

Second-Party Opinion

NXP Green Innovation Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the NXP Green Innovation 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 eligible categories for the use of proceeds – research and development of energy efficient chip design, smart mobility, advanced driver assistance systems, wireless communication infrastructure, edge processing, smart buildings as well as projects related to greening of NXP’s manufacturing and non-manufacturing activities – are aligned with those recognized by the Green Bond Principles, namely eco-efficient products, energy efficiency, clean transportation, and pollution prevention and control. Sustainalytics considers that NXP’s investments in R&D and the production of certain technologies in the categories enumerated above, and process improvements in their operations will lead to positive environmental impacts and advance several UN Sustainable Development Goals, in particular Goals 7, 9, and 11.



PROJECT EVALUATION / SELECTION NXP has formed the Green and Sustainable Innovation Bond Committee, comprised of representatives from NXP’s Group Finance, Sustainability and Corporate Strategy organizations, the Chief Technology Officer and other NXP subject matter experts, from time to time. This committee will be responsible for evaluation, selection and allocation of eligible projects to the Green Project Portfolio.



MANAGEMENT OF PROCEEDS NXP will manage the proceeds of its green bond(s) on a portfolio basis and will strive to ensure on an ongoing basis that the balance in the portfolio matches or exceeds the net proceeds of outstanding bonds. NXP’s Treasury Team will administer and manage the Green Project Portfolio. Pending allocation, proceeds may be held in cash, other short-term liquid instruments, or used to repay outstanding indebtedness. This is in line with market practice.



REPORTING NXP will make available an allocation report as well as an impact report. These reports will form a part of NXP’s sustainability report until full allocation of the bond(s) net proceeds or in case of any modification to the framework or allocation portfolio. Sustainalytics views NXP’s allocation and impact reporting as aligned with market practice.

| | |
|------------------------|------------------------|
| Evaluation date | January 24, 2020 |
| Issuer Location | Eindhoven, Netherlands |

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Introduction

NXP Semiconductors N.V. (“NXP”, the “Company”, or the “Issuer”) is a designer and manufacturer of semiconductors, with 60 years of experience providing connectivity solutions for a wide variety of applications. Headquartered in the Netherlands, NXP has a global presence in the automotive, industrial & IoT, mobile, and communication infrastructure markets.

NXP has developed the NXP Green Innovation Bond Framework (the “Framework”) under which it intends to issue green bond(s) and use the proceeds to finance and/or refinance, in whole or in part, investments primarily related to the R&D or production of “green chips”, which provide or enable greater energy efficiency. The Framework defines eligibility criteria in seven of the Company’s operational areas:

1. Power Adaptors
2. Smart Mobility
3. Advanced Driver Assistance Systems
4. Wireless communication infrastructure
5. Edge Processing
6. Smart Buildings
7. Green projects related to the Company’s manufacturing and non-manufacturing activities

NXP engaged Sustainalytics to review the Framework, dated January 2020, and provide a second-party opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2018 (GBP).¹ This Framework has been published in a separate document.²

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

This document contains Sustainalytics’ opinion of the NXP Green Innovation Bond Framework and should be read in conjunction with that Framework.

¹ 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/>

² The NXP’s Framework is available on NXP’s website at: https://www.nxp.com/company/our-company/about-nxp/corporate-responsibility:CORP_SOCIAL_RESP

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the NXP Green Innovation Bond Framework

