SECOND PARTY OPINION

Livent Corporation Green Bond Framework



Issuer	Livent Corporation	Issuer Green Bond Framework Name	Livent Corporation Green Bond Framework	
Completion Date	June 20, 2020	Independent External Review Provider's	Environmental Resources Management Inc. (ERM)	
Publication Date	June 22, 2020	Name		

Scope and Objective

Environmental Resources Management Inc. (ERM) has evaluated Livent Corporation's Green Bond Framework (the 'Green Bond Framework') and assessed whether it is aligned with the four components of the ICMA Green Bond Principles 2018. The review was based on the content of the Green Bond Framework, together with supporting information and data provided by the issuer.

Review Conclusion

ERM Inc. (ERM) has assessed Livent Corporation's Green Bond Framework and supporting information and has concluded that it is aligned with the four core components of the <u>ICMA Green Bond Principles 2018</u>.



Use of Proceeds

The Livent Green Bond Framework has designated '*Facilitating the Growth of Electrification with a Focus on the Transport Sector*' as the eligibility category for consideration of Eligible Green Projects. This is aligned with the explicit objective of the ICMA Green Bond Principles to recognize categories of eligibility that contribute to climate change mitigation.



Project Evaluation

A dedicated Green Team, chaired by the Head of the Sustainability, will be responsible for determining if potential Green Projects are in conformance with **both** the eligibility criteria set out in the Green Bond Framework **and** Livent's Sustainability Policies and Procedures. The Green Bond Framework eligibility and exclusion criteria are designed to select Eligible Green Projects that support the market growth of Electric Vehicles (EVs), energy storage solutions and other applications that promote the low carbon energy transition in the transport sector.



Management of Proceeds

The issuer has clearly defined how the proceeds will be accounted for in the Green Bond Framework. All proceeds are planned to be allocated within 24 months of issuance, and Livent's Treasury team will track the allocation of the proceeds to Eligible Green Projects by establishing and maintaining a Register, which will be subject to third party audit. This approach is aligned with the measures set out in the ICMA Green Bond Principles.



Reporting

Livent has committed to report, on an annual basis, until the full proceeds have been allocated, on the aggregate amounts allocated to Eligible Green Projects under the Green Bond Framework. The annual allocation report and the impact report will be published on Livent's website and additional information will be disclosed, as applicable, in the annual financial report and sustainability report. The allocation report will be verified annually by an independent registered public accounting firm.

Responsibilities

The management of Livent is responsible for the information and data provided by it for use by ERM during the delivery of this review, and all matters after the issuance of a Green Bond under its Framework. ERM has relied on the information and data presented to us by Livent, as well as relevant information in the public domain. ERM is responsible for the assessment of information and data provided and preparing an independent Second Party Opinion on the alignment of the Livent Green Bond Framework with the four core components of the ICMA Green Bond Principles 2018.

Independence and Conflict of Interest Policy

ERM operates a Code of Business Conduct and Ethics, supported by policies and procedures to implement ethical principles, including conflict of interest management. Neither ERM, nor any of its staff involved in this review, have had any involvement with Livent or its advisors in the development of the Livent Green Bond Framework or the information and data provided to support it. ERM's Code of Business Conduct and Ethics may be viewed <u>here</u>.

Reviewer's Credentials

ERM is a leading global provider of environmental, health, safety, risk, social consulting services and sustainability related services. ERM has more than 5,500 people in over 40 countries and territories working out of more than 160 offices. Further information may be found here: <u>www.erm.com</u>.

The team undertaking this review has appropriate skills and qualifications including sustainability strategy, environmental management, climate change, assurance and greenhouse gas verification. Key members of the review team are Lead Auditors and meet the competence requirements set out in ISO14066.

Methodology and Work Undertaken

ERM's approach to this review is informed by ISAE3000. The review included the following tasks:

- a) Review of data and information provided by Livent and relevant information in the public domain.
- b) Identification of evaluation criteria.
- c) Systematic review of the Livent Green Bond Framework and supporting information and data against the evaluation criteria. This included an evaluation of the risk of potentially material environmental and/or social risks associated with the Green Projects, identified by the issuer.
- d) Development of conclusions and Second Party Opinion report.
- e) Internal technical review.

