GREEN INNOVATION BOND REPORT
AS OF DECEMBER 31, 2020
(COVERING ALLOCATION 2019 & 2020)
INTRODUCTION

On April 29, 2020, NXP issued as one of the first semiconductors companies an innovation green bond. The bond offering raised $1 billion of proceeds for eligible green projects.

In this Green Innovation Bond Report 2020, NXP reports on the use of proceeds and where feasible provides insight on the sustainability impact, in respect of the USD 1,000,000,000 3.4% Notes due May 1, 2030 (ISIN US62954HAD08).

As of December 31, 2020, 78.5% of the net proceeds of the Green Innovation Bond were allocated to Eligible Green Projects, defined in the prospectus for the Green Innovation Bond; In the allocation of the net proceeds for the financing and refinancing of eligible green project, NXP limited the look back period to the full year 2019; Our Green Innovation Bond report will as such cover spend in 2019 and 2020 to selected Eligible Green Projects.

The Green Innovation Bond was issued under NXPs’ Green Innovation Bond Framework (also available on the corporate website); The Framework is aligned with the ICMA Green Innovation Bond Principles and Sustainability Bond Guidelines 2018, to ensure the selected and disclosed projects meet widely recognized criteria. Subsequently, Sustainalytics successfully provided a second-party opinion.


NXP Semiconductors N.V. (NASDAQ: NXPI) enables secure connections for a smarter world, advancing solutions that make lives easier, better, and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the automotive, industrial & IoT, mobile, and communication infrastructure markets.

NXP believes a company’s corporate responsibility is to continuously improve through its actions to make a positive impact on society. As a technology company, we want our stakeholders and employees to be motivated and excited to work for a responsible company and to design products that can change the world. At NXP we also believe that, by building on innovation and providing technologies that directly address societal demands, some of our most exciting times as a company lie ahead.
NXP will continue to operate with a focus on corporate responsibility and a duty to good corporate citizenship for the future. We believe the semiconductor industry is poised to take on new challenges, using the latest semiconductor technologies which produce tiny circuits that can perform advanced functions, with relatively low power consumption. Our industry can help address some of the most compelling challenges we face as a society, including issues relating to energy efficiency, mobile populations, national and personal security, and caring for the health of a growing and rapidly-aging world population.

In particular, our industry has the potential to directly address our dependence on fossil fuels and minimize carbon emissions. Semiconductors are already reducing the power consumption of server farms and making consumer appliances operate more efficiently. They are accelerating the deployment of:

- Energy efficiency
- National and personal security
- Dependence on fossil fuels and minimizing carbon emissions
- Caring for the health of a growing and rapidly-aging world population
- Reducing the power consumption of server farms
- Enabling the shift to hybrid and electric vehicles
- Making consumer appliances operate more efficiently
- Accelerating the deployment of energy-saving lighting technologies

It is our collective responsibility, as an industry, to continue this trend of being proactive as we create value for consumers, the environment, and society as a whole.

NXP has based the impact reporting guidance included in this Green Innovation Bond Report on judgments and estimates that management believes are reasonable given its assessment and other information reasonably available as of the date of this report.

Please note, the impact reporting included in this document consists of predictions only, and is subject to a wide range of known and unknown risks and uncertainties, many of which are beyond NXP’s control. The impact reporting included in this release should not be regarded as representations by NXP that the estimated results will be achieved. Actual impact results may vary materially from the guidance we provide today. The majority of green bond proceeds is intended to be invested in selected research and development (R&D) activities, which have the potential to drive positive environmental outcomes, however it is difficult to quantify the direct impacts of R&D related activities until commercialization.
# GREEN BOND ALLOCATION REPORTING

## USE OF PROCEEDS FOR ELIGIBLE GREEN INNOVATION PROJECTS

<table>
<thead>
<tr>
<th>Eligible Projects</th>
<th>Amount (in millions) USD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Energy efficiency in power adaptors</td>
<td>12</td>
</tr>
<tr>
<td>Smart Mobility</td>
<td>69.7</td>
</tr>
<tr>
<td>Preventing emissions through automated and connected traffic</td>
<td>140.2</td>
</tr>
<tr>
<td>Significantly reducing power consumption of 5G networks</td>
<td>40.8</td>
</tr>
<tr>
<td>Edge processing reducing the need for energy-hungry cloud services</td>
<td>102.3</td>
</tr>
<tr>
<td>Smart buildings</td>
<td>5.7</td>
</tr>
<tr>
<td>Green project related to our manufacturing and non-manufacturing facilities</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>372.2</strong></td>
</tr>
</tbody>
</table>

