

Elbit Systems – EHS Report 2023

As part of Elbit Systems' overall Sustainability Strategy, this report summarizes the key elements and achievements of our EHS (environment, health and safety) activities in 2023.

Global EHS Management System

Our global EHS management system covers 99.7% of Elbit System's global business operations, which include sites where we have full operational control, as well as our activities at major customers' sites (Scope 3). We facilitate compliance with applicable EHS regulations and our internal policies on EHS matters. We strive to improve our performance by collecting, analyzing and reporting indicators internally to management and to the board of directors and externally through our bi-yearly [Sustainability Report](#). Our Company-wide system also provides us the opportunity to share learning across our global organization and engage employees throughout our operations in regular communications and activities.

Elbit Systems has established a [Global EHS Policy](#) endorsed by management, which guides our activities to advance environmentally friendly practices and to reduce the environmental impact of our operations. Our EHS Policy also supports our commitments to enhancing precautionary measures to protect our employees' health and safety.

We maintain leading international standards on Environment and Occupational Health and Safety Management Systems. We are certified to ISO14001 and ISO45001 at our main sites, covering 78% of our employees, and we are in the process of certifying additional sites.

Managing Our Environmental Impacts Throughout Our Operation:

Elbit Systems recognizes the potential environmental impacts of our ongoing operations. We have a robust climate change strategy, which is based on a multi-disciplinary Company-wide risk management process. A committee made up of senior management from different areas of the organization, including finance, business units, facilities, procurement, security and the Chief Operating Officer (COO), gather on a yearly basis to identify and assess the main EHS risks and opportunities for the organization, including climate-related issues. The evaluation covers short and long-term horizons, and as an output the team establishes action plans for the upcoming years. The main outputs from our risk management processes can be found in our 2024 CDP report.

As part of our global environmental, health and safety (EHS) management, we conduct environmentally-friendly manufacturing activities and ongoing measurements to reduce electricity, water and fuel consumption.

In line with our commitment to continuously improve our EHS management, we monitor key metrics and establish long-term goals in several areas as shown below. Since 2021 we have submitted our key environmental indicators and greenhouse gas report covering all scope emissions to be verified by a third-party independent auditor in accordance with ISO14064-3.

Moreover, the global EHS team set global targets for most of our environmental indicators, which are approved during the EHS Management Review presentation to our board of directors.

The Coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization in March 2020. In the following two years we had an increase in remote working with fewer employees in the offices. Additionally, many sites closed their kitchen facilities and offered take-out options only. These and other changes impacted the data during these years, and in 2021 we see the beginning of a shift to a post-COVID baseline. However, we have chosen to continue using 2020 as our baseline year, since we have already committed to reduction targets.

On October 7th, 2023, we saw the outbreak of the Iron Swords War in Israel, which has affected all of our employees and many of our sites. On a personal level, we have striven to support our employees and meet their needs, in particular those who were most directly affected by the war and by the horrific events of October 7th. The war has required additional emergency preparedness measures, including adding protected spaces on site to ensure all employees have immediate access to shelter during air raid sirens, and in some cases, sites needed to be shut down due to proximity to areas under heavy fire. Our EHS data has been affected as well, since many employees have been working extra shifts to ensure we continue to meet the demands of our industry, especially at a time when defense systems are in urgent demand. Our resources have seen a logical rise due to increased activity, and in many cases our reduction goals were not met. We hope that we will soon see peaceful times, a safe return of our hostages, and that we will continue to progress in our EHS management and Sustainability Strategy moving forward.

1- Energy Efficiency

In recent years we have completed several reduction projects throughout the global organization, such as improving air conditioning and lighting controls, LED lighting replacements and consistently maintaining our manufacturing operations to achieve maximum efficiency. These projects have helped to reduce our consumption in certain key areas, and we expect upcoming projects to help us further reduce our consumption. Several of our Israeli sites perform energy surveys, as required by Israeli law for high consumers (every 4.5 years), which help us to understand where we use the most energy and what we can do to improve our performance. The following table shows our energy consumption in the last several years:

Energy consumption in MWh				
	2020	2021	2022	2023
Total direct energy (Scope 1)	136,083	114,181	107,193	100,676
Purchased energy (Scope 2)	276,083	269,746	269,672	284,768
Total energy consumption (Scope 1+2)	412,166	383,927	376,865	385,444

The target established for electricity efficiency in 2023 was a 7.5% reduction of kWh per square meter (area) with a parallel target of 7.5% reduction in our electricity-based (Scope 2) emissions, in comparison with our 2020 baseline. Our Scope 2 reduction target is part of a long-term Scope 2 target using the Science Based Target calculator as a guide, with an aim for less than 2 degrees of warming. This target aims for a 15% decrease in Scope 2 emissions by 2026. Unfortunately, we did not meet either of these reduction targets – although in 2022 we achieved our emissions reduction target of 5% relative to 2020, in 2023 our energy consumption and associated emissions increased as compared to the previous year. This is primarily due to increased activity at our sites, with some sites adding extra shifts in order to meet production demands. Since our intensity target is based on site area, the increase of activity at existing sites is not reflected, and only the increased energy consumption is seen in our intensity figures.

Despite the increased emissions, we did succeed in our goal of beginning to generate renewable energy, with solar panels at several sites. In 2023, one of our Romania sites generated 65 MWh of electricity from company-owned panels, while sites in the UK and Israel consumed another 859 MWh from panels owned by the landlord or another third party. Our Brazil site uses purchased renewable energy from a supplier that provides certificates, giving us an additional 2504 MWh of purchased renewable energy. These sources combine to about 1.2% of our total electricity consumption. Another of our Israel sites has solar panels, though the energy generated from these panels is sold to the national energy provider, such that Elbit cannot claim the renewable credit. These panels generated 291 MWh in 2023, contributing to the overall renewable energy generation on a national level.

Electricity consumption					
Type	Units	2020	2021	2022	2023
Purchased energy ¹	kWh	276,082,655	269,746,182	269,671,933	284,768,064
Purchased electricity costs	USD	29,812,124	29,896,135	28,987,596	29,272,414

2- Water and Waste Generation Efficiency

Elbit Systems is committed to avoiding environmental pollution, primarily water and soil pollution. In addition, our continuous improvement to achieve minimum waste of resources and maximum operational efficiency has led us to adopt numerous activities to improve water and waste management. For example, these measures include smart metering to detect water leaks and monitor consumption, implementation of processes of water recycling and water efficient installations in washrooms, waste reduction at source, re-use of packaging materials and recycling programs covering all waste streams.

Water withdrawal in Mm3	2020	2021	2022	2023
Total water withdrawal	0.916	1.026	1.009	1.159

As with our energy consumption, the total withdrawal in 2023 was higher than in the previous year, likely due primarily to increased production at the sites. Our target for 2023 was a 5% reduction from a 2020 baseline of water withdrawal per employee, about 45 m³/employee – however, this was not achieved. For 2024 and 2025, we are still aiming for 45 m³/employee as our target. All water consumption at our operations is drawn from municipal water supplies.

¹ Most of this is electricity – some portion (8873 MWh in 2023) is from purchased cooling (cold water).

Source separation of several non-hazardous waste streams is in place at most sites (paper, cardboard, metal, electronics, used oils and wood). At our headquarter site in Haifa, we are currently working to implement organic waste separation as well, and have been working with local industrial park management and neighboring businesses on this project. Waste disposal information collection, particularly non-hazardous waste, has been a challenge in previous years. We have streamlined our global efforts to obtain and report precise information. A small amount of waste is classified as hazardous, and we dispose of it safely and in accordance with applicable regulations. In the last few years, we have begun working with a contractor to improve our hazardous waste management, and now send certain hazardous waste streams to facilities to produce energy, or for purification and reuse. This helps us reduce the amount of hazardous waste sent to a landfill, and our overall environmental impact.

