

Supplements to the Sustainability Report 2023



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Introduction

While our [Sustainability Report](#) is our central document for sustainability reporting, in our stakeholder dialog we found out that some stakeholders seek additional information. As this information is neither material nor requested by all relevant stakeholders, we decided to publish this supplementing document.

Boundaries

In keeping with the consolidated financial statements and the sustainability report, the reporting period for this supplement is from January 1 to December 31, 2023.

Unless otherwise stated, this report includes all fully consolidated companies in the consolidated financial statements and the sustainability report.

The data presented here is not within the assurance process for the Sustainability Report 2023.

1. Environment and Climate

1.1. Biodiversity Risk Assessment

Reflecting global policy developments, such as COP15 and the Post-2020 Global Biodiversity Framework, and related market initiatives, ams OSRAM recognizes biodiversity as an increasingly important sustainability issue. Despite not being a material topic (see [ams OSRAM Sustainability Report, 3.2.2 Materiality Analysis](#)), we have initiated steps to understand and mitigate our impact on biodiversity.

Biodiversity Risk Assessment Approach

To assess biodiversity-related risks, we employed several tools:

- [WWF Biodiversity Risk Filter](#): This tool enables us to identify hotspots across our operational locations, providing spatially explicit data on biodiversity and freshwater at a global scale. It offers location-specific and industry-specific assessments of biodiversity-related physical and reputational risks, considering factors like the state of ecosystems, the presence of endangered species, and the impact of human activities.
- [Natura 2000 Network Viewer Tool](#): This tool provides data on Sites of Community Importance and Special Protection Areas within the European Natura 2000 network. By incorporating information from both tools, we gain a comprehensive understanding of our impact on biodiversity. The Natura 2000 tool supplements the WWF Risk Assessment Tool results, offering additional insights into our interactions with protected areas.
- [Integrated Biodiversity Assessment Tool \(IBAT\)](#): Utilizing the free version of IBAT, we identified biodiversity sites close to our production sites in Asia and the United States. Based on this mapping we then identified biodiversity-sensitive areas within a 10km radius in Asia.

We continue to seek improvements in our mappings for the US and Asia to ensure the same level of accuracy as achieved with EU sites using Natura 2000.

Geographical Footprint and Biodiversity Impact

Our major operational sites are located in Asia, Europe and the United States. We conducted a biodiversity risk assessment for all these sites using the WWF tool, and for our EU sites, we used the Natura 2000 tool. This dual approach helps us to identify and understand potential dependencies and impacts on surrounding nature and communities. For Natura 2000 sites within a 10 km range, we evaluated the existence of management plans by municipalities. Our initial assessment revealed that our sites have minimal impact on these protected areas.

Environmental Compliance and Initiatives

While we currently do not have specific biodiversity policies, we comply with all local regulations and conduct Environmental Impact Assessments (EIAs) where required. Although we do not have ongoing biodiversity conservation or restoration initiatives, we ensure our operations adhere to stringent environmental guidelines. All production facilities and the headquarters in Premstaetten (Austria) have an environmental management system that is certified to the international standard ISO14001.

Results and Metrics

We mapped all our sites using the WWF Biodiversity Risk Filter and identified no major risks. Additionally, we mapped the proximity of our EU and Asia sites to biodiversity-sensitive areas using a 10km buffer zone. This range was determined to be most suitable based on literature. For Natura 2000 sites within this range, we evaluated the existence of management plans by municipalities. Our initial assessment revealed that our sites have minimal impact on these protected areas. The results of these assessments are shown in the table below.

Overlaps with protected areas 2024

Location (country)	Type of protection	amount (in numbers)
Austria	Habitats directive sites	1
China	no data available	
Czech Republik	Birds directive sites, Habitats directive sites	2
Germany	Birds directive sites, Habitats directive sites	42
Malaysia	No biodiversity sensitive area within the defined scope	0
Philippines	Terrestrial and Inland Waters Protected Areas	2
Singapore	Terrestrial and Inland Waters Protected Areas	2
Slovakia	Birds directive sites, Habitats directive sites	4
United Kingdom	Terrestrial and Inland Waters Protected Areas	3

As part of our commitment to sustainability, we will continue to monitor our biodiversity impact regarding our sites and update our analysis in due time.