Funds for allocation to future years                                              214.7

## Status December 31, 2020

<table>
<thead>
<tr>
<th>Percentage of net proceeds of Green Bond allocated to Eligible Green Project</th>
<th>78.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of net proceeds of Green Bond allocated to Existing Eligible Green Project</td>
<td>64.2%</td>
</tr>
</tbody>
</table>

## Green Funding

| Green Funding                                                                 | Amount (in millions) USD |
|                                                                               | 1000 |
| USD 1,000,000,000 3.4% Notes due May 1, 2030                                   | 1000 |
## GREEN BOND ALLOCATION BY SDG (UN SUSTAINABLE DEVELOPMENT GOALS)

<table>
<thead>
<tr>
<th>SDG</th>
<th>Description</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td><strong>Affordable and Clean Energy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Energy efficiency in power adaptors</td>
<td>160.8</td>
<td>144.8</td>
</tr>
<tr>
<td></td>
<td>• Significantly reducing power consumption of 5G networks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Smart buildings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Edge processing reducing the need for energy-hungry cloud services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td><strong>Industry Innovation and Infrastructure</strong></td>
<td>1.5</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>• Green projects related to the companies manufacturing and non-manufacturing activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td><strong>Sustainable Cities and Communities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Smart Mobility</td>
<td>209.9</td>
<td>264.6</td>
</tr>
<tr>
<td></td>
<td>• Preventing emissions through automated and connected traffic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>372.2</td>
<td>413.1</td>
</tr>
</tbody>
</table>
The definitions and principles used in this Green Innovation Bond Report are disclosed in our Green Innovation Bond Framework.

The projects were selected based on the categories defined in the Green Innovation Bond Framework.

Related to R&D projects the costs tracked by project are the sum of the expenditures incurred during the year on this project (through SAP Project Accounting module – same IFRS methodology). The costs related to the project activities comprise all directly attributable expenditure to this project. This includes:

A. Expenditure on materials and services used or consumed for the project activities;

B. The salaries, wages and other employment related costs of personnel engaged in the project activities;

C. All directly attributable costs necessary to support the activities under B) (e.g. R&D equipment, licenses, IT and real estate charges).

Related to Manufacturing and Real-estate activities, the costs allocated are based on materials and services invoices.

FOREIGN CURRENCIES

The Company uses the U.S. dollar as its reporting currency. The functional currency of the holding company is the U.S. dollar. For consolidation purposes, the financial statements of the entities within the Company with a functional currency other than the U.S. dollar, are translated into U.S. dollars. Assets and liabilities are translated using the exchange rates on the applicable balance sheet dates. Income and expense items in the statements of operations, statements of comprehensive income and statements of cash flows are translated at monthly exchange rates in the periods involved.
The majority of green bond proceeds is intended to be invested in research and development (R&D) activities. While these advanced R&D activities have the potential to drive positive environmental outcomes, it is difficult to quantify the direct impacts of R&D related activities until commercialization.

NXP can however present several examples of recent developments and product launches in the eligible projects categories listed above. The anticipated contributions to energy saving in end-products are based both on referenced academical studies as well as internal subject matter specialists.

1. **Energy efficiency in power adaptors**

Hundreds of millions of electronic devices used by consumers worldwide use power adapters for converting grid voltage into a lower voltage level, often 5 to 12 V. NXP’s latest resonant technology aims to achieve world-class efficiency. These resonant solutions enable our customers to comply with (existing and future) challenging emission-reduction and energy-efficiency regulations. NXP’s chip TEA1716 was the first to meet the EuP (Energy-using Products) Lot 6 regulation for a resonant power supply.