Waste generated				
Non-hazardous waste in tons	2020	2021	2022	2023
Waste to recycling	8,765	4,117	4,099	4,434
Waste to landfill	23,671	6,649	6,298	9,380
Total waste (non-hazardous)	32,436	10,766	10,397	13,813
Hazardous waste (tons) ²	1,410	1,944	1,422	2,884

In 2023 there appeared to be a significant increase in waste production, in particular hazardous waste. Waste management is often done by external companies, and the data received is from those companies. As such, it can be difficult to get consistent and accurate data. The difference in numbers may be a result of differences in data collection. One of our goals in the coming years is to increase the quality of our waste data collection. We have begun a waste survey, and will be continuing this extensive project over the next few years. Our 2023 target was 40% of waste to recycling relative to total waste produced – in practice, we only achieved 32%.

² Note that this does not include oil waste or emulsion, which are monitored separately, despite also being considered hazardous waste.

3- Greenhouse Gas (GHG) Emissions Efficiency

Our GHG calculation includes Scope 1, Scope 2 and Scope 3 emissions, and is verified by a third-party independent auditor in accordance with ISO14064-3. Our global GHG activities are divided according to the GHG protocol as followed:

- Scope 1 (direct emissions) - emissions are those from activities owned or controlled by our organization:
 - LPG consumption
 - Gasoline consumption
 - Aviation fuel consumption
 - Diesel consumption
 - Natural gas consumption
 - Kerosene
 - Refrigeration operating emissions (AC systems for office and Communication Rooms)

- Scope 2 (energy indirect) - emissions released into the atmosphere that are associated with our consumption of purchased electricity, heat, steam and cooling:
 - Electricity
 - Cold water

- Scope 3 (other indirect) - emissions that are a consequence of actions that occur at sources we do not own or control and are not classified as Scope 2 emissions:
 - Electricity T&D and WTT (associated with grid losses, the energy loss that occurs in getting the electricity from the power plant to the organization)
 - Fuel WTT
 - Water withdrawal
 - Paper consumption
 - Business travels
 - Waste disposal - landfill
 - Waste disposal - recycling (paper, mineral oils, plastics, wood, metals, WEEE and mixed waste)

UK Government conversion factors for greenhouse gas (GHG) reporting were used in all calculations, with the exception of CO₂e emissions factors of electricity generation, which were based on information provided by suppliers when possible, and other databases when not – for example, the U.S. EPA's eGrid for U.S.-based emissions, the Association of Issuing Bodies (AIB) or the European Environment Agency (EEA) for EU-based emissions, or the International Energy Agency (IEA).

In order to report GHG emissions, we used market-based emissions factors from the private suppliers and location-based emission factors from the national databases. We report on both location- and market-based emissions, as per the GHG Protocol.

Greenhouse gas emissions (tCO₂e)³	2020	2021	2022	2023
Scope 1 emissions	34,029	29,043	27,908	26,812
Scope 2 emissions	117,339	116,039	110,682	115,614
Total greenhouse gas emissions (Scope 1+2)	151,368	145,082	138,590	142,426
Scope 3 emissions	54,460	66,659	54,329	63,620
Total emissions: All Scopes	205,828	211,741	192,919	206,046

Note: Scope 2 emissions here are shown based on the market-based values.

The goal established for GHG emissions efficiency was 7.5% reduction for 2023, of emissions per area (tCO₂e /1000 m²), in comparison with a 2020 baseline. Additionally, we have set a long-term Scope 2 target using the Science Based Target calculator as a guide, with an aim for less than 2 degrees of warming. This target aims for a 15% decrease in Scope 2 emissions by 2026, using a 2020 baseline (an average of 2.5% decrease per year). Our yearly targets are based on this, giving us our 2023 target of 7.5% reduction from 2020 (and 10% by 2024).

We have not paid any significant fines (> USD \$10,000) related to environmental or ecological issues in the past four fiscal years.

³ Note that the values reported here have been updated since our last report. For the Scope 1 values, this was due to receiving corrected data; our Scope 2 calculation was updated retroactively to reflect a slight change in methodology, which we believe more accurately represents our actual emissions.

Volatile Organic Compounds (VOC)

Elbit’s direct Volatile Organic Compounds (VOC) emissions are only relevant for a few of our operations in Israel. In 2023, we had a total of 88.1 tons of direct VOC emissions. We engage with the Israeli government reporting requirements for companies for the emissions permit report and Pollutant Release and Transfer Register (PRTR), which is a database or inventory of pollutants released to air, water or soil by factories, and/or transferred off-site for treatment or disposal. Among all information described, our VOC emissions are reported on this platform on a yearly basis.