Summary

Sustainalytics is of the opinion that the NXP Green Innovation 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 use of proceeds categories are aligned with those recognized as impactful by the GBP, namely eco-efficient products, energy efficiency, clean transportation, and pollution control and prevention.
 - The majority of green bond proceeds is intended to be invested in research and development (R&D) activities. Sustainalytics considers R&D activities to have the potential to drive positive environmental outcomes, while noting that it is more difficult to quantify the direct impacts of R&D related activities until commercialization, as well as that the GBP are commonly focused on project expenditures. We view positively the R&D activities of NXP's Framework, based primarily on the following:
 - The Framework defines specific technological areas, and the product types within each area, that are to be the focus of R&D expenditures. Refer to Section 3 for further discussion of the impacts of the specific R&D programmes which may be financed.
 - NXP has disclosed the anticipated and/or targeted outcomes for its R&D initiatives in each of the areas described in the Framework, through either percentage savings or a qualitative description of expected outcomes/products.
 - NXP has a demonstrated track record of successfully implementing new and advanced technology, and the specific products targeted by the Framework for R&D activity are noted to be in deployment and/or near commercial stage.
 - The Framework defines a number of "application domains" in which NXP will focus the R&D activities financed by its green bond(s), all of which aim to further the development of products which enable energy savings or are themselves more energy efficient:
 - Energy efficient chip design: NXP aims to further develop its line of energy efficient "GreenChips", for power adaptors of consumer electronics devices. These chips operate more efficiently, consume less power, and are manufactured using less raw materials and avoiding certain toxic chemicals. According to NXP, the Company's family of chips is 10% more energy efficient than competing products, with NXP having developed the first chip with a standby power requirement of below 500 mW. The Company also projects that each successive chip generation will require 15% less in component materials. Based on the existing record of performance, the Company's projected future improvements, and the need for energy efficiency within this sector, Sustainalytics views positively the ambition of these investments.
 - Smart Mobility: NXP's activities in this area relate to battery management in electric powertrain vehicles, including fully electric and hybrid automobiles. Sustainalytics considers components intended for use solely in electric vehicles to have positive environmental impacts, and to be fully aligned with market norms for clean transportation. Hybrid vehicles, while generally less polluting than conventional internal combustion engine vehicles, may not be fully aligned with a low-carbon trajectory.³ Nevertheless, as NXP's investments are focused on improving the performance of electrical systems within these vehicles, thus enabling a lesser reliance on fossil fuel combustion, these investments are viewed positively.

³ Sustainalytics considers an emissions threshold in CO₂ emitted per person-kilometer of mobility, as proposed by the IEA Mobility Model, to be indicative of compliance with a 2-degree warming scenario.

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- Advanced Driver Assistance Systems (ADAS): Sustainalytics notes that ADAS can be applied to all types of vehicles, including those with internal combustion engines. Nevertheless, these technologies have the potential to provide significant energy savings,⁴ as well as improved road safety, and do not constitute a “lock-in” of fossil fuel based technologies, and should therefore be considered to have net-positive impacts. Refer to Section 3 for further discussion of the impact of ADAS.
- Wireless communication infrastructure: NXP’s research activities in this area relate to improved performance of wireless network base stations, in particular power amplifiers and beam-forming antennas. According to NXP’s technical experts, a 30-fold energy savings can theoretically be achieved compared to conventional antenna configurations. Due to the continued expansion of wireless communications, and in particular the roll-out of 5G networks which have greater power demands, investments in this area have the potential to provide meaningful energy savings.⁵
- Edge Processing: NXP’s “edge processing portfolio” relates to microcontrollers which are deployed in a variety of automotive, industrial, and Internet-of-Things implementations. The Company’s research in this area aims to improve the power consumption of microcontroller chips, some of which, NXP claims, are already twice as efficient as those from its competitors. In addition to improved performance of the chips itself, for example low consumption in sleep mode, NXP’s edge processing chips support additional functionality in peripheral devices, enabling greater local processing and less reliance on cloud computing, which NXP estimates can save upwards of 50% of energy use.
- Smart Buildings: NXP’s components enable “smart” building technologies, such as sensor-equipped lighting and adaptive temperature controls. Based on the overall energy demand of the worldwide building sector, and therefore the potential magnitude of energy savings that could be achieved, Sustainalytics views the enabling of these technologies as environmentally beneficial, while noting that quantification of impacts is challenging based on the decentralized deployment and operation.
- NXP’s green bonds may also finance investments related to improving the environmental performance of the Company’s activities. Specifically, these may include:
 - Energy efficiency improvements and building refurbishments, related to both manufacturing facilities and other sites. Sustainalytics views positively the intention of these investments, while noting that market practice includes specifying thresholds for improvement and/or specific types of upgrades, and encouraging project-by-project reporting to provide assurance to investors on the impact of projects financed.
 - Investments in solar and wind energy projects, to mitigate the emissions from energy consumption. Sustainalytics views this class of investment to be impactful and aligned with market practice.
 - Emissions mitigation from manufacturing, with a focus on reducing F-gasses.⁶ Sustainalytics notes the high global warming potential of F-gasses, and considers investments in pollution reduction to be net-positive.
 - Improvement in environmental and health safety of its products by substituting non-toxic materials.⁷ Sustainalytics views positively these initiatives, while noting that some of these impacts may be more closely related to social benefits (ie. human health) than accepted green categories.
 - Industrial water efficiency, conservation, and quality projects. Sustainalytics views positively the intention of these investments, while noting that market practice includes specifying thresholds for improvement and/or specific types of upgrades, and