Resonant technology in PC power supplies enables the energy efficiency to increase from ~84 to ~92% vs conventional technologies. NXP’s high efficiency at low loads enables that a complete separate standby converter can be omitted, making the use of resonant technology also cost competitive. In addition, NXP’s sustainable chip design saves a considerable amount of raw materials. The chips are free of Antimony Oxides and Halogen, and with every generation of chips NXP’s constant innovations save up to 15% on external components. This means less plastic package and less gold bond wire are required.

2. **Smart mobility**

Electric vehicles are ramping in volume, but their limited range is still cited as a main obstacle to buying by many people. Battery control and energy management, extending the range of electric and hybrid cars, are key innovation areas of NXP, because smart chips can make the real difference here. Smart chip solutions enable the efficient use and regeneration of energy, resulting in extended efficiency and hence range, as well as lower emissions in the case of hybrid vehicles. Academic research suggests that improved decision-making and control of hybrid electric vehicles can increase the range of the vehicle by up to 28%\(^1\). In the Battery Management System market, NXP is the only supplier that can offer solutions which are scalable over different voltages, communication protocols and topologies. These chips include processing and analog products that deliver the desired accuracy, reliability and system cost-efficiency required by large car makers to electrify their entire fleet in the future. As an example

\(^1\) [https://cecas.clemson.edu/~avahidi/wp-content/uploads/2016/10/chen.pdf](https://cecas.clemson.edu/~avahidi/wp-content/uploads/2016/10/chen.pdf)
NXP is now developing motor control solutions for 48V mild hybrid vehicles: cars with a regular combustion engine equipped with a small electric motor/generator. The hybrid power drive adds torque at low speeds when accelerating, assisting the combustion engine, thereby increasing fuel economy by 10%-20% compared to a combustion-only engine. Precision analog design is a core competence of NXP which, along with our scalable portfolio and optimized algorithms, can help the car-maker to enable smaller batteries and hence less demand for raw materials. In electric vehicle control, we are also expanding the performance of the control chips. Advanced algorithms and integration of components are applied to optimize overall system power consumption, helping to increase energy efficiency and vehicle range.

3. Preventing emissions through automated and connected traffic

Advanced Driver Assistance Systems (ADAS), as enabled by NXP chip architectures, range from simple features like cruise control, up to fully self-driving cars. Autonomous driving can reduce fuel consumption up to 45%. The on-board systems are more capable than humans of smoothing the ride and saving fuel. Speed limits are automatically observed, and car-to-car communication systems help to avoid and even prevent traffic congestions. Smart vehicle automation enables traffic to move at higher speeds due to less congestion, reducing energy consumption and emissions up to about 60%.

A recent development in ADAS is the launch, last December, of NXP’s complete suite of radar sensor solutions that can surround vehicles in a 360-degree safety cocoon. The solution covers all radar segments from NCAP corner to 4D imaging radar. NXP has demonstrated platooning technology for trucks, since past studies show that the net fuel savings of platooning are between 5% and 8% compared to vehicles driving independently and isolated from each other. NXP will invest more R&D resources in developing increasingly advanced and smart ADAS systems.

3 http://www.osti.gov/biblio/1409303
5 https://www.researchgate.net/publication/224190659_An_experimental_study_on_the_fuel_reduction_potential_of_heavy_duty_vehicle_platooning
4. Significantly reducing power consumption of 5G networks

Base-stations for wireless communication transmit huge amounts of data over long distances. The power amplifiers and antennas together typically consume multiple kilowatts of electric power per station. The upcoming superfast fifth generation mobile internet standard (5G) is expected to further boost energy consumption, as many more base stations will be required in a 5G network.

On September 29, 2020, NXP announced the opening of its 150 mm (6-inch) RF Gallium Nitride (GaN) fab in Chandler, Arizona, one of the most advanced fabs dedicated to 5G RF power amplifiers in the United States. The state-of-the-art fab will serve as a hub enabling NXP to innovate faster with strong collaboration between the new internal factory and NXP’s R&D team based in the same location. In classical mobile network systems, to reach a mobile phone user, energy is radiated from the central base station in an omnidirectional way (360°). As a consequence, a lot of energy is wasted. The crucial step here is to create focused signal beams between base station and mobile device. This can be done through “beam steering” for which NXP has developed, and is currently supplying, the driver devices in the high-frequency range (mmWave). Next generations of products are in full development today.

