



# Explanatory notes to the information published in the report “Sustainability at Infineon” – supplementing the Annual Report 2022

These explanatory notes refer to the sustainability information and data published in the report “Sustainability at Infineon” (hereinafter called Report). KPMG AG Wirtschaftsprüfungsgesellschaft, Munich (Germany), has provided independent limited assurance on this information in accordance with the “International Standard on Assurance Engagements 3000 (Revised)”. In addition, selected indicators were subject to a reasonable assurance audit. The assurance reports can be found in the Internet under: [www.infineon.com/csr\\_reporting](http://www.infineon.com/csr_reporting).

## Reporting standards

The Infineon Group (hereinafter called “Infineon”) applies the GRI Standards, according to the Core option and as reporting criteria for the sustainability information published in the Report. This reporting standard is supported by internal guidelines, too.

For the determination of the Infineon carbon footprint, we have developed an own approach which we have continually further refined. This approach is generally oriented towards International Organization for Standardization (ISO) 14000 and substantiated by Publicly Available Specification (PAS) 2050, a guideline for product carbon footprints, issued by the British Standards Institution (BSI) as well as by the Greenhouse Gas Protocol (GHG Protocol).

For external reporting we follow the GHG Protocol classification of the scope 1, scope 2 and scope 3 emissions. The Scope 2 Protocol<sup>1</sup>, issued by the World Resources Institute, has been considered, too.

For the determination of the indicator “CO<sub>2</sub> savings enabled through our products” we have used internal criteria.

## Reporting boundaries

Our reporting includes all our own production sites, our corporate headquarters Campeon (Germany), R&D sites, sites for service functions, and sales offices.

Infineon acquired NoBug Consulting SRL (Romania) and NoBug d.o.o. (Serbia) (hereinafter called „NoBug“). Founded in 1998, NoBug is a privately owned engineering company providing verification and design services for all the digital functionalities of semiconductor products. Besides the chapter „Key figures“ and “EU Taxonomy”, the data of NoBug is not included in the 2022 fiscal year’s Sustainability Report.

The information reported in the chapters “Protection of our employees” and “Environmental sustainability and climate protection” include the production sites Austin (USA), Bangkok (Thailand), Cavite (Philippines), Mesa (USA) as well as all production sites and our corporate headquarters Campeon (Germany), which are part of our certified IMPRES<sup>2</sup> management system as well as direct and indirect energy-related emissions by manufacturing service providers. It is based on data collected internally and publicly available conversion factors. This scope was selected based on the impact of the activities performed on those sites and comprises more than 87 percent of the total Infineon employees worldwide.

External companies operating at some of our sites, in which Infineon has no operational control, and which have no influence on Infineon’s production, are not included in the reported key performance indicators.

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<sup>1</sup> GHG Protocol Scope 2 Guidance (2015).

<sup>2</sup> IMPRES: Infineon Integrated Management Program for Environment, Energy, Safety and Health.

Data relevant to Cypress, which became part of Infineon in April 2020, are included in the carbon neutrality goal we set with the 2019 calendar year as the base year.

With the completion of the acquisition of Syntronix Asia, the company has become part of Infineon. Generally, the non-financial data of Syntronix have not yet been consolidated in this report. In the 2023 fiscal year, we want to have completed the harmonization of processes and definitions required for the consolidation so that the non-financial data of Syntronix will be integrated into the 2023 Sustainability Report. Where data from Syntronix have been included in the content of this report; this is explicitly disclosed in the relevant sections.

## **Determination of the key performance indicators**

### **a. Occupational safety**

#### Definition of terms:

The term employees includes the following group of persons: full-time employees (with full and with fixed-term work contracts), part-time employees (with full and with fixed-term work contracts), working students, apprentices and interns, external employees/temporary employees/employees working via a staffing agency, diploma candidates/master students, PhD students, and employees in active partial retirement.

#### Accidents:

The calculations of the Injury Rate (IR) and the Lost Day Rate (LDR) are based on the GRI Disclosure 403-9 definitions.

Only work-related accidents with at least one day work-absence are considered. The day of the accident is not counted. The base for the determination of lost days is calendar days. Way-to-work accidents and near misses are not included.

