

SECOND PARTY OPINION¹

ON THE SUSTAINABILITY OF THE GREEN BOND FRAMEWORK² OF THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

April 10, 2019

SCOPE

Vigeo Eiris was commissioned to provide an independent opinion on the sustainability credentials and management of the Green Bond Framework dated 28 March 2019 (hereafter the “Framework”) created by the Government of the Hong Kong Special Administrative Region of the People’s Republic of China (the “Issuer” or “HKSAR Government”) to govern the Green Bonds issuances (all the potential bonds to be issued under the Framework in 2019 and referred as the “Bonds” hereafter).

Our assessment is established according to our Environmental, Social and Governance (“ESG”) exclusive assessment methodology³ and to the International Capital Market Association’s Green Bond Principles voluntary guidelines edited in June 2018 (“GBP 2018”).

Our opinion on the contemplated Green Bonds is built on the review of the Framework, including the assessment of the coherence between the Framework and the Issuer’s environmental commitments, its potential contribution to sustainability and its alignment with the four core components of the GBP 2018⁴.

Our sources of information are multichannel, combining public information, documents provided by the Issuer and data from interviews with Issuer’s managers and stakeholders involved in the Green Bonds issuance held *via* a telecommunications system.

We carried out our due diligence assessment from February 4th to April 10th, 2019. We consider that we were provided with access to all the appropriate documents and interviewees we solicited. We consider that the information provided enables us to establish our opinion with a reasonable level of assurance on its completeness, precision and reliability.

VIGEO EIRIS’ OPINION

Vigeo Eiris is of the opinion that the Green Bond Framework of The Government of the Hong Kong Special Administrative Region is aligned with the four core components of the Green Bond Principles 2018.

We express a reasonable assurance⁵ (our highest level of assurance) on the Issuer’s commitments and on the contribution of the contemplated Bonds to sustainability.

1) Issuance:

The Issuer has described and formalized the main characteristics of the Bonds within a Green Bond Framework (the “Framework”), dated March 28, 2019 and committed to making this document publicly accessible on HKSAR Government Green Bond Programme website, in line with good market practices.

We are of the opinion that the Green Bond Framework is coherent with HKSAR Government’s publicly disclosed strategic sustainable development priorities and sector issues, and that it contributes to achieve its sustainable development commitments and targets.

Use of Proceeds

- ▶ The net proceeds of the Bonds will exclusively finance or refinance, in full or in part, projects falling under eight Eligible Categories (“Eligible Projects”), which are formalized and publicly disclosed in the Framework, namely: Renewable energy, Energy efficiency and conservation, Pollution prevention and control, Waste management and resource recovery, Water and wastewater management, Nature conservation/biodiversity, Clean Transportation and Green buildings. We consider that Eligible Categories are clearly defined.

¹ This opinion is to be considered as the “Second Party Opinion” described in the GBP voluntary guidelines 2018 Edition by the International Capital Market Association (www.icmagroup.org).

² HKSAR Government’s Green Bond Framework dated 28 March 2019.

³ Vigeo Eiris ESG exclusive assessment methodology is used to analyse the issuance, in particular to assess the potential environmental and social benefits of Eligible Projects and to analyse the identification and management of environmental, social and governance risks associated to the Eligible Projects.

⁴ HKSAR Government’s ESG performance assessment was not within the scope of evaluation of this Second Party Opinion.

⁵ Definition of Vigeo Eiris’ scales of assessment (as detailed in the Methodology section).

Use of Proceeds (continued)

Eligible Projects are intended to contribute to six main environmental objectives, namely: climate change mitigation and adaptation, pollution prevention and control, biodiversity conservation, conservation and sustainable management of water resources and air quality improvement. These objectives are formalized in the Framework and considered clearly defined and relevant.

Eligible Projects are considered to provide clear environmental benefits. The Issuer will assess and quantify, as feasible, the expected environmental benefits. We have suggested defining ex-ante precise quantified environmental targets of each of the Eligible Categories.

In addition, Eligible Projects are likely to contribute to eight United Nations' Sustainable Development Goals ("UN SDGs"), namely: Goal 3. Good Health and Well-being, Goal 6. Clean Water and sanitation, Goal 7. Affordable and Clean energy, Goal 9. Industry, Innovation and Infrastructure, Goal 11. Sustainable Cities and Communities, Goal 12. Responsible Consumption and Production, Goal 13. Climate Action, and Goal 15. Life on Land.

The Issuer has transparently communicated the look-back period for refinanced Eligible Projects, namely those included in HKSAR Government budget for the last two financial years⁶, in line with best market practices. In addition, the Issuer has declared that for its first Green Bond issuance the estimated share of refinancing will be lower than 50% of the total net proceeds.

Process for Project Evaluation and Selection

- ▶ The governance and the process for the evaluation and selection of the Eligible Projects are formalized in the Framework and the public documents related to HKSAR Government Public Works Programme. We consider that the process is transparent and relevant.

The process relies on explicit and relevant eligibility criteria (selection and exclusion).

