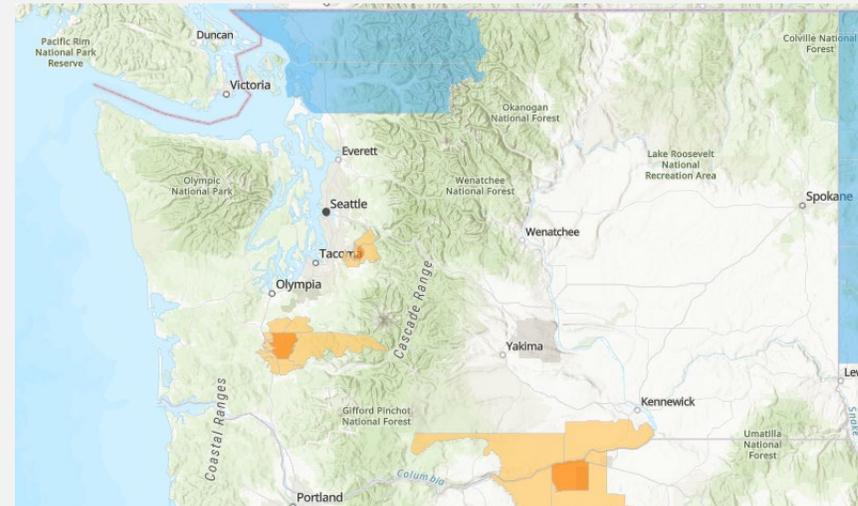
- In essence, the IRA allows tax-exempt entities to claim a refund for taxes they are deemed to have paid.
- Investment Tax Credits (“ITC”):
 - A one-time tax credit based on the cost of the investment and is earned when the project is placed in service. The IRA expands the ITC programs available for qualifying investments in wind, solar, energy storage, and other renewable energy projects.
- Production Tax Credits (“PTC”):
 - Subsidy provided over time based on the electricity generated by the facility. PTCs may generally be claimed over a 10 year period, subject to earlier phase out provisions. For some projects, issuers may elect to receive an up-front ITC in lieu of the corresponding annual PTCs.
- Other tax incentives
- Can combine direct payments with tax-exempt bonds to fund clean energy infrastructure projects, with a relatively minor (15%) reduction in the direct payment.

Inflation Reduction Act

Direct payments for clean energy projects

Bonus structure for priority projects, that satisfy the following criteria:

- Meet prevailing wage and qualified apprentice standards
- Meet domestic content requirements (for steel, iron, or manufactured components of the facility),
- Projects in low-income communities
- Projects that are part of a qualified low-income residential building project or a qualified low-income economic benefit project
- Projects in “energy communities” – brownfield sites and areas dependent on coal, oil or natural gas



Direct Payment Investment Tax Credits – Examples

Type	Program	Purpose	Notes
Investment	Energy (Section 48) ITCs	Investments in specified energy property including solar, geothermal electricity, qualified fuel cell, qualified microturbine, combined heat and power system, qualified small wind energy, geothermal heat pump systems, waste energy recovery, energy storage technology, qualified biogas and microgrid controllers	The ITC is calculated as a percentage of the basis of the energy property placed in service during the tax year. This technology-specific tax credit sunsets (construction of eligible projects must begin prior to January 1, 2025), and is replaced with the technology-neutral, emissions-based clean electricity credit listed next.
Investment	Clean Electricity (Section 48E)	Certain electrical generation facilities for which the anticipated greenhouse gas emissions rate is not greater than zero and to energy storage technology	The facilities must be placed in service after December 31, 2024. The IRA phases out the credit one year after the later of: (i) December 31, 2032, or (ii) the year in which U.S. annual greenhouse gas emissions from electricity production are less than 25% of the 2022 emission rate..
Investment	Alternative Fuel Refueling Property Credit (Section 30C)	Fueling equipment for electricity, natural gas and other alternative fuels, providing a tax credit equal to up to 30% of the cost of the property. Eligible fueling equipment must be installed in locations that meet the following census tract requirements. The census tract is not an urban area; A population census tract where the poverty rate is at least 20%; or Metropolitan and non-metropolitan area census tract where the median family income is less than 80% of the state medium family income level.	This program may be a helpful tool for entities installing electric vehicle charging stations in low-income or rural areas. The credit is available to facilities placed in service through December 31, 2032.
Investment	Credit for Qualified Commercial Clean Vehicles (Section 45W)	This program provides a subsidy for “qualified commercial clean vehicles,” capped at \$40,000 for vehicles weighing 14,000 lbs or more and \$7,500 for vehicles weighing under 14,000 lbs	The subsidy may be a helpful tool for ports and others implementing programs to electrify vehicle fleets. The provisions expire on December 31, 2032.