Findings of the Review

ERM's findings and assessment of the Livent Green Bond Framework against the four core components of the ICMA Green Bond Principles are set out in Annex 1.

For Environmental Resources Management Inc.

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Date: June 20, 2020

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This document was developed by ERM Inc. ("ERM") with the express intent of providing a Second Party Opinion ("Opinion") on the alignment of Livent's Green Bond Framework with the four core principles of ICMA's Green Bond Principles. The Opinion is for information purposes only, and ERM does not accept any form of liability for the substance of the Opinion, liability for damage arising from the use of this Opinion, and/or information provided in the Opinion. Nothing herein shall be construed as providing a representation or warranty, express or implied, regarding the advisability to invest in or include companies in investment vehicles, or investment universes or portfolios. This Opinion shall not be interpreted or construed as an assessment of the economic performance and credit worthiness of the bond, nor to have focused on the effective allocation of the fund's Use of Proceeds. The Opinion is based on information made available by the client, and as such, ERM does not warrant that the information used and presented in this Opinion is complete, accurate or contemporary. The client is fully responsible for assuring and certifying its compliance, implementation and monitoring under its framework. No part of this Opinion may be reproduced, transmitted or published in any form or by any means without the express prior written and full consent of ERM.





Livent Corporation Green Bond Framework

Independent External Review Form

Section 1. Review Overview

SCOPE OF REVIEW

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

☑ Use of Proceeds
 ☑ Management of Proceeds
 ☑ Management of Proceeds
 ☑ Reporting

ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

\boxtimes	Second Party Opinion	Certification
	Verification	Scoring/Rating
	Other (please specify):	

EXECUTIVE SUMMARY OF REVIEW

Environmental Resources Management Inc. (ERM) has evaluated Livent Corporation's Green Bond Framework (the 'Green Bond Framework') and assessed whether it is aligned with the four components of the ICMA Green Bond Principles 2018. The review was based on the content of the Green Bond Framework, together with supporting information and data provided by the issuer.

ERM has concluded that the Green Bond Framework is aligned with the four components of the ICMA Green Bond Principles 2018.

Use of Proceeds

The Green Bond Framework has designated 'Facilitating the Growth of Electrification with a Focus on the Transport Sector' as the eligibility category for consideration of Eligible Green Projects. This is aligned with the explicit objective of the ICMA Green Bond Principles to recognize categories of eligibility that contribute to climate change mitigation.



Project Evaluation

A dedicated Green Team, chaired by the Head of the Sustainability, will be responsible for determining if potential Green Projects are in conformance with both the eligibility criteria set out in the Green Bond Framework and Livent Sustainability Policies and Procedures. The Green Bond Framework eligibility and exclusion criteria are designed to select Eligible Green Projects that support the market growth of Electric Vehicles, energy storage solutions and other applications that promote the low carbon transition in the transport sector.

Management of Proceeds

The issuer has clearly defined how the proceeds will be accounted for in the Green Bond Framework. All proceeds are planned to be allocated within 24 months of issuance, and Livent's Treasury team will track the allocation of the proceeds to Eligible Green Projects by establishing and maintaining a Register, which will be subject to third party audit. This approach is aligned with the measures set out in the ICMA Green Bond Principles.

Reporting

Livent has committed to report, on an annual basis, until the full proceeds have been allocated, on the aggregate amounts allocated to Eligible Green Projects under the Green Bond Framework. The annual allocation report and the impact report will be published on Livent's website, and additional information will be disclosed, as applicable, in the annual financial report and sustainability report. The allocation report will be verified annually by an independent registered public accounting firm.

Section 2. Detailed Review

1. USE OF PROCEEDS

Overall comment on section:

The net proceeds of Bonds issued under the Green Bond Framework will exclusively finance or re-finance, in part or in full, new and/or existing 'Eligible Green Projects' that support the future extraction of lithium and the production of Lithium Hydroxide and Lithium Carbonate, which are critical to the production of energy-dense and long-lasting batteries increasingly used in electric vehicles (EVs), and energy storage applications.