The identification and management of the environmental and social (E&S) risks associated with the Eligible Projects are considered to be good, covering the identification, monitoring and control of the relevant E&S risks in all the Eligible Projects.

Management of Proceeds

- ▶ The rules for the management of proceeds are clearly defined. The net proceeds of the Bond will be credited to the Capital Works Reserve Fund and appropriately tracked by the Financial Services and the Treasury Bureau (FSTB) using a formal internal register.

Unallocated proceeds will be placed in the Exchange Fund, which is part of Hong Kong's fiscal reserve that keeps the funds in the form of cash or cash equivalent.

The Steering Committee will annually verify that the net proceeds of the Bonds match the allocations to Eligible Projects and an independent qualified party will verify the internal register kept by FSTB once a year, at least until full allocation of the proceeds.

Reporting

The reporting process and commitments of the Issuer appear to be good, covering both the funds allocation and the environmental benefits of the Eligible Projects.

In addition, HKSAR Government's Green Bonds issuances are and will be supported by external reviews:

- A pre-issuance consultant review: in the form of a publicly available Second Party Opinion ("SPO") delivered by Vigeo Eiris on the sustainability credentials of the Framework.
- An annual verification: performed by an independent party, who will verify the internal register maintained by the Financial Services and the Treasury Bureau covering the Green Bonds Transaction details and allocation of proceeds, including the assessed environmental benefits of the Bonds.

The Second Party Opinion is based on the review of the Framework according to the GBP 2018.

Project team

Adriana Cruz Félix
Sustainability Consultant
Project Leader

Muriel Caton
Director Sustainable Finance Strategy
Supervisor

Amaya London
Sustainability Consultant

Carlos Araujo
Sustainability Consultant

For more information, contact:

Paul Courtoisier
Head of sustainability bonds & loans
(+33) 6 85 35 43 51
paul.courtoisier@vigeo-eiris.com

⁶ A financial year (FY) of the HKSAR Government runs from April 1st of a calendar year to March 31st of the next calendar year.

DETAILED RESULTS

Coherence of the issuance

We are of the opinion that the Green Bond Framework is coherent with HKSAR Government's publicly disclosed strategic sustainable development priorities and sector issues, and that it contributes to achieve its sustainable development commitments and targets.

Context note: Asia and the Pacific account for more than 50 per cent of global Greenhouse Gas ("GHG") emissions. Main urban area and cities of the region have therefore the great potential to play a key role driving significant positive changes towards sustainable development and environmental protection. By implementing actions targeting clean transportation, urban planning, green buildings, energy efficiency or waste and water management, major cities could effectively support the attainment of the goals of the Paris Agreement and drive meaningful, measurable and sustainable action on climate change.

The Hong Kong Special Administrative Region appears to acknowledge its role in addressing these challenges and has formalized several strategies and environmental policies coupled in some cases with quantified targets, including but not limited to:

- Pollution prevention and control plans:
 - "Clean Air Plan for Hong Kong" issued in 2013, targeting the reduction of air pollution and lower public health risks;
 - "Harbour Area Treatment Scheme" (HATS) and the "Sewerage Master Plans" (SMPs) addressing water quality improvement in Hong Kong;
- "Hong Kong Blueprint for Sustainable Use of resources 2013 – 2022" addressing waste management;
- "Hong Kong Biodiversity Strategy and Action Plan 2016-2021" (BSAP) towards Biodiversity protection within and outside Hong Kong;
- Green Government Buildings Circular for government buildings, setting specific requirements in terms of, among other things, energy efficiency and targeted ratings of green building certification;
- "Energy Saving Plan" setting the target of reducing Hong Kong's energy intensity by 40% by 2025 using 2005 as the base;
- "Railway Development Strategy 2014" and other dedicated plans focused on the expansion of the railway network in Hong Kong to respond to mobility, traffic congestion and pollution challenges.

In addition to these thematic strategies, the "Hong Kong's Climate Action Plan 2030+" sets out global carbon emissions reduction targets, namely to reduce the carbon intensity (carbon per unit of GDP) by 65% to 70% by 2030 compared to 2005 data.

By creating a Framework to issue Bonds to finance or refinance projects related to renewable energy, energy efficiency and conservation, pollution prevention and control, waste management and resource recovery, water and wastewater management, nature conservation/biodiversity, clean transportation and green buildings, the HKSAR Government coherently aligns with its sustainability strategy and commitments and addresses main issues in terms of cities' environmental responsibility.

Use of proceeds

The net proceeds of the Bonds will exclusively finance or refinance, in full or in part, projects falling under eight Eligible Categories (“Eligible Projects”), which are formalized and publicly disclosed in the Framework, namely: Renewable energy, Energy efficiency and conservation, Pollution prevention and control, Waste management and resource recovery, Water and wastewater management, Nature conservation/biodiversity, Clean Transportation and Green buildings. We consider that Eligible Categories are clearly described.

Eligible Projects are intended to contribute to six main environmental objectives, namely: climate change mitigation and adaptation, pollution prevention and control, biodiversity conservation, conservation and sustainable management of water resources and air quality improvement. These objectives are formalized in the Framework and considered clearly defined and relevant.

