

# Second-Party Opinion

## Port of Los Angeles Green Bonds



### Evaluation Summary

Sustainalytics is of the opinion that the Port of Los Angeles (“the Port”) Green Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2018. This assessment is based on the following:



**USE OF PROCEEDS** The green categories for eligible use of proceeds – (i) Renewable Energy, (ii) Green Buildings, (iii) Clean Transportation, (iv) Pollution Prevention and Control, and (v) Terrestrial and Aquatic Biodiversity Conservation – are aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers the eligible categories to have positive environmental impact and to advance the UN Sustainable Development Goals, specifically 7, 11, 12, and 15.



**PROJECT EVALUATION / SELECTION** The Port selected projects based on their commercial feasibility, eligibility and alignment with internal environmental management program. The Port also confirmed that all projects require that the relevant Environmental Impact Review and stakeholder consultation must conclude negligible environmental disruption. Sustainalytics considers the Port’s project selection process to be in line with market practice.



**MANAGEMENT OF PROCEEDS** The Port intends to refund outstanding bond amounts related to eligible projects. Net Proceeds will be applied to redeem the outstanding bonds within 90 days. Sustainalytics considers this to be in line with market practice.



**REPORTING** The Port has reported amounts to be allocated to each eligible project along with details of impact indicators associated with each eligible category within the Framework.

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<b>Evaluation date</b>	July 2019
<b>Issuer Location</b>	Los Angeles, California, USA

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## Introduction

The Port of Los Angeles (“the Port”, or the “Issuer”) is a department of the City of Los Angeles (also known as the Los Angeles Harbor Department), governed by the Los Angeles Board of Harbor Commissioners, and is one of the busiest seaports in North America. In terms of physical size, the Port covers approximately 7,500 acres (4,300 acres of land and 3,200 acres of water). The Port generally encompasses approximately 43 miles of waterfront berthing and 25 terminals, including seven major container cargo terminals, four break bulk facilities, three dry bulk facilities, seven liquid bulk cargo terminals, two passenger cruise terminals, one vehicle handling facility and one multi use facility. The Port is located in San Pedro Bay in the San Pedro and Wilmington neighbourhoods of Los Angeles, California.

In September 2016, the Port issued green bonds to refinance expenditures related to projects aimed at improving environmental quality of life in and around the Port’s area.<sup>1</sup> In 2019, to further its efforts, the Port has developed the Port of Los Angeles Green Bond Framework (the “Framework”) under which it intends to issue green bonds to refund portions of previously issued bonds which financed expenditures related to a number of selected green projects. The Framework defines eligibility criteria in the following areas:

1. Renewable Energy
2. Green Buildings
3. Clean Transportation
4. Pollution Prevention and Control
5. Terrestrial and Aquatic Biodiversity Conservation

A list of eligible projects and intended allocations for the 2019 green bond issuance (refunding Series 2009A and 2009C bonds) is provided in Appendix 2.

The Port engaged Sustainalytics to review the Green Bond Framework, dated July 2019, and provide a second-party opinion on the Framework’s environmental credentials, as well as the alignment of the Framework with the Green Bond Principles 2018 (GBP).<sup>2</sup> This Framework is published as a part of this document in Appendix 1.

As part of this engagement, Sustainalytics held conversations with various members of the Port’s management team to understand the sustainability impact of their business processes and use of proceeds, as well as management of proceeds and reporting aspects of the Port’s Green Bond Framework. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the Port of Los Angeles Green Bond Framework, dated July 2019, and should be read in conjunction with that Framework.

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<sup>1</sup> Port of LA Green Bond Series 2016C, Framework Overview and Second-Party Opinion by Sustainalytics available at:

[https://www.sustainalytics.com/sites/default/files/green\\_bond\\_framework\\_and\\_opinion\\_port\\_of\\_la\\_final.pdf](https://www.sustainalytics.com/sites/default/files/green_bond_framework_and_opinion_port_of_la_final.pdf)