Volatile Organic Compounds	2020	2021	2022	2023
VOC emissions (tons)	92.0	74.3	92.3	88.1

Occupational Health and Safety

Elbit Systems operations include a range of development, manufacturing, testing, logistics and support activities. Protecting our employees through consistent attention to occupational health and safety is fundamental to the way we work. As a responsible employer, our goal is to maintain a healthy working environment for our employees. Therefore, we are committed to leading precautionary standards as well as implementation of emergency preparedness systems at all sites. We strive to enhance the safety of our employees, minimize risks, prevent hazards and maintain a safe environment at each facility.

Elbit Systems employs thousands of employees globally. As a responsible employer, our goal is to provide a healthy working environment for our employees. Mandatory health examinations are conducted routinely for employees that work under conditions that may pose potential health issues. We offer employees the opportunity to participate in designated health insurance programs.

Injuries - including contractors	Unit	2020	2021	2022	2023
Fatalities	Number	0	0	0	1
Injury frequency rate (LTIFR)	# per million hours worked	2.98	2.81	2.75	4.50

We closely monitor all accidents and safety-related incidents at our operations. Since 2019 we have added to our follow-up contractors' accidents to better understand and prevent such events. Lost-time Injury Frequency Rate (LTIFR) is calculated by the number of "lost-time" injuries per million hours worked in a fiscal year. Unfortunately, we saw an increase in our incident rate in 2023. The increase may be partly due to increased workloads, since the last quarter of 2023 saw many sites increase shifts and employees worked around the clock to ensure we met the increased demands. We are working with the individual sites to understand the reasons for the accidents that occurred, and to find ways to mitigate such incidents moving forward.

We are saddened to note that we did have one fatal accident in 2023, involving a subcontractor. A thorough investigation into the incident was completed, and the lessons were shared with all sites in order to prevent any similar incidents from occurring in the future.

The goal set for 2023 was a 5% reduction from the 2022 baseline. We did not manage to achieve the target, and saw a rise rather than a decrease in incidents, which we are working to reduce moving forward. Our target for 2024 was a 5% reduction from our 2023 target (i.e. 9.75% from our 2022 baseline), and we hope that we will see an improvement from the previous year's results.

Sustainable Innovation in Our Products and Services

Elbit Systems has significant ongoing investment in breakthrough technological solutions that help protect the environment.

We implement a clear sustainable innovation methodology in our development and manufacturing processes that support environmental protection, mainly in the choice of materials and components, type of energy utilization, weight, quality and other relevant factors. Some of those processes have a direct impact on environmental aspects, for example:

- Building materials - source the lightest and most durable materials, for example fiberglass - which allows greater time and distance propulsion and corresponding energy efficiency.
- Building materials - some UAS (unmanned aircraft systems) parts are produced by three-dimensional printing, for example aluminum parts, reducing both the UAS' fuel consumption, chip processing, as well as waste generation.
- Lead-free structural walls - a dedicated model was implemented for airborne lead-free platforms with the understanding that in the near future lead-based materials will not be allowed to be used.
- Removal of carcinogenic and/or hazardous components from our products, including paints and microchips. We comply with RoHS and REACH standards and with customer's requirements.
- Propulsion - hybrid engines

- Electrical energy sources:
 - Lithium-ion batteries - Most of Elbit's electric UAVs are now based on rechargeable lithium-ion batteries, a cutting-edge technology above all other available solutions in the market. The batteries consist of suitable cylindrical standard in 18650 configurations, and control card BMS (Battery Management System). The role of the BMS is to provide electrical protection to the battery, store its database and transmit the data to the aircraft computer during the mission.
 - Fuel Cells type PEM (Proton Exchange Membrane) - an electrochemical device that converts the chemical energy of the reactants directly into electrical energy. The fuel cell is fed with hydrogen coming from the storage system and hydrogen supply, a “state of the art” solution for propulsion and motion.
 - Solar panels - This technology is improving consistently, our flexible solar cells with GaAs technology and “Rider 10” platform, have already improved by approximately 30% the utilization of a single cell.
- Simulators – realistic training solutions for air, naval and land forces training and homeland security provide environmental impacts reduction, such as fuel consumption reduction. As an example, one hour at the simulator could save 4000 liters of aviation fuel. In partnership with Israel’s air force we have been gradually increasing the proportion of trainings at simulators over time. In 2015 we have started with 3%, in 2020 we have reached 14%, and we strive to improve by establishing a goal to reach 30% of all trainings to simulators by 2026. We estimate an average of 10 million liters of aviation fuel savings due to the simulators in 2021, approximately 22,908.2 tCO₂e.