Eligible Projects will provide clear environmental benefits. The Issuer will assess and quantify, as feasible, the expected environmental benefits. We have suggested defining ex-ante precise quantified environmental targets of each of the Eligible Categories.

In addition, Eligible Projects are likely to contribute to eight United Nations’ Sustainable Development Goals (“UN SDGs”), namely: Goal 3. Good Health and Well-being, Goal 6. Clean Water and sanitation, Goal 7. Affordable and Clean energy, Goal 9. Industry, Innovation and Infrastructure, Goal 11. Sustainable Cities and Communities, Goal 12. Responsible Consumption and Production, Goal 13. Climate Action, and Goal 15. Life on Land.

The Issuer has transparently communicated the look-back period for refinanced Eligible Projects, namely those included in HKSAR Government budget for the last two financial years⁷, in line with best market practices. In addition, the Issuer has declared that for its first Green Bond issuance the estimated share of refinancing will be lower than 50% of the total net proceeds.

The Issuer has formalized the definitions of the Eligible Categories in its Framework, which have been analysed in the table below:

- Of note, for its first Green Bond issuance the Issuer has already identified a list of potential Eligible Projects, transparently presented to Vigeo Eiris, which are in line with the definitions of four of the eight Eligible Categories, namely: Energy efficiency and conservation, Water and wastewater management, Waste management and resource recovery and Green Buildings.

HKSAR Government’s Framework		Vigeo Eiris Analysis	
Eligible Category	Definition	Objectives and benefits	Opinion
Renewable Energy	Design, construction, installation, operation and connection of renewable energy systems at government buildings, venues, facilities and infrastructure. Technologies include: <ul style="list-style-type: none">- Solar: photovoltaic (onshore and offshore)- Wind (onshore and offshore)- Small hydropower (<20MW capacity)	Climate change mitigation <i>Reduction of GHG emissions</i> <i>Increase of Hong Kong’s renewable energy installed capacity and generation.</i>	The definition of this category is clear. <ul style="list-style-type: none">- Offshore solar and wind projects will be subject to the requirements of the Environmental Impact Assessment Ordinance to ensure the appropriate identification and management of environmental risks.

⁷ A financial year (FY) of the HKSAR Government runs from 1 April of a calendar year to 31 March of the next calendar year

HKSAR Government's Framework		Vigeo Eiris Analysis	
Eligible Category	Definition	Objectives and benefits	Opinion
Energy Efficiency and Conservation	<p>Design, construction, installation and operation of:</p> <ul style="list-style-type: none"> - Energy-efficient and energy-saving systems and installations in government buildings and properties. - Energy efficient infrastructure, such as District Cooling Systems (DCS). 	<p>Climate change mitigation</p> <p><i>Reduction of GHG emissions</i></p> <p><i>Energy savings in the private and public sectors.</i></p>	<p>The definition of this category is clear.</p> <ul style="list-style-type: none"> - In 2015, the Government published the "Energy Saving Plan for Hong Kong's Built Environment 2015~2025+" which sets the target to reduce energy intensity in Hong Kong by 40%, including a reduction in electricity consumption by government buildings by 5% from 2015-16 to 2019-20, using the operating conditions in 2013-14 as the baseline.
Pollution prevention and control	<ul style="list-style-type: none"> - Monitoring treatment systems and facilities for improvement of air quality 	<p>Pollution prevention and control</p> <p><i>Improvement of air quality through the reduction of air pollutants emissions</i></p>	<p>The definition of this category is clear.</p>
Waste management and resource recovery	<ul style="list-style-type: none"> - Waste treatment, recycling and resource recovery projects; - Waste to energy projects such as power generation projects from solid waste and sewage sludge with 25% waste-to-energy efficiency, and part of the residual will be recycled while the remaining part not suitable for recycling will be disposed of at landfills; - Recycling of organic waste, e.g. food waste into biogas/ renewable energy. 	<p>Pollution prevention and control</p> <p><i>Improvement of the rate of reuse, recycling and treatment of waste</i></p> <p>Climate change mitigation</p> <p><i>Reduction of GHG emissions through renewable energy generation</i></p>	<p>The definition of this category is clear.</p>