<sup>2</sup> The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

## Sustainalytics' Opinion

### Section 1: Sustainalytics' Opinion on the Port of Los Angeles Green Bond Framework

#### Summary

Sustainalytics is of the opinion that the Port of Los Angeles Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP 2018. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
  - The Port's Green Buildings eligibility criteria include LEED Gold certified Police Headquarters. Sustainalytics has conducted an evaluation of the certification and considers such standard as having a positive impact (Appendix 3 provides additional details on the certification scheme).
  - The Port's Pollution Prevention and Control category includes investments in Alternative Maritime Power (AMP) Infrastructure projects that support the provision and use of shore (electrical) power for ocean-going vessels while at berth. Such projects reduce the emissions from fleets that shut-off their diesel auxiliary engines while docked at the Port. Sustainalytics recognizes that the Port's AMP projects support California's commitment to reduce GHG emissions, specifically nitrogen oxides (NOx) and diesel particulate matter (PM), from ships at ports and creates significant environmental benefits.<sup>3</sup>
  - Some proceeds will be used to finance operational expenditures (OPEX), such as charges related to perform environmental site remediation and Environmental Impact Statement/Report (EIS/EIR). Sustainalytics believes that such expenditures are important and contribute to positive environmental impacts related to improvements in air, soil and ground water quality.<sup>4</sup> The Port confirmed that it has monitored and allocated these expenditures to eligible projects, verifying that OPEX is directly tied to eligible and impactful projects.
- Project Evaluation and Selection:
  - The Port selected projects based on the following: (i) each project's commercial feasibility (locational ease, land use, and availability of resources), (ii) alignment with the eligibility criteria, and (iii) alignment with Port's internal environmental management program. The Port also confirmed that all projects require that the relevant Environmental Impact Review (EIR) and stakeholder consultation must conclude negligible environmental disruption. Sustainalytics considers the Port's project selection process to be in line with market practice.
- Management of Proceeds:
  - The Port's intends to refund the outstanding bond amounts related to eligible projects. Net Proceeds will be applied to redeem the outstanding bonds within 90 days. Sustainalytics considers this to be in line with market practice.
- Reporting:
  - The Port has reported amounts to be allocated to each eligible project within the Framework.
  - Additionally, the Port has reported details of impact indicators associated with each eligible category within the Framework. Sustainalytics considers the Port's allocation and impact reporting to be in line with market practice.

#### Alignment with Green Bond Principles 2018

Sustainalytics has determined that the Port's Green Bond Framework aligns to the four core components of the GBP 2018. For detailed information please refer to Appendix 4: Green Bond/Green Bond Program External Review Form.

### Section 2: Sustainability Strategy of the Issuer

#### Contribution of the Framework to the Port's sustainability strategy

<sup>3</sup> California has At-Berth Regulation in place which mandate the use of shore power (or equivalent at-berth emission reduction technology). Nevertheless, Sustainalytics notes that such investments are well-documented to support emission reduction from shipping industry on a global scale. Additionally, on a contextual basis, California's electricity is mainly derived from natural gas and renewables and will result in significantly lower emissions (and better air quality) while in use as shore power relative to marine diesel oil (MDO) and/or heavy fuel oil (HFO) that would have otherwise been used by most ocean-going vessels.

<sup>4</sup> The Port, Sustainable Progress- China Shipping Container Terminal Project:  
<https://www.portoflosangeles.org/environment/progress/monitor/china-shipping/>

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Sustainalytics is of the opinion that the Port has demonstrated a commitment to reduce its negative environmental impact while utilizing a sustainable approach to the development of its infrastructure.

- In 2006, the Ports of Los Angeles and Long Beach, under the Boards of Harbor Commissioners, established Clean Air Action Plan (CAAP). The goals under the Plan established a long-term emissions reduction and health risk reduction targets associated with the operations of its global seaport complex. For example, under the plan, the San Pedro Bay Standards have targets to support the state ambient air quality goals and to align with California Air Resources Board's Goods Movement Emission Reduction Plan.<sup>5</sup>
- In 2011, the Harbor Department and the Port of Long Beach released a Zero Emission Technologies Roadmap<sup>6</sup> to identify, evaluate and integrate zero emissions technologies into maritime goods-movement activities. In 2013, Clean Truck Program<sup>7</sup> was included in CAAP, which resulted in significant reduction of air pollution from harbor trucks with focus on three most critical air pollutants including particulate matter, nitrogen oxides, and sulphur oxides.
- The Port has also implemented several control measures to reduce diesel particulate matter (DPM), greenhouse gases, including nitrogen oxide emissions from its ocean-going vessels (OGV). For example, the Alternative Maritime Power (AMP) is an air quality program under which AMP-equipped ships "plug in" to shore side electrical power while at berth, enabling such ships to turn off their diesel auxiliary engines.
- The Port's sustainability efforts<sup>8</sup> in design and operations include initiatives related to green buildings, technology lease review for integration of clean technologies, and water diversion. In 2008, the Port developed its Green Building Policy under which it continues to pursue LEED certification for its new and existing buildings.
- In 2013, the Port developed its Energy Management Action Plan (E-MAP)<sup>8</sup> to identify, develop and implement programs that "improve energy efficiency, reliability, quality, cost and resiliency" while meeting the needs of electrification and energy demand. The Port also has comprehensive Alternative Energy Program (AEP) that promotes the use of renewable energy, including solar, wind, and fuel cells.

Considering the above, Sustainalytics is of the opinion that the Port's sustainability strategy and efforts demonstrate the importance it places on achieving positive environmental impacts. Sustainalytics also believes that the Port's Framework is aligned with its overall sustainability efforts and can support its commitment to balance economic, social and environmental impacts of its operations.

### Well positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the use of proceeds from the Port's Framework will be directed towards eligible projects that are recognized by the GBP 2018 to have positive environmental impact, Sustainalytics is aware that such projects could have led to negative environmental and social outcomes. Some key environmental and social risks commonly associated with the eligible projects air and water pollution, and habitat destruction.