1.2. Product Sustainability

With our innovative portfolio we help our customers to achieve their own sustainability goals by continuously working to improve the energy efficiency of our products and to minimize their environmental footprint. It is the use phase of our products that is most relevant in terms of impact across our value chain. Improving energy efficiency is therefore a key criterion in our customers' purchasing decisions and satisfaction, particularly in the area of light sources (see [ams OSRAM Sustainability Report 2023, 4.2.4 Green Tech Development](#)). We strive for transparency in this area, e.g. with our LCAs (see [ams OSRAM Sustainability Report 2023, 2.2.1 Impact of our Business Model](#)). However, here's an example regarding potential CO2 savings.

Daytime running light

In 2020: If all **daytime running lights** of registered cars in Germany were equipped with the **OSLON Compact PL LED** technology (instead of using Halogen technology), an impressive **1.894.207kg* of CO₂** could have been saved.

View on real lamp level – 1:1 interchangeable

1	LED daytime running light 12V T20 LEDW5/21W		3,91 W
2	Halogen bulb Daytime running light W5W 12V 5W		5 W
	Difference		1,09 W
	LED savings compared to halogen		22%
	relative usage time daytime running light according to Audi specification	63%	
	Average car speed (day) - data from study (Audi)	33km/h	The average speed is used to determine how long the light was operated
	100 000Km * 0.63 / average speed		1909,1 hours
	Saved energy / lamp		2080,9 Wh
	per vehicle x2		4161,8 Wh
	Dynamo efficiency (Audi)	45%	9248 Wh
	Efficiency of combustion engine (Audi)	40%	23,1 kWh
	in one liter of petrol (calorific value) - theoretical energy content (calorific value) of one liter of petrol	8,5 kWh/l	2,72 l /100000km per vehicle 0,0000272 l/km
	CO2 emissions per km: 95g (fleet target value for new cars - EU specification)		0,0025841g per km LED equipped vehicle / saving

Audi Specification

Table: per vehicle

	connecting power Watts per vehicle at 13,2 V	connecting power Watts per vehicle at 13,2 V	% savings with LED	Difference Watt	relative usage time in %	% savings Watt/km
function	konventionell	LED 2012				
low beam	136	66	51	70	33	23
high beam	136	40	71	96	3	3
daytime running light	50	14	72	36	63	23
position lamp	14	2	86	12	35	4
front turn indicator	50	10	80	40	14	6
side marking lamp	14	2	86	12		0
side marking lamp	14	2	86	12		0
rear turn indicator	50	10	80	40	14	6
license plate	24	2	92	22	35	8
backup lamp	50	4	92	46	1	0
CHMSL	50	4	92	46	10	5
stop lamp	50	10	80	40	10	4
tail lamp	14	2	86	12	35	4
sum	652	168	74	484		85

Figure 3: weighted savings by usage of LED in exterior lighting

Table: per luminaire

Table 2: Baseline wattages for each function in the two systems

Function	Power per lamp (W)	
	Traditional system	LED system
DRL, dedicated	22.9	11.4
Low beam	56.2	54.0
High beam	63.9	34.4
Parking/position	7.4	1.7
Turn signal, front	26.8	6.9
Side marker, front	4.8	1.7
Stop	26.5	5.6
Tail	7.2	1.4
CHMSL	17.7	3.0
Turn signal, rear	26.8	6.9
Side marker, rear	4.8	1.7
Backup/reverse	17.7	5.2
License plate	4.8	0.5

2.4.1 Vehicle efficiency (kW-h/km)

Table 3 shows the efficiency values that were used in the calculations.

Table 3: Efficiency values used in the consumption and power-savings calculations.

Variable	Value used
Alternator efficiency ¹	45%
Engine efficiency ²	40%
Electrical output, gasoline engine ¹	1.6 kW-h/L
Fuel efficiency, gasoline engine ²	8.5 km/L (20 mpg) = 0.19 kW-h/km (0.30 kW-h/mile)
Fuel efficiency, electric vehicle ³	0.10 kW-h/km (0.17 kW-h/mile)

¹ Kassakian, Wolf, Miller, and Hurton (1996)

² Typical efficiency for U.S. vehicles (DOE, 2008)

³ Average of efficiency values from Tesla (2008) and Edmunds (2008)

2. Social

For information on our management approach in terms of topics related to our own employees please check our [ams OSRAM Sustainability Report 2023, 6.0 Responsibility to Employees](#). Here we provide additional data.