HKSAR Government's Framework		Vigeo Eiris Analysis	
Eligible Category	Definition	Objectives and benefits	Opinion
Water and wastewater management	<ul style="list-style-type: none"> - Establishment of intelligent network management system with analytical tools and associated works to reduce water consumption; - Collection, treatment and recycling facilities for grey water, treated effluent and rainwater; - Provision and rehabilitation of sewerage infrastructure for the collection and treatment of sewage; - Construction and maintenance of water infrastructure which help enhance climate resilience. 	<p>Conservation and sustainable use of water resources</p> <p><i>Increase of the proportion of wastewater treated, reused and avoided</i></p> <p><i>Reduction of water consumption</i></p> <p>Climate change adaptation</p> <p><i>Strengthen resilience of the water infrastructure in case of severe weather (droughts, flood) and climate change events</i></p>	<p>The definition of this category is clear.</p> <ul style="list-style-type: none"> - The Issuer declared that the energy efficiency of the water and wastewater treatment facilities is regularly monitored and that measures for the reduction of GHG emissions will be reviewed as part of the ongoing environmental auditing and reporting system. We have suggested implementing GHG mitigation measures over the operational lifetime of the projects, in line with international standards (Climate Bonds Initiative).
Nature conservation/ biodiversity	<ul style="list-style-type: none"> - Conservation and restoration of natural environment and biodiversity such as improvement projects at sites of high conservation value 	<p>Biodiversity conservation</p> <p><i>Conservation and sustainable use of terrestrial, and inland freshwater and marine ecosystems</i></p>	<p>The definition of this category is clear.</p> <ul style="list-style-type: none"> - The Issuer has declared that the Eligible Projects in this category will exclusively be related to the sustainable management of Hong Kong's protected areas.
Clean Transportation	<p>Development, construction and operation of low carbon transportation solutions:</p> <ul style="list-style-type: none"> - Projects to build or operate public, urban metro, electric heavy or light rail, non-motorized and multi-modal transportation; - Infrastructure projects for the construction of electric mass transit railways; - Cycling tracks and bike storage infrastructure. 	<p>Climate change mitigation</p> <p><i>Reduction of GHG emissions through the promotion of low carbon emissions vehicles.</i></p> <p>Improvement of air quality</p> <p><i>Reduction of air pollutant emissions through the promotion of low carbon transportation.</i></p>	<p>The definition of this category is clear.</p> <ul style="list-style-type: none"> - The technologies proposed within this category align with international standards taxonomies (Climate Bonds Initiative).
Green Buildings	<p>Construction of new government buildings, and retrofitting of existing buildings that have received or are expected to receive a recognised green building certification, such as:</p> <ul style="list-style-type: none"> - BEAM Plus (Level "Gold" or higher) - LEED (Level "Gold or higher) 	<p>Climate change mitigation</p> <p><i>Enhance the sustainability performance of a building, including the reduction of GHG emissions through the development of Green Buildings.</i></p>	<p>The definition of this category is clear.</p> <ul style="list-style-type: none"> - The accepted Green Buildings certifications rely on locally and internationally recognized sector standards.

In addition, the Eligible Projects are likely to contribute to eight United Nations’ Sustainable Development Goals, namely Goal 3. Good Health and Well-being, Goal 6. Clean Water and sanitation, Goal 7. Affordable and Clean energy, Goal 9. Industry, Innovation and Infrastructure, Goal 11. Sustainable Cities and Communities, Goal 12. Responsible Consumption and Production, Goal 13. Climate Action and SDG. 15 Life on land.

Eligible Green Assets	UN SDGs identified	UN SDGs targets
Renewable Energy	SDG 7. Affordable and Clean Energy	7.2
	SDG 13. Climate Action	
Energy efficiency and conservation	SDG 7. Affordable and Clean Energy	7.3
	SDG 9. Industry, Innovation and Infrastructure	9.4
	SDG 13. Climate Action	
Pollution prevention and control	SDG 3. Good Health and Well-being	3.9
	SDG 11. Sustainable Cities and Communities	11.6
	SDG 15. Life on Land	15.3
Waste management/ waste-to-energy	SDG 11. Sustainable Cities and Communities	11.6
	SDG 12. Responsible Consumption and Production	12.4, 12.5
Water and wastewater management	SDG 6. Clean Water and Sanitation	6.2, 6.3
	SDG 12. Responsible Consumption and Production	12.2, 12.4
	SDG 13. Climate Action	13.1
Nature conservation/biodiversity	SDG 15. Life on Land	15.1, 15.a
Clean transportation	SDG 3. Good Health and Well-being	3.9
	SDG 9. Industry, Innovation and Infrastructure	9.4
	SDG 11. Sustainable Cities and Communities	11.2, 11.6
	SDG 13. Climate Action	
Green Buildings	SDG 7. Affordable and Clean Energy	7.3
	SDG 13. Climate Action	



UN SDG 3 consists ensuring healthy lives and promote well-being for all at all ages. More precisely, SDG 3 targets by 2030 include:

- 3.9 Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination



UN SDG 6 consists in ensuring availability and sustainable management of water and sanitation for all. More precisely, SDG 6 targets by 2030 include:

- 6.2 Achieve access to adequate and equitable sanitation and hygiene for all
- 6.3 Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally



UN SDG 7 consists in ensuring access to affordable, reliable, sustainable and modern energy for all, SDG 7 targets by 2030 include:

- 7.2 Increase substantially the share of renewable energy in the global energy mix
- 7.3 Double the global rate of improvement in energy efficiency



UN SDG 9 consists in building resilient infrastructure, promoting sustainable industrialization and fostering innovation. More precisely, SDG 9 targets by 2030 include:

- 9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



UN SDG 11 consists in making cities inclusive, safe, resilient and sustainable. More precisely, SDG 11 targets by 2030 include:

- 11.2 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
- 11.6 Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management



UN SDG 12 consists in ensuring sustainable consumption and production patterns. More precisely, SDG 12 targets by 2030 include:

- 12.2 Achieve the sustainable management and efficient use of natural resources
- 12.4 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



UN SDG 15 consists in sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss. More precisely, SDG 15 targets include:

- 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
- 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems



UN SDG 13 consists in taking urgent action to combat climate change and its impacts. More precisely, SDG 13 target include:

- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

In addition, Governments can contribute to this goal by investing in the transition to net-zero carbon energy, energy efficiency, green buildings and the reduction of GHG emissions from transport operations with abatement levels such as modal shift to electric modalities.