⁴ It is estimated that ADAS systems can generate 30-45% energy savings, with system-wide savings of up to 60% technically feasible with full network implementation.) (Chen et al., 2017) Refer: <https://www.osti.gov/biblio/1409303>

⁵ Estimates by NXP suggest that the energy savings from full roll-out of these technologies could be equivalent to the annual energy consumption of over 2 million US households.

⁶ F-gases refer to Fluorinated gases used in a range of industrial applications and can be global warming effect up to 23,000 times greater than carbon dioxide (CO₂). Refer: https://ec.europa.eu/clima/policies/f-gas_en

⁷ For example, the replacement of lead as a semiconductor bonding material with other alternatives.

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encouraging project-by-project reporting to provide assurance to investors on the impact of projects financed.

- Project Evaluation and Selection:
 - NXP has established a Green and Sustainable Innovation Bond Committee, consisting of representatives from a variety of relevant departments including Finance and Sustainability, as well as the Chief Technology Officer, with relevant subject-matter experts included as needed. This Committee, meeting at least annually, will select eligible projects in line with the criteria of the Framework as well as the Company’s environmental targets.
 - Based on the implementation of a formal committee with executive-level participation, Sustainalytics considers this process to be aligned with market practice.
- Management of Proceeds:
 - NXP will manage the proceeds of its green bond(s) on a portfolio basis, and NXP will strive to add eligible projects to the portfolio in order to ensure that the balance matches or exceeds the net proceeds of outstanding bonds. NXP’s Treasury team will be charged with administering this programme, and will make use of a register of eligible projects to manage allocations. Sustainalytics notes that NXP may allocate to new or existing projects.
 - Pending allocation, proceeds may be held in cash, other short-term liquid instruments, or used to repay outstanding indebtedness.
 - Based on the commitment to a portfolio approach with ongoing management to match projects to the balance of outstanding bonds, Sustainalytics considers this to be in line with market practice.
- Reporting:
 - NXP has committed to ongoing reporting on the allocation and, where feasible impacts of its green bonds, until the proceeds have been fully allocated, as part of its existing Sustainability reporting.
 - The allocation report will include the total amount invested in eligible projects, the share (%) of new and existing projects, and the balance of any unallocated proceeds.
 - Impact reporting will be aligned with the Company’s existing sustainability reporting, and may also include relevant case studies or impact methodology.
 - Based on the commitment to provide both impact and allocation reporting, Sustainalytics considers this process to be aligned with market practice.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that NXP’s Green Bond Framework aligns to the four core components of the GBP 2018. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme

Section 2: Sustainability Strategy of the Issuer

Contribution of framework to issuer’s sustainability targets and strategy

NXP has a stated vision to achieve sustainability through innovation and performance, and has worked to align policies pertaining to its products and operations to contribute towards key SDGs. To integrate corporate responsibility into its operations NXP has developed programmes related to business ethics and transparency, environment, health and safety, human rights, and product stewardship. NXP’s public goal is to protect and respect each life, human rights, environment, and the health and safety of all.