The working hours are the weekly hours as stipulated in employee contracts. This includes vacations and public holidays. The reporting of lost days concludes at the end of each fiscal year.

#### Training hours:

The determination of the "training hours" is based on the training and continuing education for our specialized experts worldwide in the areas of occupational safety and health as well as in fire prevention.

### **b. Energy**

#### Energy consumption per revenue:

As a reference for the calculation of this key performance indicator we have used the GRI Standards definitions. We have taken into account all energy sources: Electricity, district heating, firewood, natural gas, LPG, gasoline/petrol, diesel and heating oil. The revenue figures used for the calculation are taken from respective financial reports of the last years.

#### Total energy consumption:

As a reference for the calculation of this key performance indicator we have used the GRI Standards definitions. We have taken into account all our energy sources:

- Infineon obtains its energy in the form of electricity, district heating, firewood, natural gas, LPG, gasoline/petrol, diesel and heating oil.
- The individual energy consumption of our production sites is included in our reporting tool quarterly and automatically converted into the energy reference unit by the tool itself. The conversion factors included in our reporting tool in order to calculate the final energy consumption originate from the following sources:
  - UK Carbon Trust
  - National Energy Board, Government of Canada
  - Claverton Energy Research Group
  - FNR (German: Fachagentur Nachwachsende Rohstoffe e.V.) – German central coordinating institution for research, development and demonstration projects in the field of renewable resources
  - UK Ministry – Department for Environment, Food & Rural Affairs (DEFRA)
  - International Energy Agency (IEA)

#### Specific electricity consumption:

Based on the normalization factor "square centimeter manufactured wafer", the electricity consumption's benchmark reported by the World Semiconductor Council (WSC) only includes the data of our frontend sites in Austin (USA), Dresden (Germany), Kulim (Malaysia), Regensburg (Germany), Temecula (USA) and Villach (Austria).

#### Energy consumption outside the organization:

Information is reported in CO<sub>2</sub> equivalents. The reporting was based on the definitions of the GRI Disclosure 302-2:

- Upstream emissions are the ones incurred in connection with external manufacturing services and the provision of materials (such as raw materials, supplies as well as other utilities).
- Downstream emissions are the ones directly derived from production processes, internal and external transportation as well as travel.

#### **c. Perfluorinated Compounds**

Perfluorinated Compounds (PFC) are essential for the production of semiconductors in the frontend sites. These are used in wafer-etching processes for structuring wafers as well as for cleaning production equipment. This includes PFC, namely perfluorinated and polyfluorinated carbon compounds, sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>). These greenhouse gases cannot be replaced by another class of substances and account for around 80.7 percent of the scope 1 emissions.

The reported PFC figures refer to the amounts consumed during the respective fiscal year by Infineon.

The conversion of PFC in CO<sub>2</sub> equivalents is based on a worldwide predetermined algorithm which must be used within the semiconductor industry. Our calculation methodology is based on the scientific assessments of the IPCC<sup>1</sup> according to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the calculations for GWP<sup>2</sup>. The algorithm is provided annually by the responsible associations.

The calculation of the normalized emission rate is carried out as a normalization of PFC emissions in CO<sub>2</sub> equivalents divided by the manufactured wafer surface.

#### **d. Other emissions**

Under "other emissions" we considered the following emissions:

- Sulphur oxide (SO<sub>x</sub>): SO<sub>2</sub> and SO<sub>3</sub> expressed as SO<sub>2</sub> equivalents
- Nitrogen oxide (NO<sub>x</sub>): NO and NO<sub>2</sub> expressed as NO<sub>2</sub> equivalents
- Volatile Organic Compounds (VOC): Organic compound having an initial boiling point not exceeding 250°C at a standard pressure of 101.3 kPa (Directive 2004/42/EC)
- Fine particulate matter (PM): Particles with a diameter of 10 or less micrometers (PM10)
- Carbon monoxide (CO): Carbon monoxide is produced from the partial oxidation of carbon-containing compounds with insufficient oxygen supply.