Process for evaluation and selection

The governance and the process for the evaluation and selection of the Eligible Projects are formalized in the Framework and the public documents related to HKSAR Government Public Works Programme. We consider that the process is transparent and relevant.

- The process for the evaluation and selection of Eligible Projects is reasonably structured.
- The governance is based on relevant HKSAR Government expertise, with well-defined roles and responsibilities.

HKSAR Government procedure:

- HKSAR Government has formalized the Public Works Programme (PWP) to govern and control all public works projects of non-recurrent nature. The PWP financing is managed through the Capital Works Reserve Fund (CWRP).

The CWRP was established as a Resolution passed by Hong Kong's Legislative Council, which states that the fund is to be administered by the Finance Secretary. The approval power of public works projects is vested with the Finance Committee (FC) or public officers under the delegated authority. The Public Works Subcommittee (PWSC) falls under the FC and its role is to examine public works expenditures and make recommendations to the FC.

- The PWP has clearly structured the stages for the approval of public work projects, from its conception to its implementation that explicitly determine the authority, responsibilities and the specific requirements that must be completed at each stage:
 - Category D: smaller projects/consultancies estimated to cost not more than the prevailing financial ceiling (\$30M). Finance Committee has delegated to the Secretary for Financial Services and the Treasury Bureau the approval of funding for Category D projects.
 - Category B: The inclusion of the public work project in the PWP of which its preliminary technical feasibility is established on a prima facie basis. Once all procedures are completed, the director of the relevant works department seek funding for the project from the legislature through the presentation of the PWSC paper.
 - Category A: The approval of the FC upgrades the project to Category A status with finding approval.
 - After receipt of competitive tenders, the authority to accept a tender shall be given from either the relevant tender board or the Controlling Officers, depending on the value of the contract and whether the contract is awarded to the highest combined price-quality scorer or not. When the authority has given its approval, the works department can accept the tender and get construction under way.

Bonds procedure:

- HKSAR Government has set up the Steering Committee on the Government Green Bond Programme (SC), which is responsible for the review and approval of the allocation of proceeds to Eligible Projects. The SC is chaired by the Financial Secretary and comprise the Secretary for Financial Services and the Treasury, the Secretary for the Environment and Deputy Chief Executive of the Hong Kong Monetary Authority.
- The verification and traceability are ensured throughout the process:
 - The SC will annually verify that the Eligible Projects financed by the Bond continue to comply with the eligibility criteria, and minutes of each meeting will be created to ensure decision traceability.
 - We have recommended that an independent party verifies the compliance of Eligible Projects with the eligibility criteria.

The process relies on explicit and relevant eligibility criteria (selection and exclusion).

- The eligibility requirements are based on the definitions of the Eligible Categories.
- All Eligible Projects will be located within the territory of Hong Kong Special Administrative Region.
- In addition, the Issuer has considered clear and formalized exclusion criteria, namely:
 - Fossil fuel-based electric power generation or improvement in the efficiency of fossil fuel-based electric power generation.
 - Large scale hydropower plants (larger than 20 MW).
 - Biomass energy generation that depletes existing terrestrial carbon pools.

The identification and management of the environmental and social (E&S) risks associated with the Eligible Projects are considered to be good, covering the identification, monitoring and control of the relevant E&S risks in all the categories of Eligible Projects.

HKSAR Government has formalized procedures to govern the development, construction and operation of public works, namely the Public Works Programme (PWP). We consider that these procedures are exhaustive and adequately structured, covering the identification, monitoring and control of the relevant E&S risks in all the Eligible Projects:

The PWP procedures explicitly state the mandatory E&S requirements for a project to be approved for funding and the government authorities responsible for each stage of the project planning process. While tasks differ from one type of project to another, the general procedures and sequence of stages apply to all Eligible Projects to be financed or refinanced by the Bonds.

The monitoring and reporting of all projects financed by HKSAR Government is ensured through a register in the Public Works Programme Information System (PWPIS) and the publicly available Quarterly Report on Public Works Programme.