Nevertheless, Sustainalytics is of the opinion that the Port mitigated such risks through the following policies, systems and processes:

- The Port formally adopted Environmental Management Policy which include provisions aimed at protecting and improving water and sediment quality with considerations to the Los Angeles Regional Water Quality Control Board (LA-RWQCB), the EPA's Total Maximum Daily Loads (TMDLs), and the associated Clean Water Act (CWA) permits. As an outcome, the Port, along with the Port of Long Beach, developed Water Resources Action Plan (WRAP) in 2009 with control measures related to land use discharges, on-water discharges, sediments, and watershed discharges.<sup>9</sup>
- The Port also obtained the ISO 14001:2015 certification (Environmental Management System) to drive systematic and continuous environmental improvements using a Plan-Do-Check-Act model.<sup>10</sup>
- The Port, along with the Port of Long Beach, undertook comprehensive biological surveys of the Los Angeles-Long Beach Harbor to evaluate area's physical and ecological characteristics along with seasonal variations and presence of invasive species. It helped the Port for several environmental evaluation, including biological mitigation planning related to development projects.
- The Port conducts health and environmental risk assessments and regulatory reviews and oversees emergency response and waste management programs,<sup>11</sup> among other things, to restore the

<sup>5</sup> The Port, Air Emissions Inventory: <https://www.portoflosangeles.org/environment/air-quality/air-emissions-inventory>

<sup>6</sup> The Port, Zero Emission White Paper (Draft): [https://www.portoflosangeles.org/pola/pdf/zero\\_emissions\\_white\\_paper\\_draft.pdf](https://www.portoflosangeles.org/pola/pdf/zero_emissions_white_paper_draft.pdf)

<sup>7</sup> The Port, San Pedro Bay Ports Clean Air Action Plan (CAAP): <https://www.portoflosangeles.org/environment/air-quality/clean-truck-program>

<sup>8</sup> The Port, Sustainability Report [https://www.portoflosangeles.org/pola/pdf/publications/pola\\_fy13-14\\_sustainability\\_report\\_2016\\_02\\_29.pdf](https://www.portoflosangeles.org/pola/pdf/publications/pola_fy13-14_sustainability_report_2016_02_29.pdf)

<sup>9</sup> The Port, Water Resources Action Plan: [https://www.portoflosangeles.org/pola/pdf/doc/wrap\\_final.pdf](https://www.portoflosangeles.org/pola/pdf/doc/wrap_final.pdf)

<sup>10</sup> The Port, Environmental Management System: <https://www.portoflosangeles.org/environment/environmental-management-system>

<sup>11</sup> The Port, Site Restoration and Hazardous Materials: <https://www.portoflosangeles.org/environment/site-restoration-and-hazmat-services>

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contaminated sites with local, state, and federal agencies, and/or address chemical spills and release of hazardous materials.

- The Port also conducted stakeholder consultations to identify material issues related to the Port's development and operations,<sup>8</sup> including land use and infrastructure and energy and resource conservation.

Due to the above-mentioned policies, systems and processes, Sustainalytics believes that the Port sufficiently identified, managed and mitigated environmental and social risks commonly associated with the eligible project intended to be refinanced by the use of proceeds.

### Section 3: Impact of Use of Proceeds

All five use of proceeds categories are recognized as impactful by GBP 2018.

1. Renewable Energy
2. Green Buildings
3. Clean Transportation
4. Pollution Prevention and Control
5. Terrestrial and Aquatic Biodiversity Conservation

#### Alignment with California's environmental commitments

Through the Global Warming Solutions Act of 2006, California committed to reduce statewide GHG emissions to 1990 levels by 2020, about a 15% reduction from business as usual scenario, and to reduce emissions by 80% below 1990 levels by 2050.<sup>12</sup> In order to meet targets, the state adopted a 'Scoping Plan' that contained an extensive list of measures to reduce GHG emissions, a number of which are specific to ports and the movement of goods. Such measures include investments in renewable energy, green buildings, advanced heavy-duty vehicles and zero emission port trucks.

Updates to the Scoping Plan in 2014 stated that California has reduced diesel particulate matter (PM) emissions at the largest ports by 70% since 2005 however, requires more action to continue to reduce the impacts from air pollution, including diesel PM.<sup>13</sup> The Port with its stated eligible projects contributes to the following: (i) development of solar energy and sustainable built environment, and (ii) promotion of clean technologies and reduction of air pollution through electric trucks.

Sustainalytics is of the opinion that the Port's eligible projects are aligned with California's priorities, commitments and goals to reduce GHG emissions.

#### Importance of the Port's Alternative Maritime Power (AMP) Infrastructure

Alternative Maritime Power (or cold ironing/shore power) is a port-based emission reduction technology that allows ships at berth to "plug in" to shore side electrical power, enabling such ships to turn off their diesel auxiliary engines. AMP supports the following (i) elimination of at-berth ship emissions (approximately 95% of all vessel emissions while at berth), (ii) conservation of fuel, and (iii) reduction of engine noise pollution.<sup>14</sup> In 2004, the Port and China Shipping opened the world's first berth to run a container ship on shore-side electricity. By 2017, the Port has 30 AMP equipped berths where container, refrigerated cargo and cruise ships plug in and run their onboard systems using electricity.<sup>14</sup>

Following the initiative at the Port, the California Air Resources Board approved the At-Berth Regulation<sup>15</sup> in 2007 for statewide adoption, under which ocean-going vessels must reduce at-berth emissions by 80% by 2020.<sup>16</sup> Sustainalytics recognizes that since maritime transportation is a major source of air pollution and mostly run on marine diesel oil (MDO) and/or heavy fuel oil (HFO), the shore electrical power reduces the need ships' reliance on such fuels while at berth. Sustainalytics believes that the Port's investments in AMP infrastructure, including related electrical equipment and systems, further the reduction of GHG emissions from goods-movement activities.