The Eligible Green Bond Project Category defined within the Green Bond Framework is '*Facilitating the Growth of Electrification with a focus on the Transport Sector*'. This category reflects the contribution made by the development of lithium ion batteries for EVs and energy storage for the grid and other applications to climate change mitigation and supports the transition to a lower carbon economy.

In evaluating the selected Use of Proceeds, ERM has considered whether the growth in capacity for EVs and battery storage of electricity represent a genuine contribution towards the transition to a low carbon economy. Electrification of energy end use features in the Special Report prepared by the Intergovernmental Panel on Climate Change in 2018 as one of the pathways to limiting global warming to 1.5 degrees¹ and an increasing

¹ IPCC Special Report Global Warming of 1.5°C: 2018, <u>www.ipcc.ch/sr15/</u>



supply of lithium-based materials will be required to support the growth in demand for electric vehicles and energy storage. This is further illustrated in the recent IEA Global EV Outlook 2020², which illustrates that at least for the next decade, the Li-ion battery is likely to dominate the electric vehicle market, with cathode and battery producers for EVs relying on lithium supply.

We therefore support the Green Bond Framework's premise that expanding the supply of critical raw materials for EV batteries and energy storage is aligned with the Green Bond Principles' objective of climate change mitigation.

Because lithium has uses other than EV batteries and renewable energy storage (for example it is also widely used in non-rechargeable batteries and the manufacture of alloys and grease) the Issuer will only approve projects under its Green Bond Framework that relate directly to the development, operation and maintenance of assets dedicated to the extraction of lithium and the production of Lithium Hydroxide and Lithium Carbonate which will be used for manufacture of batteries for EVs, energy storage solutions and other applications that promote the low carbon energy transition in the transport sector. Other product applications of Lithium Hydroxide and Lithium Carbonate are specifically excluded from project eligibility. The Green Bond Framework may be updated to ensure continued alignment with voluntary market practices, emerging standards and classification systems.

Use of proceeds categories as per GBP:

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

² IEA (2020), Global EV Outlook 2020, IEA, Paris https://www.iea.org/reports/global-ev-outlook-2020



2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section:

Potential Green Projects will be screened for eligibility by Livent's Green Team, chaired by the Head of Sustainability, and consisting of senior members of the following teams: Finance/ Treasury, Corporate Sustainability, Operations, Audit, Tax, Sales & Marketing, Regulatory, Communications/Public Affairs and Legal. This team has been established specifically to be responsible for overall governance of Eligible Green Projects included within the Green Bond Framework, including the screening, assessment, approval and monitoring of Eligible Green Projects.

Eligible Green Projects will be approved by the Green Team based on meeting **both** the eligibility and exclusion criteria set out in the Green Bond Framework **and** Livent's Sustainability Policies and Procedures [link]. In addition, all Eligible Green Projects will undergo an Environmental Impact Assessment and will be required to implement an Environmental Management System.

ERM has reviewed the inclusion and exclusion criteria and has concluded that these are appropriate to align the Green Bond Framework with product applications that will be used in EVs and energy storage applications.

The Green Team will annually review the list of Eligible Green Projects against the eligibility and exclusion criteria. If a project is initially included but eventually does not meet the eligibility criteria set forth in the Framework, the project will be removed from the register and replaced with a substitute.

A documented process to determine eligible projects, including assessment of environmental and social risks associated with the project and appropriate mitigation measures, will be developed and the screening process and conformation of alignment with the eligibility and exclusion criteria. It is set out in the Green Bond Framework that projects proposed as Green Projects will fall within the issuer's environmental and safety management systems, which govern assessment and management of environmental and social risks. Impact assessments are a routine element of Livent's project assessment and approval process.

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Evaluation and selection

- Credentials on the issuer's environmental sustainability objectives
- Defined and transparent criteria for projects eligible for Green Bond proceeds
- Summary criteria for project evaluation and selection publicly available

Information on Responsibilities and Accountability

- Evaluation / Selection criteria subject to external advice or verification
- □ Other (please specify):

- Documented process to determine that projects fit within defined categories
- Documented process to identify and manage potential ESG risks associated with the project
- □ Other (*please specify*):

In-house assessment



3. MANAGEMENT OF PROCEEDS

Overall comment on section:

The issuer has defined in the Green Bond Framework how the proceeds will be accounted for, with the allocation of proceeds tracked within a Register maintained by Livent's Treasury Team. All proceeds are expected to be allocated within 24 months of the date of issuance of a Green Bond under the Framework.