In addition, the procedures to monitor and control the environmental and social performance of contractors and suppliers entering into contracts for public works are formalized in the Contractor Management Handbook, which is publicly accessible. The Handbook includes:

- Explicit procedures for the admission of contractors and suppliers in the List of Approved Contractors for Public Works or the List of Approved Suppliers of Material and Specialist Contractors of Public Works. (hereafter “the List/Specialist List”). Contractors and suppliers, who would like to apply for admission into the List/Specialist List, must comply with a number of criteria covering, but not limited to, financial, technical and management experience and personnel as well as applicable legislation and regulations, including, for example, the statutory minimum wage under the Minimum Wage Ordinance. These approval criteria are in line with the E&S criteria recommended by Vigeo Eiris covering the respect to human and labour rights, respect to working conditions including minimum wage and maximum working hours, ensure appropriate health and safety conditions and prevent corruption, fraud and conflict of interest.

In addition, consultants and contractors are required to provide certification of their quality management systems in accordance with ISO 9001:2015 standard and declaration of Conflict of interest.

- A central record system is maintained to monitor the workload, performance and financial status of contractors and suppliers entering into contracts for public works, the Report on Contractor’s Performance (RCP). The RCP is a scorecard that assesses 11 relevant criteria and sub-criteria. The first ten criteria assessed are: workmanship, progress, site safety, environmental pollution control, organization, general obligations, industry awareness, resources, design and attendance to emergency. Their assessment is based on a five-scale evaluation: very good, good, satisfactory, poor and very poor. The remaining criteria is the contractor’s attitude to claims and is based on a two-scale evaluation: reasonable/no claim submitted and unreasonable. The assessment of the performance of contractors includes onsite monitoring visits.
- The formalized Regulating Actions include the removal, suspension, downgrading or demotion of contract/supplier from the List/Specialist List, if a contractor or supplier fails to comply with the standards set in the Handbook including, but not limited to, unsatisfactory performance, misconduct or suspected misconduct, winding-up, bankruptcy or other financial problems, poor site safety record, poor environmental performance, and violation to Hong Kong laws.

Public Works Program E&S due diligence procedures:

- In order to be considered part of the Public Works Programme, all Eligible Projects have to deliver the following relevant documents:
 - The Project Definition Statement in which the need of the project and the potential contribution to local development is justified and the compliance with HKSAR Government policies, policy committees and basic planning standards for the development is confirmed.
 - Technical Feasibility Statement including:
 - Detailed project description, land requirements, development constraints (geotechnical aspects, management of construction and demolition material, interface problems, traffic impact, etc.), management of contaminated sites, heritage considerations and greening and landscape considerations.
 - Environmental considerations: categorization of the project under or not under the Environmental Impact Assessment Ordinance (EIAO). Projects under EIAO are required to conduct an EIA study in accordance with the Technical Memorandum on EIA Process or seek permission to apply directly for an Environmental Permit. Other projects should provide dedicated measures to implement standard pollution control measures during construction or to carry out a Preliminary Environmental Review of the project, as appropriate.
 - Further feasibility studies if considered needed. Of note, the engagement of consultants to conduct feasibility studies is structured in a formalized procedure that includes price ceilings.
 - Sustainability Evaluations conducted at the early planning stage of a proposal. Examples of these evaluations include the regional or sub-regional planning studies, comprehensive transport studies, waste management plans, etc.
 - The PWSC paper, which is required for the submission of a project for approval under the PWP. This paper contains similar elements of the Technical Feasibility Statement plus the completed detailed design and tender documents required based on the nature of the project.
 - If the project cost estimate is \$200M, the Systematic Risk Management has to be implemented. This system includes annual monitoring using a Risk Register, from the project's inclusion in the PWP until the completion of the project.
- The PWP has a formalized framework of dispute resolution procedures with contractors and suppliers divided in three stages: a decision of the engineer, mediation and arbitration.
- The PWP mandates the consultation with the relevant government departments, district councils, rural committees, and local and industry stakeholders to ensure smooth coordination. In addition, HKSAR Government has a formalized procedure to confidentially receive and manage complaints from members of the public throughout the lifetime of the project.

Management of proceeds

The rules for the management of proceeds are clearly defined.

The allocation and tracking processes are clearly defined and formalized in the Framework:

- The net proceeds of the Bond will be credited to the Capital Works Reserve Fund and managed by FSTB, using a formal internal register. We consider this procedure allows the appropriate tracking of proceeds.
- The issuer has transparently communicated the intended type of temporary placement for the unallocated proceeds. This will be placed in the Exchange Fund, which is part of Hong Kong's fiscal reserve that keeps the funds in the form of cash or cash equivalent. We have recommended committing to allocate the net proceeds within a 24 months period after the issuance date, in line with best market practices.
- In case of project postponement, or if a project fails to comply with the eligibility criteria, HKSAR Government committed to reallocating the funds to other Eligible Project within 12 months. The eventual changes in the Bond's portfolio will be reported in the Bond's reports.

The traceability and verification are ensured throughout the process.

- The SC will annually verify that the net proceeds of the Bond match the allocations to Eligible Projects.
- An independent qualified party will verify the internal allocation of proceeds record kept by FSTB once a year, at least until full allocation of the proceeds.

Monitoring & Reporting

The reporting process and commitments appear to be good, covering both the funds allocation and the environmental benefits of the Eligible Projects.