#### **e. Carbon neutrality and climate strategy**

Infineon has set itself the target of becoming carbon-neutral by the end of the 2030 fiscal year with respect to the scope 1 and scope 2 emissions. We want to make an active contribution to global CO<sub>2</sub> reduction and to the implementation of the targets set out in the Paris Climate Agreement. Even before the end of the 2025 fiscal year, Infineon aims to have achieved 70 percent of this target (compared with the 2019<sup>3</sup> calendar year) in respect of its own emissions.

To achieve its targets, Infineon focuses in particular on avoiding direct emissions and increasing energy efficiency. The continuing expansion of its energy efficiency program and its efforts to achieve intelligent exhaust air abatement are playing a key role here and are contributing significantly to a reduction in GHG emissions. To reduce emissions even further, the company is planning to continue the purchase of green electricity. In future and to a lesser extent, it is also planned to offset emissions that cannot be avoided by purchasing CO<sub>2</sub> certificates that combine development aid and CO<sub>2</sub> avoidance.

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<sup>1</sup> IPCC: Intergovernmental Panel on Climate Change.

<sup>2</sup> GWP: Global Warming Potential - GWP is relevant for 100 years long.

<sup>3</sup> In line with our carbon neutrality goal, with the 2019 calendar year as the base year, the relevant data of Cypress are included.

## f. Infineon carbon footprint

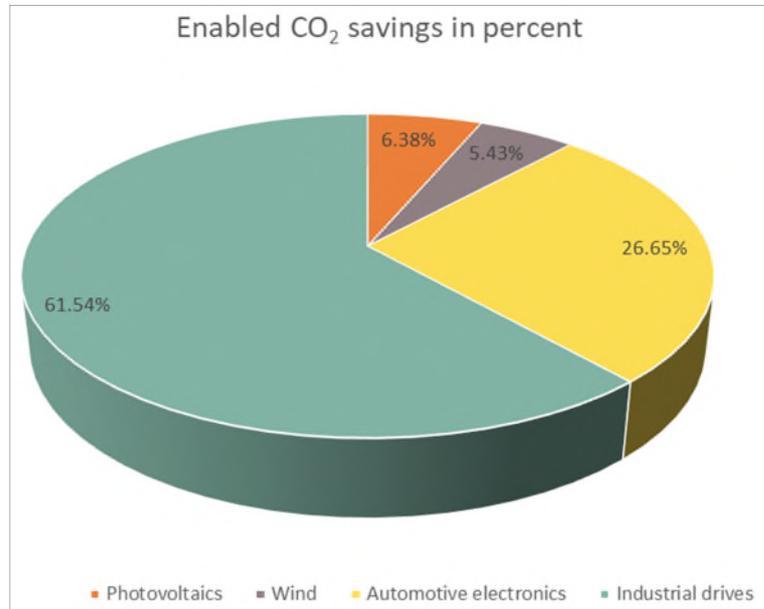
We assessed the net ecological benefit on our carbon footprint considering both: environmental burden and environmental benefits. The data of GHG emissions are reported in metric tons.

### CO<sub>2</sub> burden:

This includes the direct emissions such as PFC, supplier-specific emissions, water/waste water, energy consumption and waste. Furthermore, it considers the transport of the products to other sites and to distribution centers, travel and own vehicles as well as direct and indirect energy-related emissions by manufacturing service providers. Direct and indirect emissions are based on source data from the 2022 fiscal year.

Not included here is the CO<sub>2</sub> emitted during the use-phase of the products and their disposal. Those CO<sub>2</sub> emissions are not determined due to the varying applications and fields of use Infineon products are subject to.

Infineon uses for its external reporting the final scope 2 emissions taking into account provider-specific emission factors of the energy sources used. This approach was selected in order to illustrate the implementations achieved so far in terms of regenerative energy supply.



The following official sources were used as data sources for CO<sub>2</sub> conversion factors:

- DEFRA Carbon Factors (energy, transport, waste, water)
- International Energy Agency - Carbon conversion factors (electricity)
- ProBas<sup>1</sup> Substance Database (raw materials and supplies)
- IPCC (PFC)
- CDP supplier data

### CO<sub>2</sub> savings:

Up to date, for semiconductor products, there is no established external framework or standard defining rules applicable for accounting and reporting of CO<sub>2</sub> savings enabled through products in the use phase. Therefore, we have developed an own methodology to determine the indicator CO<sub>2</sub> savings enabled through our products.