On October 12, 2020 NEC announced to have selected NXP to supply RF Airfast multi-chip modules to be used in a 5G antenna Radio Unit (RU) for Rakuten Mobile, one of Japan’s leading mobile network operators. Two months later NXP launched its 2nd generation RF multi-chip modules offering increased efficiency of up to 45% at 2.6 GHz, to help reduce the overall electricity consumption of the 5G network.

5. Edge processing reducing the need for energy-hungry cloud services

NXP’s edge processing portfolio for automotive, industrial and IoT offers industry-leading power efficiency and battery life. Our smallest microcontrollers consume as little as 1 microwatt in deep power down modes. This degree of power efficiency provides years of battery life. New research and development projects are aimed at breaking our power consumption record in Microcontrollers, where our i.MX RT family is already setting new standards for the industry. NXP’s advanced application processors enable complex and fast computing “at the edge.” This means that processing is performed directly in IoT devices such as cameras, wearable devices, domestic appliances and industrial equipment, rather than requiring data to be sent to/from the cloud for processing. NXP is increasingly providing customers the ability to perform local data processing through machine learning intelligence, helping to minimize unsecure and power-hungry cloud services. An example of progress in this domain is NXP’s launch, in July 2020, of the industry’s first MCU-based implementation of a Glow Neural Network compiler for machine learning at the edge. Future research will be focused on the development of more autonomous edge computing chips which adaptively turn on only when needed, helping to reduce energy wastage. NXP sees great opportunities for energy saving, as well as for our business, by further enhancing our investments in Artificial Intelligence R&D for usage in microcontrollers.
6. Smart buildings

According to the International Energy Agency, buildings account for nearly one-third of global final energy consumption and 55% of global electricity demand; more than in transportation, and more than in industry. Vast amounts of energy can be saved by the use of smart control systems for air-conditioning, heating, lighting and other interior provisions. Improving the operational efficiency of buildings by using real-time data may lower total energy consumption between 2017 and 2040 by as much as 10%. By adapting equipment usage to human presence, activity, and preference settings, energy consumption may be decreased significantly, compared to the “always-on” settings often applied today. Also here, Artificial Intelligence can make these systems self-learning, further minimizing energy usage fully autonomously. NXP develops the systems and components that may help “smarten” buildings and homes.

7. Green projects related to our manufacturing and non-manufacturing activities

NXP France has engaged to replace its Toulouse site central plant with new building and equipment that will be operational in 2021.

Energy efficiency measures / Industrial water efficiency

Hot water and chilled water of Toulouse site are produced in a central plant built in 1970. Hot water is required for heating. Chilled water is needed for both air conditioning and refrigeration systems of testers and lab equipment.

The better efficiency of chillers is estimated at 20% reduction of electricity consumption during 6 cold months (Jan-Feb-Mar-Oct-Nov-Dec) + 10% reduction in Apr-May. The removal of cooling towers will save 11,000 m³ of water per year. The heat recovery exchanger on chillers will allow 80% natural gas reduction during spring and autumn.

Expected impact = Electricity : 1,145 MWh/year, Natural gas : 336 MWh/year, Water : 11,000 m³/year.

Projects that facilitate the use of materials that are safer for the environment and human health

Safer for the environment: The new chilling units use a new generation of refrigerant (R1234ze) with a very low Global Warming Potential -GWP- compare to the old chillers (GWP of R1234ze is 7 vs 1,300 for the R134a). Human health: the new central plant is designed to reduce as much as possible the noise emissions (< 39 dB during the day and 30 dB during the night).

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6 https://www.iea.org/reports/digitalisation-and-energy
Our conclusion

We have performed a limited assurance engagement on the accompanying Green Innovation Bond Report as of 31 December, 2020 (covering allocation 2019 & 2020) (hereafter: the Green Innovation Bond Report) of NXP Semiconductors N.V. (hereafter: the Company or NXP) based in Eindhoven, the Netherlands.

Based on our procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Green Innovation Bond Report is not prepared, in all material respects, in accordance with the criteria as developed by the Company and included in NXP’s “Green Innovation Bond Framework” and the applied supplemental reporting criteria as disclosed in section “Accounting methodology” of the Green Innovation Bond Report.