NXP recognizes that manufacturing semi-conductors is an energy and water intensive process and involves the use of hazardous substances, and has therefore made an environmental commitment of working towards the prevention of pollution and conservation of the Earth’s natural resources. It plans on fulfilling this goal by developing products that aim to minimize environmental impacts as well as making its operations more resource efficient. Its 2020 goal consists of reducing its electricity usage, water usage and its carbon footprint by 30 percent as compared to its 2010 baseline. NXP has also committed to recycling 90 percent of its waste and phasing out chemicals of concern by 2020. It plans on achieving these goals by implementing emission reduction projects such as using efficient lighting technologies and schedules, optimizing building operations and product testing processes, using substitute chemicals to minimize use of harmful substance as well as

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installing new abatement equipment to reduce emission of harmful gasses – including nitrogen oxides, sulphur oxides, and volatile organic compounds – during its manufacturing processes.⁸

Considering the stated goals and time-bound quantitative targets, Sustainalytics is of the opinion that the research and development investments enabled by NXP's Green Innovation Bond Framework will help NXP create manufacturing process that has minimal environmental impact, increase the efficiency of its products, aid the end-products conserve energy and fuel as well as make its operations less resource intensive.

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

Sustainalytics recognizes that the research and development projects that will be funded by the Green Innovation Bond will produce an overall positive environmental and social impact. However, the semiconductor industry can have several environmental and social issues linked to its manufacturing process and it is important to acknowledge these risks. Some of the notable environmental and social risk that can arise from the semiconductor industry is use of large amounts of water, energy as well as many toxic chemicals in the manufacturing process, generation of hazardous waste, emission of harmful substances, issues related to use of minerals sourced from conflict zones and exposure of workers to hazardous and harmful substances.

NXP acknowledges these risks and has taken several measures to mitigate it:

- All NXP manufacturing sites are ISO14001 certified (Environmental management system certification) and undergo annual risk assessments to evaluate potential risks or environmental hazards. These risks are weighed against likelihood of occurrence and proactively managed through programs, procedures and engineering controls. NXP also conducts internal Environmental Health and Safety (EHS) audits every two years. Audit findings are recorded according to severity and corrective actions undertaken, formally reported and tracked. These EHS audits may also involve a third-party consultant as well as a senior EHS manager from a different site.
- NXP undertakes employee training globally across its facilities each year. These educational programs as well as on-the-job training are provided to minimize environmental risks, improve quality controls, and ensure chemical management.
- NXP has established a global Environmental Compliance Organization for Products (ECO Product) which manages its corporate product compliance procedures. ECO Products works with the company's supply chain to document details of product compliance such as full material composition declarations and country of origin inquiries for conflict minerals. NXP's has a responsibly sourced mineral program designed in accordance with the Organization for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. NXP also requires its suppliers to adhere to NXP's Supplier Code of Conduct which ensures that its suppliers responsibly source minerals in their supply chain.
- NXP has procedures in place to ensure that relevant local, regional, and global laws are followed with regards to use of substances of concern and hazardous substances.⁹ Chemical management is one of the NXP's sustainability program focus and through this program it aims to be ahead of new chemical legislation and customer requirements. NXP strives to go beyond what is required by law and is a part of voluntary agreements that promote sustainability. For example, NXP complies with the World Semiconductor Council's (WSC's) Voluntary Agreement for PerFluoroOctyl Sulfonates (PFOS) and as of 2017 NXP has eliminated all manufacturing use of PFOS.

Based on the processes, programs and agreements that are in place, Sustainalytics views NXP as having robust measures in place to mitigate against relevant environmental and social risks. Sustainalytics is therefore of the opinion that NXP is well-positioned to mitigate the potential risks associated with the activities that will be financed by this Bond.

⁸ NXP, Design for Sustainability, (Accessed in December 2019), at: <https://www.nxp.com/company/our-company/about-nxp/corporate-responsibility/environment/design-for-sustainability:DESIGN-FOR-SUSTAINABILITY>

⁹ NXP, Materials - Managing hazardous materials, (Accessed in December 2019), at: <https://www.nxp.com/company/our-company/about-nxp/corporate-responsibility/environment/materials:MATERIALS>

Section 3: Impact of Use of Proceeds

The use of proceeds described in the Framework are aligned with those categories that are recognized as impactful by the GBP. Sustainalytics has focused below on how the impact is specifically relevant to NXP's operations.