The calculation of the environmental benefit is based on the 2021 calendar year because the products sold in that calendar year enable reductions just in the use-phase of the end product (after being sold), and are then relevant for the Infineon carbon footprint 2022.

The methodology for the determination of the CO<sub>2</sub> emission reductions enabled is based on the framework conditions described here:

- Consideration of the following Infineon products: Automotive electronics, industrial drives, photovoltaics as well as wind energy.
- The calculation is based on the potential energy savings our semiconductors enable in the end technologies where they are installed.
- For the calculation, we consistently used worldwide average emission factors of the 2020 calendar year.

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<sup>1</sup> ProBas: Process-oriented basic data for environmental management tools.

- For the calculation, we considered the market share of Infineon as well as the percentage of semiconductors in the end-products and the lifetime of the technologies which was based on internal and external expert estimations.

Life-cycle assessments can be subject to imprecision due to the complex issues involved. We continually strive to refine and improve the Infineon carbon footprint methodology.

## **g. Water**

### Water withdrawal:

The water withdrawal includes own well water as well as drinking and non-drinking water provided by third-parties (e.g. municipal waterworks).

### Specific water consumption:

Based on to the normalization factor “square centimeter manufactured wafer”, such benchmark only includes the data of our frontend sites in Austin (USA), Dresden (Germany), Kulim (Malaysia), Regensburg (Germany), Temecula (USA) and Villach (Austria). In the water consumption’s benchmark reported by the WSC, cooling water is not considered.

### Water reused and recycled:

Infineon defines water reused or recycled as the water which is used either without or with further treatment and which can be used in order to meet the water demand without using fresh water:

- The following water types are considered within reused waste water:
  - Recovered waste water for recycling in the same process
  - Recovered waste water from a different process but within the same facility
  - Waste water which is reused in another Infineon site
  
- The following water types are considered within reused ultrapure water:
  - Recovered ultrapure water for recycling in the same process
  - Recovered ultrapure water from a different process but within the same facility
  - Ultrapure water which is reused at another Infineon site

### Water discharge:

The key performance indicators and targets related to water discharge include waste water and other water discharges. Municipal waste water and evaporated water are excluded.

Waste water is classified as follows:

- Direct discharge: effluent discharged by the site without the need of prior-external treatment.
- Indirect discharge: water which is not directly discharged as it needs prior treatment.

### Water-stress:

Based on the assessment of the potential risks of water stress we conducted using the Aqueduct Water Risk Atlas developed by the World Resources Institute (with reference to Aqueduct 3.0 data in the 2021 fiscal year), we were able to identify areas with a high or extremely high risk of water stress. Three of our sites are located in such areas: Mesa (USA), Temecula (USA) and Tijuana (Mexico).

## **h. Waste**

Reported waste is classified in the categories “hazardous” and “non-hazardous” as defined by the local or national regulations in that context. The information reported in the “Environmental sustainability and climate protection” chapter is based on the officially communicated treatment methods by the waste management companies. Per our definition waste is reported independently whether it is compensated or not.

### Specific waste generation:

Based on the normalization factor “square centimeter manufactured wafer”, the waste generation’s benchmark reported by the WSC only includes our frontend sites in Austin (USA), Dresden (Germany), Kulim (Malaysia), Regensburg (Germany), Temecula (USA) and Villach (Austria).

## **Data Quality**

We continually strive to improve the quality of our data via the implementation of policies, systems, procedures and internal controls at Group and site level.

In case of business acquisitions/sales, the figures of those would be adjusted in conformity with the reporting boundaries mentioned above. In those cases, the numbers will not be retrospectively included in the Report. In individual cases data of quarter four may be estimated in accordance with the internal estimation policies.

In case a significant error in the fiscal year (meaning greater than 5 percent at Group level) was found in the data, it would be corrected. In case a significant error which does not indeed affect the reporting period but still affects the information of the previous years was found, it would be corrected retroactively.

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