#### Alignment with/contribution to SDGs

<sup>12</sup> California Air Resources Board, Assembly Bill 32 Overview: <https://www.arb.ca.gov/cc/ab32/ab32.htm>

<sup>13</sup> California Air Resources Board, First Update to the Climate Change Scoping Plan- Building on the Framework: [https://www.arb.ca.gov/cc/scopingplan/2013\\_update/first\\_update\\_climate\\_change\\_scoping\\_plan.pdf](https://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf)

<sup>14</sup> The Port, Sustainable Progress - Plugging into Cleaner Air:

<https://www.portoflosangeles.org/environment/progress/initiatives/alternative-maritime-power/>

<sup>15</sup> California Air Resources Board, Shore Power for Ocean-going Vessels: <https://www3.arb.ca.gov/ports/shorepower/shorepower.htm>

<sup>16</sup> California Environmental Protection Agency, Air Resources Board- Facts About At-Berth Ocean-Going Vessels Regulation:

[http://wpci.iaphworldports.org/data/docs/onshore-power-supply/library/1266571852\\_shorepowerfactsheet.pdf](http://wpci.iaphworldports.org/data/docs/onshore-power-supply/library/1266571852_shorepowerfactsheet.pdf)

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The UN Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. The Port's green bonds advance the following SDG goals and targets:

<b>Use of Proceeds Category</b>	<b>SDG</b>	<b>SDG target</b>
Renewable Energy Pollution Prevention and Control	7. Affordable and Clean Energy  12. Responsible Consumption and Production	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix. 7.A By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology. 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.
Clean Transportation Green Buildings	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons 11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, and resilience to disasters.
Terrestrial and Aquatic Biodiversity Conservation	15. Life on Land	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

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## **Conclusion**

The Port of Los Angeles (“the Port”) has developed its Green Bond Framework under which it intends to issue green bonds to refund a portion of previously issued bonds (Series 2009A and 2009C) to finance expenditures related to a number of selected green projects. Sustainalytics believes that the Framework is aligned with its overall sustainability strategy and efforts, and that the eligible category contributes to the advancement of UN Sustainable Development Goals 7, 11, 12, and 15. Additionally, Sustainalytics is of the opinion that the Port has identified, managed and mitigated environmental and social risks commonly associated with the eligible project intended to be refinanced by the use of proceeds.

Overall, Sustainalytics is of the opinion that the Port of Los Angeles Green Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles 2018.

## Appendices

### Appendix 1: Port of Los Angeles Green Bond Framework (July 2019)

The Port of Los Angeles (the “Port”) is located in San Pedro Bay in the San Pedro and Wilmington neighborhoods of Los Angeles. According to the latest available statistics compiled by the Journal of Commerce, during calendar year 2018, the Port was the busiest container port in the United States. In terms of physical size, the Port covers approximately 7,500 acres (4,300 acres of land and 3,200 acres of water). The Port generally encompasses approximately 43 miles of waterfront berthing and 25 terminals, including seven major container cargo terminals, four break-bulk facilities, three dry bulk facilities, seven liquid bulk cargo terminals, two passenger cruise terminals, one vehicle handling facility and one multi-use facility. The Port’s main imports include furniture, footwear, electronics, automobile parts, and apparel, and exports span wastepaper, cotton, resins, animal feed, and scrap metal. During Fiscal Year 2019, the Port handled 9,688,251.75TEUs, as compared to 9,169,779.75TEUs in Fiscal Year 2018 and was the busiest container port in the United States during those years.

This high level of activity inevitably has environmental consequences; however, the Port is committed to environmental stewardship and is working to reduce air emissions, improve water quality, modernize facilities and cultivate the development of new technologies. In line with these sustainability objectives, the Port is planning to issue a Green Bond to refinance earlier expenditures related to a number of selected green projects, including design and construction of Alternative Maritime Power (AMP), installation of Solar Panels, site remediation, development, testing, and demonstration of the Clean Truck Program, as well as the design and construction of the LEED-certified Port of Los Angeles Police Headquarters.

#### 1. Use of Proceeds

##### *Eligibility Criteria*

To be eligible for the Green Bond proceeds, the projects funded met the following criteria:

1. Renewable Energy
2. Green Buildings
3. Clean Transportation
4. Pollution Prevention and Control
5. Terrestrial and Aquatic Biodiversity Conservation