The 'Management of Proceeds' section of the Green Bond Framework addresses:

- Where the proceeds will be deposited
- How the proceeds will be allocated
- How the proceeds will be tracked
- Information to be included in the Register
- Treatment of any proceeds that have not been allocated within 24 months from the date of issuance of the Bond

Livent will publish an allocation report annually, providing information on the allocation of the net proceeds of its Green Bonds and including an assertion by management detailing how much of the net proceeds of Green Bonds issued under the Green Bond Framework were allocated to Eligible Green Projects. This assertion will be examined annually by an independent registered public accounting firm appointed by the Issuer.

ERM has concluded that this approach is aligned with the requirements of the Green Bond Principles.

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

4. REPORTING

Overall comment on section:

Livent has committed to publish annual reporting for each Green Bond issued under the Green Bond Framework, until full allocation of the proceeds, and in the event of any material developments until the relevant maturity date. The reporting will be published on Livent's website and will consist of an allocation report, providing information on the allocation of net proceeds to Eligible Green Project Categories as defined in



the Green Bond Framework, and an impact report, including the following performance metrics as set out in section 2.4 of the Framework:

- Annual revenue from volume of eligible product sales to battery producers for electric vehicles and energy storage; and
- Annual sustainability performance across all material ESG focus areas, with an emphasis on the impact of Livent's extraction of lithium and production of Lithium Carbonate and Lithium Hydroxide.

ERM notes that the sustainability performance reporting will be determined according to ESG focus areas with emphasis on the impact of Livent's extraction of lithium and production of Lithium Carbonate and Lithium Hydroxide. We note that all extraction and production sites operate certified environmental and safety management systems, which will provide a platform for determining material issues. We also note that Livent's 2019 Sustainability Report demonstrates an evaluation of the potentially material issues, as well as quantified reporting, across a range of ESG metrics that will be appropriate to the extraction of lithium and production of Lithium Carbonate and Lithium Hydroxide.

External verification of the allocation report will be conducted by an independent registered public accounting firm. The verifier will examine management's assertion detailing how much of the net proceeds of Green Bonds issued under the Framework were allocated to Eligible Green Projects.

The external verification report will be published together with the allocation report and the impact report on the Livent's website annually, until the full proceeds have been allocated. Information related to the Eligible Green Projects may also be reported in the annual financial report and/or the Sustainability Report.

ERM is satisfied that Livent has in place the processes to evaluate and measure material ESG focus areas and to report publicly on its defined impact reporting categories set out in the Green Bond Framework in line with the Green Bond Principles.

Use of proceeds reporting:

\boxtimes	Project-by-project		On a project portfolio basis
\boxtimes	Linkage to individual bond(s)		Other (please specify):
	Information reported:		
	☑ Allocated amounts	X	Green Bond financed share of total investment
	Other (please specify):		
	Proportional allocation of proceeds between existing projects (refinancing) and new projects.		
	The remaining balance of unallocated proceeds, if any.		



Frequ	ency:			
	🖾 Annual		Semi-annual	
	□ Other (please specify):			
_				
Impac	t reporting:			
\boxtimes	Project-by-project		On a project portfolio basis	
\boxtimes	Linkage to individual bond(s)		Other (please specify):	
	Frequency:			
	🛛 Annual		Semi-annual	
	□ Other (please specify):			
Information reported (expected or ex-post):				
	□ GHG Emissions / Savings		Energy Savings	
	Decrease in water use	\mathbf{X}	Other ESG indicators (please specify):	
Moon	s of Disclosure		 Revenue from volume of eligible product sales to battery producers for electric vehicles and energy storage Annual sustainability performance across all material ESG focus areas, with an emphasis on the impact of Livent's extraction of lithium and production of Lithium Carbonate and Lithium Hydroxide. 	
wears				
\boxtimes	Information published in financial report	\mathbf{X}	Information published in sustainability report	
	Information published in ad hoc documents	\boxtimes	 Other (please specify): Livent will publish allocation and impact reports annually on its website, until full allocation of the proceeds. 	

Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Annual reporting will be accompanied by an assertion by management detailing how much of the net proceeds of Green Bonds issued under this framework were allocated to Eligible Green Projects. An independent registered public accounting firm will be appointed by Livent to provide a report in respect of its examination of management's assertion conducted in accordance with attestation standards established by the American Institute of Certified Public Accounts.



5. ASSESSMENT OF THE ISSUER'S OVERARCHING OBJECTIVES, STRATEGY, POLICY AND PROCESSES RELATING TO ENVIRONMENTAL SUSTAINABILITY, AND AN EVALUATION OF THE ENVIRONMENTAL FEATURES OF THE TYPE OF PROJECTS INTENDED FOR THE USE OF PROCEEDS

The Green Bond Framework outlines the company's growth strategy, which is focused on the production of high-performance Lithium Hydroxide and Lithium Carbonate for the EV battery market, as well as maintaining the company's position as a leading supplier to the energy storage market. Through the supply of these key products to the market, Livent is contributing to the ongoing electrification of the transport sector and the transition to a lower carbon economy. The Eligibility Criteria set out in the Green Bond Framework restrict the allocation of proceeds from the issuance of a Green Bond to the extraction and production of Lithium Hydroxide and Lithium Carbonate used in the manufacture of batteries for EVs, Energy Storage solutions and other applications that promote the low carbon energy transition in the transport sector.

Livent has developed a sustainability strategy and has put in place sustainability/ESG policies, safety and health policies and human right policies aligned with global standards and the general principles of responsible mining and production.

The activities that Livent undertakes related to the products included in the Eligibility Criteria include the extraction of lithium from brine, currently via a proprietary Direct Lithium Extraction (DLE) process, and the production of Lithium Hydroxide and Lithium Carbonate from the extracted lithium. ERM has reviewed how the issuer evaluates and mitigates social and environmental risks associated with these activities and whether these are aligned with its sustainability strategy and commitments.

The lithium extraction site in Argentina and all of Livent's extraction and production sites have environmental management systems in place, which are certified to ISO 14001. The intended outcomes of an environmental management system include the fulfilment of compliance obligations, enhancement of environmental performance and the achievement of environmental objectives. Each site also undergoes a formal EHS regulatory compliance audit every three years, in addition to periodic self-auditing, to ensure the site is compliant with local and Livent requirements. Deployment of capital to the expansion of existing lithium extraction and production facilities is subject to the completion of an environmental impact assessment, and to obtaining relevant environmental permits.

In addition to meeting compliance obligations, the issuer is also working proactively to identify and integrate a range of strategic initiatives into its extraction and production operations, including lower carbon energy solutions and further reduction of hydrology impacts.



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

Livent Sustainability Report 2019 livent.com/sustainability/

Livent Policies and Statements https://livent.com/sustainability/policies-and-statements/

ICMA Green Bond Principles 2018 www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf

ERM website

www.erm.com

David Puglielli, World Environment Forum, 25 April 2019 www.weforum.org/agenda/2019/04/electrification-energy-transition-decarbonization-climate-change/

IPCC Special Report Global Warming of 1.5°C: 2018 www.ipcc.ch/sr15/

IEA (2020), Global EV Outlook 2020, IEA, Paris https://www.iea.org/reports/global-ev-outlook-2020

Li-ion batteries for mobility and stationary storage applications, Scenarios for costs and market growth JRC Science for Policy Report, Tsiropoulos I., Tarvydas D., Lebedeva N. 2018 https://publications.jrc.ec.europa.eu/repository/bitstream/JRC113360/kjna29440enn.pdf

Note that this is not a comprehensive summary of documents reviewed or available.

Type(s) of Review provided:

\boxtimes	Second Party Opinion		Certification
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□ Verification □ Scoring/Rating

□ Other (please specify):

Review provider: June 20, 2020

Date of publication: June 22, 2020

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ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- 1. 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.
- 2. 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.
- 3. **Certification**: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised 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.
- 4. **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 specialised 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.