2.1. Workforce Breakdown: Gender

	FY 2022	FY 2023
Share of women in total workforce (as % of total workforce)	44	44
Share of women in all management positions, including junior, middle and top management (as % of total management positions)	21	22
Share of women in junior management positions, i.e. first level of management (as % of total junior management positions)	21	22
Public target	25	25
Target year	2,026	2,026
Share of women in top management positions, i.e. maximum two levels away from the CEO or comparable positions (as % of total top management positions)	13	13
Public target	25	25
Target year	2,026	2,026
Share of women in management positions in revenue-generating functions (e.g. sales) as % of all such managers (i.e. excluding support functions such as HR, IT, Legal, etc)	21	28
Share of women in STEM-related positions (as % of total STEM positions)	19	24

2.2. Workforce Breakdown: Race/Ethnicity & Nationality

Workforce Breakdown: Race/Ethnicity & Nationality		
	FY 2022	FY 2023
Malaysia		
Share in total workforce (as % of total workforce)	27	29
Share in all management positions, including junior, middle and senior management (as % of total management workforce)	14	16
Germany		
Share in total workforce (as % of total workforce)	20	24
Share in all management positions, including junior, middle and senior management (as % of total management workforce)	29	31
China		
Share in total workforce (as % of total workforce)	15	13
Share in all management positions, including junior, middle and senior management (as % of total management workforce)	8	8
Singapore		
Share in total workforce (as % of total workforce)	4	9
Share in all management positions, including junior, middle and senior management (as % of total management workforce)	6	5
Austria		
Share in total workforce (as % of total workforce)	5	6
Share in all management positions, including junior, middle and senior management (as % of total management workforce)	9	10

2.3. Employee Engagement

Employee Engagement		
	FY 2022	FY 2023
% of employees with top level of engagement (eNPS)	79	79¹
Data coverage	78	78

¹ As we carry out our survey bi-annually, the 2022 results are repeated in 2023.

Based on the results, global, local, and departmental measures were continuously implemented in 2023. Identified key issues were discussed at Group level and within the responsible teams, leading to the development of appropriate measures and their subsequent implementation.

As these measures have now largely been completed, a further employee survey is planned for 2024. Findings from this are to be used for measures to increase the attractiveness of ams OSRAM as an employer and to improve employee satisfaction

2.4. Hiring

Hiring		
	FY 2022	FY 2023
Percentage of open positions filled by internal candidates (internal hiring)	26.4	15.25

2.5. Employee Turnover Rate

Employee Turnover Rate		
	FY 2022	FY 2023
Total employee turnover rate	18	18
Voluntary employee turnover rate	10	7
Data coverage (as % of all FTEs globally)	100	100

3. Governance

For information on our management approach in terms of supplier risk assessments, supplier monitoring and development amongst other topics please check our [ams OSRAM Sustainability Report 2023, 5.2 Supply Chain Management](#). Here we provide additional data.

Significant suppliers: Significant suppliers are suppliers that are identified as having substantial risks of negative ESG impacts or significant business relevance to the company or a combination of both. The Business Relevance of the suppliers is defined by the supplier classification, material risk level and/ or the purchasing volume with the supplier.

3.1. Supplier Screening

Supplier Screening (Coverage)		
	FY 2022	FY 2023
Total number of Tier-1 suppliers	12,714	11,041
Total number of significant suppliers in Tier-1	1,013	508
% of total spend on significant suppliers in Tier-1	75	70
Total number of significant suppliers in non-Tier-1	36	19
Total number of significant suppliers (Tier-1 and non-Tier-1)	1,049	527

3.2. Supplier Assessment

Supplier Assessments (Coverage)		
	FY 2022	FY 2023
Total number of significant suppliers assessed via desk assessments/on-site assessments		
Total number	950	488
Target for FY: % of significant suppliers	100	100
% of significant suppliers assessed	91	93
Number of suppliers assessed with substantial actual/potential negative impacts	90	46
% of suppliers with actual/potential negative impacts with agreed corrective action/improvement plan	97	40
Number of suppliers with substantial actual/potential negative impact that were terminated	3	2

3.3. Supplier Development

Corrective Action Plans (Coverage)		
	FY 2022	FY 2023
Total number of suppliers supported in corrective action plan implementation	87	46
Target for FY: % of significant suppliers	100	100
% of suppliers assessed with substantial actual/potential impacts supported in corrective action plan implementation	97	100