Research & Development for Innovation in Chip Design

As discussed in Section 1, R&D activities related to chip design have the potential to deliver significant environmental benefits. NXP has a public commitment to making R&D a focus of the Company's culture, carrying out these activities globally, with six dedicated R&D/testing sites and design engineering teams based in over 20 locations worldwide.¹⁰ Framework has specified a number of domains which will be the focus of its R&D investments:

NXP's chips for Power Adapters:

NXP's GreenChip products are the centerpiece of the Company's environmental design initiative; since 1998, this programme has focused on the development of highly energy-efficient products for use in power adaptors. GreenChip designs allows for manufacture of power adaptors that are resource and energy efficient. It is estimated NXP's GreenChip enabled power adapters are 10% more efficient than competing products available in the market and have record low standby power consumption. Further these chips are estimated to use 15% less raw materials such as gold bond wires and plastic packaging.¹¹ Its high-performance low-power supply range of controllers such as the - GreenChip TEA1716, allows for very low standby power consumption and therefore extends battery life of end products such as mobiles, laptops, home appliances etc.

Automotive implementations:

NXP's strategy has been to focus on multiple areas of vehicle performance, one of the focus areas is through the research and development work of its joint venture, Datang NXP Semiconductors Co, Ltd.¹² Other areas of focus include, the Company's effort to investigate and bring to market technologies that improve the battery performance of electric powertrain vehicles, allowing increased lifecycles, faster recharges, and longer driving distance between charges.¹³ This work is especially impactful as "range anxiety", the fear of the battery running dead while driving, is a major factor in influencing drivers away from electric vehicles.¹⁴ NXP will also invest green bond proceeds in its development of Advanced Driver Assistance Systems (ADAS). ADAS has the potential to deliver benefits in both safety, by reducing collisions caused by driver error, as well as energy efficiency by enabling communication between vehicles and other on-road infrastructure.¹⁵ NXP's internal data suggest that one application of ADAS, truck platooning, has the potential to provide fuel savings of between 5% and 8%, these figures are consistent with estimates from other studies.^{16,17}

Wireless networks:

It is expected with that with the advancement in mobile internet standard as well as increase in users, there will be a need to install many more base stations and process much more data over longer distances, consequently driving up energy demand. It is estimated that the Information and Communication (ICT) Industry could use 20% of all electricity and emit up to 5.5% of the world's carbon emissions by 2025, if serious advancements in energy efficiency in the ICT industry are not made.¹⁸ NXP's R&D efforts to deliver highly efficient power amplifiers and beamforming antenna systems for 5G networks are intended to help manage the increase in energy demand from the ICT sector, and therefore viewed positively by Sustainalytics.

¹⁰ NXP, Materials - Design for Sustainability, (Accessed in December 2019), at: <https://www.nxp.com/company/our-company/about-nxp/corporate-responsibility/environment/design-for-sustainability:DESIGN-FOR-SUSTAINABILITY>

¹¹ As per estimated provided by NXP. The 10% energy efficiency gain as compared to competitive product is based on below 20-30% power load.

¹² Datang NXP Semiconductors, About us, (Accessed in January 2020), at: <http://www.datangnxp.com/index.aspx>

¹³ NXP, Materials – Electrification – Solutions for Automotive, (Accessed in December 2019), at:

<https://www.nxp.com/applications/solutions/automotive/powertrain-vehicle-dynamics/electrification:ELECTRIFICATION>

¹⁴ The Drive, Americans Cite Range Anxiety, Cost as Largest Barriers for New EV Purchases, February 2019, at:

<https://www.thedrive.com/news/26637/americans-cite-range-anxiety-cost-as-largest-barriers-for-new-ev-purchases-study>

¹⁵ Rahul Kala, On Road Intelligent Vehicles - Advanced Driver Assistance Systems, 2016, at:

<https://www.sciencedirect.com/science/article/pii/B9780128037294000040>

¹⁶ Alam et al., 2010, An experimental study on the fuel reduction potential of heavy duty vehicle platooning, at:

https://www.researchgate.net/publication/224190659_An_experimental_study_on_the_fuel_reduction_potential_of_heavy_duty_vehicle_platooning