We monitor the use and performance of our sustainable innovation products at our customers’ facilities. Also, there is an ongoing effort to upgrade the mid-life of the products, thus maintaining their efficiency and improving performance.

Sustainable aspects of end of product life are also managed. We often "re-purchase" the product for reuse or recycle of the product as a whole or its raw materials. In cases where products cannot be returned to us, we support implementation of the best disposal alternatives in compliance with local regulations.

For over five decades, Elbit Systems has achieved sustainable growth and market leadership through innovation. Elbit Systems implements its Open Innovation strategy through [Incubit Ventures](#) – a deep-tech, early-stage Incubator and through Elbit Systems’ Corporate OPIN collaboration team for more mature startups. Several examples of sustainability innovation projects being developed by the technology start-ups in which Elbit Systems has invested, which include:

- [NewRocket](#): Developing advanced, environmentally friendly rocket engines based on innovative gel-propellant technology, NewRocket provides a new alternative to both solid rockets that once ignited cannot be controlled or shut down and reignited, and to liquid rockets,

that are difficult to maintain and rely on very toxic or cryogenic propellants. NewRocket's gel-propellant rocket engines combine the best of both solid and liquid rockets – they are safe and simple to use, yet feature high performance and controllability. This gel is a green fuel in accordance with European standards.

- **Cens:** Developing breakthrough technology to increase the energy and power of super-capacitors and lithium ion batteries by connecting carbon nanotubes (CNT) with various electrode materials to create highly conductive 3-dimensional structures, CENS is set to meet the increasing demands of electronics, transportation, medical device and defense markets. CENS technology enables significantly greater utilization of CNT properties – including much improved power and energy: The CENS CNT-particle clusters provide super-capacitors with about 50% more power than equivalent type cells produced with conventional CNT mixtures; thereby enabling desirable features such as fast charging, longer cycle life, and better reliability.
- **FlyWorks:** breakthrough propellant technology which is hybrid and combines in a unique way electric and petrol engines to achieve a longer duration of drone flight. The new “fuel cells” created (based on magnesium hydrid - H₂) only expel water, which reduces pollution and does not require additional protection for the generators.
- **Greenvibe:** IP protected method in order to measure very accurately the concrete strength, temperature, humidity and conductance, in real time and provide projections on the exact curing dynamics and strength development. After the construction is done, the system continues to monitor the structure health.

All the factors above provide resource efficiency benefits and GHG emissions reductions during their use phase to your customers and consumers, and therefore can be considered as low carbon products.

Additional start-ups in which Elbit Systems has invested focus on the safety aspects, for example:

- **Spectralics:** develops a thin film optics which will be adjacent to the vehicle's windshield to create a highly wide field of view and an infinite focal depth, both of which are necessary in order to create an immersive and natural augmented reality experience on the vehicle's windshield.
- **Sealartec:** Autonomous launch and recovery system for manned and unmanned surface vehicles and vessels.
- **Ultrawis:** Remote control of tower cranes. Nowadays, operated manually from a top tower cabin, with on ground verbal coordination – this leads to a Large number of fatal accidents, inefficient operations, and projects delays. Ultrawis's Solution is based on Elbit Systems' technology and 14 registered patents.

- **ReSight:** Capture the physical surroundings and embed augmented reality content in it, by building a live, crowdsourced, 3D semantic map from all the users while not compromising their privacy. This enables developers to build persistent, robust, and multi-user experiences at scale. This technology is being developed with the purpose, among others, to provide support inside buildings to emergency response teams.