Direct Payments for Production Tax Credits

A production tax credit (“PTC”) is a subsidy provided over time based on the electricity generated by the facility. PTCs may generally be claimed over a 10 year period, subject to earlier phase out provisions.

Similar to the ITC adjustments described above, the IRA adds bonuses to the calculation of the renewable electricity PTC for projects that meet prevailing wage and qualified apprentice requirements, that meet domestic content requirements, or that are located in applicable energy communities.

- Projects generally may not claim a double benefit and are limited to receiving a single type of PTC described below.
- For some projects, issuers may elect to receive an up-front ITC in lieu of the corresponding annual PTCs.

Inflation Reduction Act: Other Tax Incentives

Allocable Deduction for Energy Efficiencies

The IRA also includes incentives for including or installing energy-efficient components (such as energy efficient windows, HVAC, hot water and lighting features) in affordable housing and other buildings.

- Expands the deduction under Section 179D of the Code to allow tax-exempt entities (including state or political subdivisions, or any agency or instrumentality of the foregoing) that include energy efficiencies in buildings owned by or on property owned by the tax-exempt entity to allocate the deduction to the entity primarily responsible for designing the property.
- Increases the deduction amount (up to \$5.00 per square foot if prevailing wage and qualified apprenticeship requirements are satisfied).
- Provides an opportunity for local governments and other tax-exempt entities to allocate tax deductions to the designer (such as the architect, engineer or design-build contractor) and receive economic benefits in return for the allocation.
- The amendments are effective for buildings placed in service beginning January 1, 2023.

Next Steps

Considerations in project development.

A large number of state and federal grant programs and federal direct pay and other tax incentives. These are new options that can be combined with traditional public financing options. Challenge is to sort through technical funding tools and match to technical projects.

- Understand Port and tenant projects and project components
- Understand grants; track by granting federal and state agency
- Identify components eligible for direct payments to Port or private partners in lieu of taxes
- Allocating/combining grants, direct payments and tax-exempt bonds
- Challenges:
 - Tax incentives and qualifying projects are highly technical.
 - Tax incentives are newly available to local governments; although some local governments (particularly public power) are familiar with the tax incentives through power purchase agreements and other arrangements with private entities that have been able to use the credit.
 - Steep learning curve to put together the puzzle pieces to unlock new funding.
- Opportunity: unprecedented funding options

Project Sources and Uses

Funding puzzle pieces. A portion of the costs may be bond financed, if there is a source of revenue to pay debt service on the bonds. Significant federal and grant funds, as well as federal tax credits, are available for clean energy infrastructure.

- Bonds
 - Source of repayment?
 - Grants? Timing
- State and federal grant funds
 - Qualified equity
- Federal tax credits/payments
 - Portion of project costs
 - Timing?

Wrap Up

Questions?

Comments?

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Port Bonds (Washington) – Additional Background

Unlimited Tax General Obligation (UTGO)

- Consumes UTGO debt capacity (0.75% of value of taxable property)
- Only for capital purposes, not the replacement of equipment
- Supermajority (60%) voter approval
- Validation requirement
- Paid from excess property tax levy
- Outside of statutory or constitutional limits on regular property taxes
- Levy set at rate required to pay debt service

Limited Tax General Obligation (LTGO)

- Councilmanic, non-voter approved
- Consumes LTGO debt capacity (0.25% of value of taxable property)
- Any municipal purpose (generally)
- Pledge to levy regular (nonvoted) taxes as necessary to pay debt service
- Paid from portion of regular levy imposed to pay debt service (or from other legally available funds)
- Levy not subject to the \$0.45 per \$1,000 rate limitation applicable to the general purpose portion of the tax levy, but subject to the 101% limit on annual dollar amount

Port Bonds (Washington) – Additional Background

Revenue Bonds	Assessment Bonds
<ul style="list-style-type: none">▪ A port may obligate its general revenues or a specific portion of its revenues to pay port revenue▪ Not subject to constitutional or statutory debt limitations (“special fund doctrine”)▪ Capacity to issue additional revenue bonds is typically limited by bond covenants▪ Additional bonds test (ABT) requires an issuer to demonstrate a minimum level of debt service coverage (e.g., 1.25x or 1.50x), including the proposed new debt▪ May require a debt service reserve fund▪ Tax revenue may not be used to pay, secure, or guarantee the payment of port revenue bonds (but tax revenue may be applied to pay operating expenses)	<ul style="list-style-type: none">▪ Infrastructure (e.g., road or utility improvements) with special benefit to property owners▪ Payable from charges imposed against properties in a designated local improvement district (LID) or utility LID in respect of special benefits received by those properties from the construction of nearby or adjacent public improvements, separate and apart from the general benefit accruing to the public at large▪ Special assessments are determined according to the value of the benefit received – value capture financing▪ Process for creating district, setting the assessment roll, finalizing the assessment roll, and issuing debt payable from assessment is highly statutory