The process for monitoring, data collection, consolidation and reporting are clearly defined by the Issuer in internal documentation. We have recommended formalizing this process in the Framework.

The process is based on relevant expertise:

- The relevant public works departments will be responsible for monitoring the environmental benefits data associated to the Eligible Projects.
- FSTB will be responsible for monitoring the allocation of proceeds data, for collecting and consolidating the environmental benefits data and for creating the Green Bond reports.

The Issuer has committed to annually reporting on the Bonds, until full allocation and later in case of material changes, through the Green Bond Reports which will be publicly accessible on HKSAR Government Green Bond Programme website.

The Issuer has committed to transparently communicating at Eligible Category level, and at Eligible Project level if possible, on:

- The allocation of proceeds: the selected reporting indicator related to the fund's allocation cover all the relevant information related to the Eligible Categories.

Reporting Indicators
<ul style="list-style-type: none">- Amount of proceeds allocated to Eligible Projects categories;- Description of major Eligible Projects (status, location, technologies, year of construction, etc.)- Aggregate amount of proceeds of GBT allocated that has been earmarked to Eligible Projects;- The remaining balance of unallocated proceeds yet to be earmarked;- Share of refinancing vs. financing of Eligible Projects;- Confirmation of SC's approval that the project is considered to be an Eligible Project.

- Environmental benefits: the selected reporting indicators are relevant to the Eligible Projects.

Eligible categories	Benefits Indicators
Renewable Energy	<ul style="list-style-type: none"> - Installed capacity (MW) and renewable energy generated (MWh) - Carbon dioxide (CO₂) and other greenhouse gas (GHG) avoided, in CO₂e where appropriate (in tonnes)
Energy efficiency and conservation	<ul style="list-style-type: none"> - Annual reduction of energy consumption (% or MWh) - CO₂ and other GHG avoided, in CO₂e where appropriate (in tonnes)
Pollution prevention and control	<ul style="list-style-type: none"> - Reduction in NO_x, PM₁₀ and PM_{2.5} emissions (in tonnes)
Waste Management and resource recovery	<ul style="list-style-type: none"> - Waste that is reused, recycled, or otherwise treated (in tonnes) - Share of waste reused, recycled or otherwise treated (in % of total tonnes per year) - Waste diverted from landfills (in tonnes) - Reduction of waste sent to landfills (%) - CO₂ and other GHG avoided (in tonnes), in CO₂e where appropriate (in tonnes) - Renewable energy generated (MWh) - Waste-to-energy efficiency (%)
Water and waste water management	<ul style="list-style-type: none"> - Water and wastewater treated (in cubic meters) - Volume of leakage prevented - Annual volume (or population equivalence) of sewage / wastewater treated, reused and avoided (in cubic meters) - Population (number of people) with access to improved sanitation facilities
Nature conservation/ biodiversity	<ul style="list-style-type: none"> - Area conserved/restored/sustainably managed (in hectare) - Number of nature conservation/biodiversity facilities constructed
Clean transportation	<ul style="list-style-type: none"> - CO₂ and other GHG avoided (in tonnes), in CO₂e where appropriate (in tonnes) - Tracks built/repared/modernized (in km) - Number of rolling stocks, carriages/ locomotives bought or repaired - Number of passengers carried
Green buildings	<ul style="list-style-type: none"> - Number and types of green building certifications obtained - Rating level of certifications obtained - Total gross floor area (GFA) of buildings concerned - Amount of energy saved (MW) - CO₂ and other GHG avoided (in tonnes), in CO₂e where appropriate (in tonnes)

The calculation methodologies and assumptions that will be used to calculate the impact of Eligible Projects will be, as feasible, publicly disclosed by the Issuer in the Green Bond Reports.

We have recommended adding to the reporting any material development relating to the Bond, including additional ESG issues, in order to ensure transparency on this regard.

The Issuer has committed to engaging an independent third-party to assure the content of each of the Green Bond Reports.

METHODOLOGY

Vigeo Eiris reviewed information provided by the Issuer, press content providers and stakeholders (partnership with Factiva Dow Jones: access to the content of 28,500 publications worldwide from reference financial newspapers to sector-focused magazines, local publications or Non-Government Organizations). Information gathered from these sources are considered as long as they are public, documented and traceable. Vigeo Eiris has reviewed documents and websites of the Issuer (including but not limited to HKSAR Government's Green Bond Framework, Project Administration Handbook for Civil Engineering Works Ch. 1 and 2, Contractors Management Handbook, Capital Works Reserve Fund, Risk Management for Public Works, etc.) and interviewed employees from several departments of the Issuer.

ISSUANCE

The Bond has been evaluated by Vigeo Eiris according to the Green Bond Principles Voluntary Guidelines (2018 Edition) and to our exclusive methodology based on applying international standards and sector guidelines in terms of ESG management and assessment.

Coherence of the Issuance

We assess the coherence between the Bond issuance and the Issuer's strategy and main sustainability issues.