**The context:** In 2006, the Harbor Department of the City of Los Angeles (the “Department”), together with the Port of Long Beach, developed the Clean Air Action Plan (CAAP) with input from the U.S. Environmental Protection Agency, the California Air Resources Board, and the South Coast Air Quality Management District. The CAAP addresses the five primary categories of Port-related emission sources (ships, trucks, trains, cargo handling equipment and harbor craft), and outlines specific, detailed strategies to reduce emissions from each category. The CAAP is the Department’s comprehensive plan to address air pollution emissions from Port-related sources. Pursuant to the CAAP, the Department has undertaken several programs to lower air pollution levels at the Port. Through implementation of the CAAP, since 2005, there has been an 87% reduction in diesel particulate matter, a 98% reduction in sulfur oxides and a 60% reduction in nitrogen oxides emissions from Port-related sources. The 2017 update to the CAAP includes several updates, including goals of achieving zero emission cargo handling equipment by 2030 and zero emission drayage truck fleets by 2035. The CAAP and its associated various measures have cost the Port and the Port’s tenants approximately \$2.0 billion to date and the CAAP will continue to require a significant investment by the Department, the Port of Long Beach and private sector businesses and will expedite the introduction of new and innovative methods of reducing emissions prior to any federal or State requirements being imposed on the San Pedro Bay Ports. In Fiscal Year 2019, fees related to the Clean Truck Program amounted to approximately \$2.0 million (unaudited). For Fiscal Year 2020, the Department has budgeted approximately \$2.0 million for fees related to the Clean Truck Program.

**Use of proceeds:** The Port has identified numerous projects aimed at greening its infrastructure. The projects involve the following activities:

##### **Renewable Energy**

- Installation of Solar panels

##### **Green buildings**

- Using construction materials manufactured from recycled content
- Construction waste diversion from landfill
- Installation of high-efficiency irrigation equipment and controllers
- Installation of high-efficiency domestic water fixtures
- Construction of high-reflectance paving

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- Use of cool roof materials
- Installation of photovoltaic arrays
- Installation of high-efficiency heating, ventilating and air conditioning units<sup>17</sup>

### Clean Transportation

- Investment in electric trucks

### Pollution prevention and control

- Construction/development and installation of (electric) shore power
- Brownfield clean-up
- Soil remediation
- Importing clean soil
- Landscaping with dense trees and rolling hills/berms/retaining walls

### Terrestrial and aquatic biodiversity conservation

- Designing and constructing an expansion of a shallow water habitat for fish and foraging space for birds<sup>18</sup>
- Use of dredged material for environmental enhancement of a shallow water habitat

Projects focused on the activities above are eligible to be refunded in whole or in part by an allocation of the Green Bond proceeds. The Port has selected the projects listed in Appendix A for the allocation of Series 2009A and 2009C Bond proceeds to be refunded by Green Bond proceeds.

## 2. Project Evaluation and Selection Process

Projects refinanced through the Green Bond proceeds were evaluated and selected based on (i) commercial feasibility (locational ease, land use, availability of resources); (ii) alignment with the eligibility criteria; and (iii) alignment with the Port's internal environmental management program.

The Port has developed and maintained an environmental management program that will:

1. Ensure this environmental policy is communicated to Port staff, its customers, and the community;
2. Ensure compliance with all applicable environmental laws and regulations;
3. Ensure environmental considerations include feasible and cost-effective options for exceeding applicable regulatory requirements;
4. Define and establish environmental objectives, targets, and best management practices and monitor performance;
5. Ensure the Port maintains a Customer Outreach Program to address common environmental issues; and
6. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations through environmental awareness and communication with employees, customers, regulatory agencies, and neighboring communities.

The Port states that it is committed to the spirit and intent of this policy and the laws, rules and regulations, which give it foundation. All projects refinanced through Green Bond proceeds are selected based on their adherence to the above stated requirements of the Port's environmental management program.

In addition, the Port has confirmed to Sustainalytics that all selected projects have undergone an Environmental Impact Review (EIR), and a stakeholder consultation process. The Port has also confirmed that for all selected projects, the relevant EIR and stakeholder consultation must conclude negligible environmental disruption.

## 3. Management of Proceeds

The portion of the Series 2009A Bonds which would be refunded using the Port's Green Bond proceeds was determined by reviewing Series 2009A Bond drawdown statements and identifying proceeds that were drawn down for the following list of projects (the Green Bond Projects; totals may not add due to rounding).

Following an examination of Series 2009A Bond drawdown statements spanning August 2009 through May 2010, the following amount of proceeds were drawn down from the Port's Construction Fund related to the Green Bond Projects:

<sup>17</sup> [https://portoflosangeles.org/newsroom/2012\\_releases/news\\_032712\\_Port\\_Police\\_HQ\\_LEED\\_Certification.asp](https://portoflosangeles.org/newsroom/2012_releases/news_032712_Port_Police_HQ_LEED_Certification.asp)

<sup>18</sup> [https://www.portoflosangeles.org/environment/wildlife\\_habitat.asp](https://www.portoflosangeles.org/environment/wildlife_habitat.asp)

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### 2009A - Green Project Breakout (calculations not truncated for \$5k bond denoms; totals may not add due to rounding)