¹⁷ McAuliffe et al., 2018, Influences on Energy Savings of Heavy Trucks Using Cooperative Adaptive Cruise Control, at:

<https://www.nrel.gov/docs/fy18osti/70868.pdf>

¹⁸ Andrae, Anders, Total Consumer Power Consumption Forecast. 2017, at:

https://www.researchgate.net/publication/320225452_Total_Consumer_Power_Consumption_Forecast

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Edge Processing:

Edge processing allows for IoT devices to process, aggregate, and manipulate data without relying on external resources, such as cloud processing.¹⁹ This results in several benefits such as – improved device performance, reduction of bandwidth requirements, greater level of data security as well as reduced energy consumption. NXP is a recognized industry leader in innovating processors that enable fast and complex data processing and the use of artificial intelligence in devices. The ability to process complex data quickly reduces the need to transfer data to the cloud and is a precursor to the growth and development of high-performing IoT devices. Further, NXP's i.MX family of processors enable ultra-low power processing for use cases demanding long battery life, therefore enabling longer life of consumer wearables and portable devices.²⁰

Smart Buildings:

Globally, buildings account for 32% of energy use and 19% of GHG emissions.²¹ Heating, ventilation, air conditioning and lighting together consume about 46% of total building energy, therefore having a large carbon footprint.²² A study from the Pacific Northwest National Laboratory suggests that well-implemented building controls could result in building-wide energy savings of approximately 29%.²³ In this context NXP's development of technology that supports a variety of energy-saving appliances as well as a variety of building automation solutions that enables users to improve energy efficiency, lower maintenance costs, and improve building safety,²⁴ can be considered to provide significant potential environmental impacts.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This green bond advances the following SDG goals and targets:

| Use of Proceeds Category | SDG | SDG target |
|---|---|---|
| Smart mobility Advanced Driver Assistance Systems | 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 |
| Energy efficient chip design Wireless communication infrastructure Edge Processing Smart Buildings | 7. Affordable and Clean Energy | 7.3 By 2030, double the global rate of improvement in energy efficiency |
| Green projects related to the Company's manufacturing and non-manufacturing activities | 9. Industry, Innovation, and Infrastructure | 9.4 By 2030, 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 |

¹⁹ Industrial Internet Consortium, Edge Computing Task Group, Introduction to Edge Computing in IoT, June 2018, at: https://www.iiconsortium.org/pdf/Introduction_to_Edge_Computing_in_IoT_2018-06-18.pdf

²⁰ NXP, i.MX Applications Processors, (Accessed in December 2019), at: https://www.nxp.com/products/processors-and-microcontrollers/arm-processors/i.mx-applications-processors:IMX_HOME

²¹ Intergovernmental Panel on Climate Change, Climate Change 2014 Mitigation of Climate Change – Buildings, 2014, at: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter9.pdf

²² United States Department of Energy, An Assessment of Energy Technologies And Research Opportunities, September 2015, at: <https://www.energy.gov/sites/prod/files/2017/03/f34/qtr-2015-chapter5.pdf>

²³ United States Department of Energy, Report Delves into the Impacts of Commercial Building Controls on Energy Savings, September 2017, at: <https://www.energy.gov/eere/buildings/articles/report-delves-impacts-commercial-building-controls-energy-savings>

²⁴ NXP, Building Automation, (Accessed in December 2019), at: <https://www.nxp.com/applications/solutions/industrial/building-automation:SMART-BUILDINGS>

Conclusion

NXP has developed the NXP Green Innovation Bond Framework under which it will issue green bonds, with the use of proceeds earmarked to finance research and development projects pertaining to energy efficient chip design, smart mobility, advanced driver assistance systems, wireless communication infrastructure, edge processing, smart buildings as well as projects related to greening of NXP's own manufacturing and non-manufacturing activities. Sustainalytics considers that the projects funded by the green bond proceeds will not only enable NXP make its products and processes more resource efficient but also support other industries such as information and telecommunication technology, automotive and infrastructure in becoming less carbon intensive.