Basis for our conclusion

We have performed our limited assurance engagement on the Green Innovation Bond Report in accordance with Dutch law, including Dutch Standard 3000A “Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie (attest-opdrachten)” (Assurance engagements other than audits or reviews of historical financial information (attestation engagements)). Our responsibilities under this standard are further described in the “Our responsibilities for the assurance engagement of the Green Innovation Bond Report” section of our report.

We are independent of NXP Semiconductors N.V. in accordance with the “Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten” (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. This includes that we do not perform any activities that could result in a conflict of interest with our independent assurance engagement. Furthermore, we have complied with the “Verordening gedrags- en beroepsregels accountants” (VGBA, Dutch Code of Ethics).

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Reporting criteria

The Green Innovation Bond Report needs to be read and understood together with the reporting criteria. NXP Semiconductors N.V. is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting.

The reporting criteria used for the preparation of the Green Innovation Bond Report are the NXP’s “Green Innovation Bond Framework” and the applied supplemental reporting criteria as disclosed in section ‘Accounting Methodology’ of the Green Innovation Bond Report.

The absence of an established practice on which to draw, to evaluate and measure the information included in Green Innovation Bond Report allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.
Limitations to the scope of our assurance engagement

The Impact Reporting section in the Green Innovation Bond Report includes prospective information such as ambitions, strategy, plans, expectations and estimates. Inherent to prospective information, the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in Green Innovation Bond Report.

The references to external sources or websites in the Green Innovation Bond Report are not part of the information as assured by us. We therefore do not provide assurance on this information.

Responsibilities of the Executive Officers for the Green Innovation Bond Report

The Executive Officers are responsible for the preparation of a reliable and adequate Green Innovation Bond Report in accordance with the reporting criteria as included in the ‘Reporting criteria’ section of our report. The choices made by the Executive Officers regarding the scope of the Green Innovation Bond Report and the reporting policy are summarized in the section ‘Accounting Methodology’ of the Green Innovation Bond Report.

The Executive Officers are also responsible for such internal control as the Executive Officers determine is necessary to enable the preparation of the Green Innovation Bond Report that is free from material misstatement, whether due to fraud or errors.

Our responsibilities for the assurance engagement of the Green Innovation Bond Report

Our responsibility is to plan and perform our limited assurance engagement in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion.

Procedures performed to obtain a limited level of assurance are aimed to determine the plausibility of information and vary in nature and timing from, and are less in extent, than for a reasonable assurance engagement. The level of assurance obtained in a limited assurance engagement is therefore substantially less than the assurance obtained in a reasonable assurance engagement.

We apply the Nadere voorschriften kwaliteitssystemen (NVKS, Regulations for Quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.
The procedures of our limited assurance engagement included amongst others:

- Performing an analysis of the external environment and obtaining an understanding of the characteristics of the Company and themes and issues relevant for the Green Innovation Bond Report.
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the Green Innovation Bond Report. This includes the evaluation of the reasonableness of estimates made by the Executive Officers.
- Obtaining an understanding of the reporting processes for the Green Innovation Bond Report, including obtaining a general understanding of internal control relevant to our assurance engagement.
- Identifying areas of the Green Innovation Bond Report with a higher risk of misleading or unbalanced information or material misstatements, whether due to fraud or errors. Designing and performing further assurance procedures aimed at determining the plausibility of the Green Innovation Bond Report responsive to this risk analysis. These further assurance procedures consisted amongst others of:
  - Interviewing management and relevant staff responsible for the strategy, policy and results relating to the Green Innovation Bond
  - Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the Green Innovation Bond Report
  - Obtaining assurance information that the Green Innovation Bond Reporting reconciles with underlying records of the Company
  - Reviewing, on a limited test basis, relevant internal and external documentation
  - Performing an analytical review of the data and trends in the Green Innovation Bond Reporting
  - Reconciling the relevant financial information with the financial administration.
  - Evaluating the overall presentation, structure and content of the Green Innovation Bond Report.
  - Considering whether the Green Innovation Bond Report as a whole reflects the purpose of the reporting criteria used.

Amsterdam, March, 2021

Ernst & Young Accountants LLP

Signed by J. Niewold