Green Project	Green Drawdown	% of 2009A	Allocable Par Refunded by 2019 non-AMT Green Bonds (USD)
B171-173 Env Invest Redevp - 24457	\$462,136.09	0.45%	\$275,529.26
B97-109 EIR/EIS - 24587	143,831.82	0.14%	85,753.69
B. 91-93 World Cruise Center AMP - 24777	3,721,658.06	3.62%	2,218,882.54
B102 Wharf - AMP – 24869	306,564.66	0.30%	182,776.32
B93 A&B Cruise Terminal Solar - 24942	3,238,673.95	3.15%	1,930,923.52
B136-139 Alt. Marine Power (AMP)- 24943	152,270.07	0.15%	90,784.64
Electric Truck Program – 24958	2,997,451.00	2.92%	1,787,104.45
POLA Police HQ – 24583	14,254,772.51	13.87%	8,498,810.30
<b>Total</b>	<b>\$25,277,358.16</b>	<b>24.59%</b>	<b>\$15,070,564.74</b>

Following an examination of Series 2009 C Bond drawdown statements spanning January 1997 through December 1997, the following amount of proceeds were drawn down from the Port Construction Fund related to the Green Bond Projects:

### 2009C - Green Project Breakout (calculations not truncated for \$5k bond denoms; totals may not add due to rounding)

Green Project	Green Drawdown	% of 2006B	2006B as % of 2009C	Allocable Par Refunded by 2019 AMT Green Bonds (USD)
Bolsa Chica Restoration	\$33,315,000.00	11.10%	39.14%	\$6,704,293.83
<b>Total</b>	<b>\$33,315,000.00</b>	<b>11.10%</b>	<b>39.14%</b>	<b>\$6,704,293.83</b>

Therefore, all the funds will be allocated immediately, as no bond proceeds will be used to initiate new projects.

## 4. Reporting

### Allocation and Impact Reporting

Given that the Port's Green Bond proceeds will primarily be used to refund prior borrowings, and given that the Port's Green Bond proceeds will not be utilized to fund any new development projects, no ongoing reporting requirements are envisioned at this time. Allocation and impact reporting is available in section 5 of this Framework.

## 5. List of Eligible Projects

The following table provides a project description, allocation amount (by refunded par amount), and KPIs achieved for each project associated with the refunding of the Series 2009A and 2009C Bonds by the 2019 Green Bonds.

Project Category	Project name	Project description	Allocable (USD)	KPI
<b>Green Buildings</b>	24583 - POLA Police Headquarters	The Port of Los Angeles Police Headquarters was designed and built to energy- and environmentally efficient LEED™ "Gold" standards. Sustainable elements include: pervious paving and landscaped bio-filtration/ storm water retention areas; high reflectance paving and cool roof materials to reduce heat island impacts; native landscape materials and reduction of installed turf; high efficiency irrigation equipment and controllers; high efficiency domestic water fixtures; overall energy	\$8,498,810.30	LEED Gold Certification, achieved in 2011

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		performance in excess of Title 24 2001 energy standards; a 4.08 kW photovoltaic array estimated to generate 5,990 kWh of electricity annually; reduced lighting power density by 25% from baseline Title 24 standards; high efficiency HVAC units with variable speed fans; 95% construction waste diversion from landfill; and more than 50% of the total construction materials (by value) were manufactured using recycled content.		
<b>Pollution Prevention and Control</b>	24457 - B. 171-173 Environmental Site Remediation	Staff, consultant, and contractor charges to perform environmental site remediation of the existing Berths 171 – 173 backland area. Work includes removal and/or abatement of contaminated soil and ground water, import/grading of clean replacement material, observation and inspection of tanks, pipeline, other structures, and equipment during the demolition by GATX of their marine tank farm at B. 171-173 (former GATX Tank Farm), environmental investigations, and remedial actions as required by the RWQCB.	\$275,529.26	The soil remediation efforts at the former GATX Marine Terminal resulted in the removal of approximately 109,000 tons of contaminated soil, replaced with clean imported fill. In addition, 30,500 gallons of free-floating product has been removed from the groundwater, mitigating potential impacts to harbor waters and habitats. The remediation, although still under the purview of the Los Angeles Regional Water Quality Control Board, has re-established approximately 17-acres of usable land, including approximately 1,300 feet of waterfront. The pre-existing waterfront timber wharf was demolished in 2018, allowing the potential to construct a new wharf complex.
	24587 - B.97-109 EIR_EIS	To evaluate, by completing EIR/EIS, the China Shipping project elements, particularly as they relate to Container Terminal operations.	\$85,753.69	The EIS/EIR study was completed in 2008.
	24777 - B.91-93 World Cruise Center AMP	Design and construct Alternative Marine Power (AMP) receptacles for the Berth 91-93 World Cruise Center. Work includes the installation of new main DWP station, Port's 34.5 KV main switchgear, 11 KV electrical substations, high voltage feeders, high voltage AMP receptacles in structural wharf box and high voltage cable management system.	\$2,218,882.54	B91 has (2) 11KV AMP Vaults, and B93 has (2) 6.6KV, and (2) 11KV AMP Vaults. Each AMP Vault can deliver up to 18MVA to a single Cruise Ship, and 2 ships may Berth simultaneously.
	24869 - B.102 AMP	Design and construct Alternative Marine Power (AMP) vaults and switchgears - approximately, 4 vaults and 1 switchgear at Berth 102 Wharf.	\$182,776.32	B100-102 has a total of (1) 6.6KV AMP Vaults. Each AMP Vault can deliver up to 7.5MVA, and 2 container ships may Berth simultaneously, (1 ship at B100, and 1 ship at B102).
	24943 - B136-139 Alternative Maritime Power (AMP)	Design and construct an Alternative Maritime Power (AMP) infrastructure, wharf AMP outlets, D.W.P. industrial station and electrical distribution & control system & equipment at TraPac existing Berths 136-139.	\$90,784.64	AMP infrastructure installed consists of (4) 6.6KV Vaults at B136, and (4) 6.6KV Vaults at B139. Each AMP Vault can deliver up to 7.5MVA, and 2 container ships may Berth simultaneously, (1 ship at B136, and 1 ship at B139).