The NXP Green Innovation Bond Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that NXP Green Innovation Bond Framework is aligned with the overall sustainability strategy of the company and that the green use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals 7, 9 and 11. Additionally, Sustainalytics is of the opinion that NXP has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that NXP is well-positioned to issue green bonds and that NXP Green Innovation Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles 2018.

Appendices

Appendix 1: Green Bond / Green Bond Programme - External Review Form Section 1. Basic Information

| | |
|--|-------------------------------------|
| Issuer name: | NXP Semiconductors N.V. |
| Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i> | NXP Green Innovation Bond Framework |
| Review provider's name: | Sustainalytics |
| Completion date of this form: | January 16, 2020 |
| Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i> | |

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise 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 nd 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 eligible categories for the use of proceeds – research and development of energy efficient chip design, smart mobility, advanced driver assistance systems, wireless communication infrastructure, edge processing, smart buildings as well as projects related to greening of NXP’s manufacturing and non-manufacturing activities – are aligned with those recognized by the Green Bond Principles, namely eco-efficient products, energy efficiency, clean transportation, and pollution prevention and control. Sustainalytics considers that NXP’s investments in R&D, the production of certain technologies, and process improvements will lead to positive environmental impacts and advance several UN Sustainable Development Goals, in particular Goals 7, 9, and 11.

Use of proceeds categories as per GBP:

- | | |
|--|--|
| <input type="checkbox"/> Renewable energy | <input checked="" 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 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 checked="" type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input 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*):

NXP has formed the Green and Sustainable Innovation Bond Committee, comprised of representatives from NXP’s Group Finance, Sustainability and Corporate Strategy organizations, the Chief Technology Officer and other NXP subject matter experts, from time to time. This committee will be responsible for evaluation, selection and allocation of eligible projects to the Green Project Portfolio.

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 |
|---|---|

NXP Green Innovation Bond Framework

- | | |
|--|--|
| <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 |
| <input type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other (<i>please specify</i>): |

Information on Responsibilities and Accountability

- | | |
|--|--|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

NXP will manage the proceeds of its green bond(s) on a portfolio basis and will strive to ensure on an ongoing basis that the balance in the portfolio matches or exceeds the net proceeds of outstanding bonds. NXP's Treasury Team will administer and manage the Green Project Portfolio. Pending allocation, proceeds may be held in cash, other short-term liquid instruments, or used to repay outstanding indebtedness. This is in line with market practice.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other (<i>please specify</i>): |

Additional disclosure:

- | | |
|--|---|
| <input type="checkbox"/> Allocations to future investments only | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input checked="" type="checkbox"/> Allocation to a portfolio of disbursements |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other (<i>please specify</i>): |

4. REPORTING

Overall comment on section (*if applicable*):

NXP will make available an allocation report as well as an impact report. These reports will form a part of NXP's sustainability report until full allocation of the bond(s) net proceeds or in case of any modification to the framework or allocation portfolio. Sustainalytics views NXP's allocation and impact reporting as aligned with market practice.

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): Share of new and existing projects

Frequency:

- Annual
 Semi-annual
- Other (please specify):

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):

Information reported (expected or ex-post):

- GHG Emissions / Savings
 Energy Savings
- Decrease in water use
 Other ESG indicators (please specify): Case studies

Means of Disclosure

- Information published in financial report
 Information published in sustainability report
- Information published in ad hoc documents
 Other (please specify):
- 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.)

NXP Green Innovation Bond Framework to be available at: https://www.nxp.com/company/our-company/about-nxp/corporate-responsibility:CORP_SOCIAL_RESP

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

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

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 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.
- 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 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.

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Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization, and supports various stakeholders in the development and verification of their frameworks. In 2015, Global Capital awarded Sustainalytics "Best SRI or Green Bond Research or Ratings Firm" and in 2018 and 2019, named Sustainalytics the "Most Impressive Second Party Opinion Provider. The firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance in 2018, and in 2019 was named the "Largest Approved Verifier for Certified Climate Bonds" by the Climate Bonds Initiative. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan and the Minister of the Environment Award in the Japan Green Contributor category of the Japan Green Bond Awards in 2019.

For more information, visit www.sustainalytics.com

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