Use of proceeds

The use of proceeds guidelines is defined to ensure that the net proceeds of the Bonds are exclusively used to finance and/or refinance Eligible Projects and are traceable within the issuing organization. The projects endorsed shall comply with the eligible categories and with the eligibility criteria in order to be considered as Eligible Projects. Vigeo Eiris evaluates the formalization and relevance of the categories; the relevance, preciseness of the associated environmental objectives; the definition, precision and measurability of the expected environmental benefits from the Bond and if they are assessed and quantified.

The contribution of Eligible Projects to sustainable development is evaluated based on the 17 United Nations Sustainable Development Goals (UN SDGs) and on its associated targets.

Process for evaluation and selection

The evaluation and selection process have been assessed by Vigeo Eiris regarding its transparency, governance and efficiency. The explicitness of eligibility criteria and associated supporting elements integrated in the Bond issuance, and the coherence of the process are analysed based on material ESG issues considered in Vigeo Eiris' methodology.

Management of proceeds

The rules for the management of proceeds and the allocation process have been evaluated by Vigeo Eiris regarding their transparency, coherence and efficiency.

Reporting

Reporting indicators, processes and methodologies are defined by the Issuer to enable annual reporting on fund allocation, environmental benefits (output and impact indicators) and on the responsible management of Eligible Projects financed by the Bonds proceeds, collected at project level and potentially aggregated at Bond and/or asset level. Vigeo Eiris has evaluated the relevance of the reporting framework according to three principles: transparency, exhaustiveness and effectiveness.

VIGEO EIRIS' ASSESSMENT SCALES

Performance evaluation		Level of assurance	
Advanced	Advanced commitment; strong evidence of command over the issues dedicated to achieving the objective of social responsibility. Reasonable level of risk management and using innovative methods to anticipate emerging risks.	Reasonable	Able to convincingly conform to the prescribed principles and objectives of the evaluation framework
Good	Convincing commitment; significant and consistent evidence of command over the issues. Reasonable level of risk management.	Moderate	Compatibility or partial convergence with the prescribed principles and objectives of the evaluation framework
Limited	Commitment to the objective of social responsibility has been initiated or partially achieved; fragmentary evidence of command over the issues. Limited to weak level of risk management.	Weak	Lack or unawareness of, or incompatibility with the prescribed principles and objectives of the evaluation framework
Weak	Commitment to social responsibility is non-tangible; no evidence of command over the issues. Level of insurance of risk management is weak to very weak.		

Vigeo Eiris is an independent international provider of environmental, social and governance (ESG) research and services for investors and public & private organizations. We undertake risk assessments and evaluate the level of integration of sustainability factors within the strategy and operations of organizations.

Vigeo Eiris offers a wide range of services:

- ▶ **For investors:** decision making support covering all sustainable and ethical investment approaches (including ratings, databases, sector analyses, portfolio analyses, structured products, indices and more).
- ▶ **For companies & organizations:** supporting the integration of ESG criteria into business functions and strategic operations (including sustainable bonds, corporate ratings, CSR evaluations and more).

Vigeo Eiris is committed to delivering client products and services with high added value: a result of research and analysis that adheres to the strictest quality standards. Our methodology is reviewed by an independent scientific council and all our production processes, from information collection to service delivery, are documented and audited. Vigeo Eiris has chosen to certify all its processes to the latest ISO 9001 standard. Vigeo Eiris is an approved verifier for CBI (Climate Bond Initiative). Vigeo Eiris' research is referenced in several international scientific publications.

With a team of more than 240 experts of 28 different nationalities, Vigeo Eiris is present in Paris, London, Boston, Brussels, Casablanca, Hong Kong, Milan, Montreal, Rabat, Santiago and Stockholm.

The Vigeo Eiris Global Network, comprising 7 exclusive research partners, is present in Australia, Brazil, Germany, Israel, Japan, Spain and Mexico.

For more information: www.vigeo-eiris.com

Disclaimer

Transparency on the relation between Vigeo Eiris and the Issuer: Vigeo Eiris has not carried out any audit mission or consultancy activity for HKSAR Government until so far and no established relationship (financial or other) exists between Vigeo Eiris and HKSAR Government

This opinion aims at providing an independent opinion on the sustainability credentials and management of the Bond, based on the information which has been made available to Vigeo Eiris. Vigeo Eiris has neither interviewed stakeholders out of the Issuer's employees, nor performed an on-site audit nor other test to check the accuracy of the information provided by the Issuer. The accuracy, comprehensiveness and trustworthiness of the information collected are a responsibility of the Issuer. Providing this opinion does not mean that Vigeo Eiris certifies the effectiveness, the excellence or the irreversibility of the assets to be financed by the Bond. The Issuer is fully responsible for attesting the compliance with its commitments defined in its policies, for their implementation and their monitoring. The opinion delivered by Vigeo Eiris neither focuses on the financial performance of the Bond, nor on the effective allocation of its proceeds. Vigeo Eiris is not liable for the induced consequences when third parties use this opinion either to make investments decisions or to make any kind of business transaction.

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