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<b>Renewable Energy</b>	24942 - B.93 A & B Cruise Terminal Solar Panel	Design and installation of 1 Mega Watt of photovoltaic (solar) power generation system at the Cruise terminal. Work includes materials to install a complete system including supporting structures, DC/AC inverters, transformers, switchgear, electrical conduits, wires, control and protection equipment, and connection to existing DWP service.	\$1,930,923.52	1MW of Solar Panels are installed on the roof of the cruise terminal building, that feed (4) DC/AC Inverters in the first floor Electrical Room. Inverters feed 1MW of power at 480V to a Distribution Switchboard serving the entire building.
<b>Clean Transportation</b>	24958 - Electric Truck Program	Development, testing, demonstration, and manufacturing of heavy duty electric vehicles, including electric yard hostler and an electric drayage truck, which would utilize electricity as opposed to diesel or other fossil fuel to power movement in cargo handling operations. Work also includes the design and construction of the electric charging stations.	\$1,787,104.45	There have been 65 battery electric trucks and 16 fuel-cell electric trucks that have been or are being tested at the San Pedro Bay Ports [Ports of Los Angeles (48) and Long Beach (17) combined].  There are approx. 32 hybrid electric yard tractors, 10 HD Drayage Trucks, and 6 HD Top Pick Forklifts in use across 7 terminals at the Port of Los Angeles (48 total). Manufacturers include Trans Power, US Hybrid, Toyota, BYD, Mack, Volvo, Mitsubishi Fuso, Mercedes-Benz, Freightliner, DAF, and Hyster.
<b>Terrestrial and Aquatic Biodiversity Conservation</b>	Bolsa Chica Restoration Project	In 1966, the State Lands Commission and seven other state and federal agencies signed an interagency agreement to buy, plan, design, construct and maintain the Bolsa Chica Wetlands to mitigate adverse impacts of fill at the ports of Long Beach and Los Angeles. Project features include (1) Excavation of a large tidal basin to allow a full tidal regime for fisheries habitat (2) Connections of several smaller areas to the full tidal basin with large water control structures to provide habitat areas for fish and bird species that would benefit from a muted tidal and regime and seasonal ponding; and (3) Creation of a new highway bridge for Pacific Coast Highway.	\$6,704,293.83	The Bolsa Chica wetlands are located in Orange County, surrounded by the City of Huntington Beach. This project is one of the largest wetland restoration projects to be constructed in southern California. Approximately 370 acres were re-introduced to full tidal influence. The project also improved muted tidal circulation to 200 acres, and retained 120 acres of seasonal pond habitat. Most of the affected area has been isolated from the ocean since 1900 and was used for oil production for the past 65 years.

## Appendix 2: List of Eligible Projects

Eligible Category	Eligible Project	Allocable Green Drawdown by Refunded Par Amount (USD)
Renewable Energy	B. 93 A&B Cruise Terminal Solar – 24942	\$1,930,923.52
Green Buildings	POLA Police HQ – 24583	\$8,498,810.30
Clean Transportation	Electric Truck Program – 24958	\$1,787,104.45
Pollution Prevention and Control	B. 171-173 Environmental Investigation for Redevelopment of Site	\$275,529.26
	B. 97-109 EIR/EIS (China Shipping Container Terminal Project) – 24587	\$85,753.69
	B. 91-93 World Cruise Center AMP – 24777	\$2,218,882.54
	B. 102 Wharf – AMP – 24869	\$182,776.32
	B. 136-139 Alternative Maritime Power (AMP) – 24943	\$90,784.64
Terrestrial and Aquatic Biodiversity Conservation	Bolsa Chica Restoration	\$6,704,293.83

### Appendix 3: Analysis of the LEED Certification Scheme

Certification	LEED <sup>19</sup>
<b>Background</b>	Leadership in Energy and Environmental Design (LEED) is a US Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC) and covers the design, construction, maintenance and operation of buildings.
<b>Certification levels</b>	<ul style="list-style-type: none"> <li>• Certified</li> <li>• Silver</li> <li>• Gold</li> <li>• Platinum</li> </ul>
<b>Areas of Assessment</b>	<ul style="list-style-type: none"> <li>• Energy and atmosphere</li> <li>• Sustainable Sites</li> <li>• Location and Transportation</li> <li>• Materials and resources</li> <li>• Water efficiency</li> <li>• Indoor environmental quality</li> <li>• Innovation in Design</li> <li>• Regional Priority</li> </ul>
<b>Requirements</b>	<p>Prerequisites (independent of level of certification) + Credits with associated points</p> <p>These points are then added together to obtain the LEED level of certification</p> <p>There are several different rating systems within LEED. Each rating system is designed to apply to a specific sector (e.g. New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-/Healthcare New Construction and Major Renovations, Existing Buildings: Operation and Maintenance).</p>
<b>Performance display</b>	

<sup>19</sup> USGBC, LEED: [www.usgbc.org/LEED](http://www.usgbc.org/LEED)

## Appendix 4: Green Bond / Green Bond Program - External Review Form

### Section 1. Basic Information

<b>Issuer name:</b>	Port of Los Angeles (“the Port”)
<b>Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i></b>	Port of Los Angeles Green Bond Framework
<b>Review provider’s name:</b>	Sustainalytics
<b>Completion date of this form:</b>	July 2019
<b>Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i></b>	This is the Port’s second Green Bond Framework following the development of its 2016 Green Bond Framework and Sustainalytics’ corresponding second-party opinion report.

### Section 2. Review overview

#### SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarize the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds        | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting                                    |

#### ROLE(S) OF REVIEW PROVIDER

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 <sup>nd</sup> opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification   | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other <i>(please specify)</i> :                        |  |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

#### EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to Evaluation Summary above.

### Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

**1. USE OF PROCEEDS**

Overall comment on section (*if applicable*):

The green categories for eligible use of proceeds – (i) Renewable Energy, (ii) Green Buildings, (iii) Clean Transportation, (iv) Pollution Prevention and Control, and (v) Terrestrial and Aquatic Biodiversity Conservation – are aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers the eligible categories to have positive environmental impact and to advance the UN Sustainable Development Goals, specifically 7, 11, 12, and 15.

**Use of proceeds categories as per GBP:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Renewable energy   | <input type="checkbox"/> Energy efficiency   |
| <input checked="" type="checkbox"/> Pollution prevention and control   | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input checked="" type="checkbox"/> Terrestrial and aquatic biodiversity conservation  | <input checked="" type="checkbox"/> Clean transportation   |
| <input type="checkbox"/> Sustainable water and wastewater management   | <input type="checkbox"/> Climate change adaptation   |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes                             | <input checked="" type="checkbox"/> Green buildings  |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other ( <i>please specify</i> ):  |

If applicable please specify the environmental taxonomy, if other than GBPs:

**2. PROCESS FOR PROJECT EVALUATION AND SELECTION**

Overall comment on section (*if applicable*):

The Port selected projects based on their commercial feasibility, eligibility and alignment with internal environmental management program. The Port also confirmed that all projects require that the relevant Environmental Impact Review and stakeholder consultation must conclude negligible environmental disruption. Sustainalytics considers the Port’s project selection process to be in line with market practice.

**Evaluation and selection**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Credentials on the issuer’s environmental sustainability objectives            | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories    |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |

- Summary criteria for project evaluation and selection publicly available
- Other (*please specify*):

#### Information on Responsibilities and Accountability

- Evaluation / Selection criteria subject to external advice or verification
- In-house assessment
- Other (*please specify*):

### 3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

The Port's intends to refund outstanding bond amounts related to eligible projects. Net Proceeds will be applied to redeem the outstanding bonds within 90 days. Sustainalytics considers this to be in line with market practice.

#### Tracking of proceeds:

- Green Bond proceeds segregated or tracked by the issuer in an appropriate manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other (*please specify*):

#### Additional disclosure:

- Allocations to future investments only
- Allocations to both existing and future investments
- Allocation to individual disbursements
- Allocation to a portfolio of disbursements
- Disclosure of portfolio balance of unallocated proceeds
- Other (*please specify*):

### 4. REPORTING

Overall comment on section (*if applicable*):

The Port has reported amounts to be allocated to each eligible project along with details of impact indicators associated with each eligible category within the Framework.

#### Use of proceeds reporting:

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other (*please specify*):

**Information reported:**

- Allocated amounts
- Green Bond financed share of total investment

- Other (*please specify*): reported within Framework

**Frequency:**

- Annual
- Semi-annual

- Other (please specify): one-time reporting within the Port's website

**Impact reporting:**

- Project-by-project
- On a project portfolio basis
- Linkage to individual bond(s)
- Other (please specify):

**Frequency:**

- Annual
- Semi-annual

- Other (please specify): one-time reporting within the Port's website

**Information reported (expected or ex-post):**

- GHG Emissions / Savings
- Energy Savings
- Decrease in water use
- Other ESG indicators (please specify): description of KPIs mentioned within framework

**Means of Disclosure**

- Information published in financial report
- Information published in sustainability report
- Information published in ad hoc documents
- Other (please specify): reported the amounts to be allocated and impact indicators within the Framework to be posted on the Port's website.
- Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

**USEFUL LINKS** (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

<https://www.portoflosangeles.org/environment/progress/news/port-issues-green-bonds/>

**SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**

**Type(s) of Review provided:**

- Consultancy (incl. 2<sup>nd</sup> opinion)
- Certification

Verification / Audit Rating Other (*please specify*):**Review provider(s):****Date of publication:****ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP**

- i. Second Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognized external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Green Bond Scoring/Rating: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialized research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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## Sustainalytics

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For more information, visit [www.sustainalytics.com](http://www.sustainalytics.com)

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