Elbit Systems – EHS Report 2021

As part of Elbit Systems' overall Sustainability Strategy – 2021, this report summarizes the key elements and achievements of our EHS (environment, health and safety) activities in 2021.

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 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 CDP report in 2021 and will be further detailed in our 2022 disclosure.

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.

1- Energy Efficiency

Our recent projects throughout the organization globally, such as improving air conditioning and lighting controls, LED lighting replacements and consistently maintaining our manufacturing operations to achieve maximum efficiency, have shown the following results on energy efficiency:

Energy consumption in MWh										
Direct energy (Scope 1)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019** (including IMI)	**2020** (including IMI and new site in USA)	**2021** (including IMI and new sites in USA)
Diesel	3,387	1,554	1,444	1,561	928	1,461	3,208	18,305	9,184	11,029
LPG	2,059	1,842	522	386	157	180	273	28,633	8,297	525
Aviation Fuel	722	748	767	341	407	705	1,084	639	7,600	375
Gasoline	102,840	101,635	101,635	80,944	79,502	77,104	68,816	64,186	75,346	48,614
Natural Gas liquids (LNG)									487	
Kerosene										125
Total direct energy (Scope 1)	109,009	105,779	104,369	83,233	80,993	79,449	73,381	111,763	100,913	60,669
Purchased electricity (Scope 2)	151,354	149,270	143,810	147,837	154,405	154,515	154,547	234,662	276,083	269,746
Total energy consumption (Scope 1+2)	260,363	255,048	248,178	231,069	235,398	233,964	227,928	346,425	376,996	330,415

For electricity purchase, the target established for electricity efficiency in 2021 was a 4% reduction of kWh per square meter (area) in comparison with the average from 2018 -2019. We did achieve an overall reduction but did not reach the target set. This is likely due in part to continued structural changes due to Covid-19, as well as the inclusion of new, energy-intensive sites beginning in 2020. In addition, our goal to start generating 3.6MW of renewable energy was reset for 2022. This will be achieved through the implementation of solar panels at two of our main sites in Israel..

TOTAL ELBIT							
Type	Units	2016	2017	2018	2019 (including IMI)	2020 (including IMI and new site in USA)	2021 (including IMI and new sites in USA)
Purchased electricity	KWH	154,404,772	154,515,196	156,947,698	234,662,467	276,082,655	269,746,182
Purchased electricity costs	USD	16,361,365	16,381,466	16,796,039	25,587,069	29,812,124	29,896,135

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	2012	2013	2014	2015	2016	2017	2018	2019 (including IMI)	2020 (including IMI and new site in USA)	2021 (including IMI and new site in USA)
Total water withdrawal	0.297	0.330	0.264	0.245	0.259	0.263	0.244	0.799	0.828	1.026

The water consumption target is a 5% reduction of cubic meters per employee in comparison with the average from 2019-2020. Our water consumption increased in part due to the return of employees to the sites after an extended period of remote working due to the pandemic. For 2022 we set a 5% reduction target based on the 2020 baseline. All water consumption at our operations is drawn from municipal water supplies.

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. We also are regularly enhancing our recycling programs, which cover several waste streams: paper,

plastic, cardboard, metals, oils, emulsions, wood and electronic waste. A small amount of waste is classified as hazardous, and we dispose of it safely and in accordance with applicable regulations.

This year there appeared to be a significant reduction in the total waste production. We see a reduction of over 70% of waste to landfill compared to last year and an increased recycling rate of 11.4%. 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 upcoming year is to increase the quality of our waste data collection. We have begun a waste survey, and will be continuing this extensive project in the next few years. The goal set for recycling in 2020 was 36% of total waste production, and in 2021 we increased the amount to 39%. Our 2022 target is 40% of waste to recycling relative to total waste produced.

Total waste in tons	2012	2013	2014	2015	2016	2017	2018	2019 (including IMI)	2020 (including IMI and new site in USA)	2021 (including IMI and new site in USA)	Targets for 2021 (baseline 2020)
Waste to recycling	1,794	2,150	1,729	1,617	1,551	1,674	1,917	5,541	9,231	4,344	**5% increase**
Waste to landfill	6,717	7,195	6,225	6,477	5,863	5,517	3,857	7,028	23,671	6,649	**5% reduction**
Total waste	**8,837**	**9,645**	**8,136**	**8,379**	**7,585**	**7,332**	**5,976**	**12,568**	**32,903**	**10,993**	
Hazardous waste					171	141	202	1,445	1,408	1,944	**5% reduction**

3- Greenhouse Gas (GHG) Emissions Efficiency

Our GHG report from 2021 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 following scope levels:

➢ Scope 1 (direct emissions) - emissions are those from activities owned or controlled by our organization:
- LPG consumption emissions
- Gasoline consumption emissions
- Aviation fuel consumption emissions
- Diesel consumption (for diesel generators) emissions
- Kerosene
- Fuel consumption (for cars - business travel) emissions
- 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 (generation factor)

➢ 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).
  • Water use
  • Paper consumption
  • Business Travels emissions
  • 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, except from CO_2 emission factors of electricity generation and T&D, that were based on information provided by the International Energy Agency (IEA) and electricity generation from DURAD and Negev Energy, private companies in Israel that provide electricity from low-carbon sources - based on natural gas, instead of the national grid that is primarily coal-sourced, to several of our sites.

In order to report GHG emissions, we used market-based emissions factors from the private suppliers and location-based emission factors from the IEA for other locations where we purchase electricity from the national providers. Therefore, our GHG emissions report has both location and market-based information, as per the GHG Protocol guidance.

Greenhouse gas emissions (tCO2e)	2012	2013	2014	2015	2016	2017	2018	2019 (including IMI)	2020 (including IMI and new site in USA)	2021 (including IMI and new sites in USA)
Scope 1 emissions	27,003	26,178	25,868	20,634	20,076	19,059	17,679	27,152	26,708	17,042
Scope 2 emissions	111,861	98,685	93,391	97,796	97,510	69,303	68,870	109,592	112,925	110,934
Total greenhouse gas emissions (Scope 1 +2)	138,864	124,863	119,259	118,429	117,586	88,362	86,549	136,745	139,633	127,976

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

The goal established for GHG emissions efficiency in 2021 was a 5% reduction of emissions per area (tCO_2e /1000 m^2) in comparison with the average from 2018-2019. 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 will be based on this, giving us our 2022 target of 5% reduction from 2020.

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

Volatile Organic Compounds (VOC)

Elbit´s direct Volatile Organic Compounds (VOC) emissions are only relevant for a few of our operations in Israel. In 2021, we had a total of 74.3 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	2017	2018	2019	2020	2021
VOC emissions (tons)	148.7	150.6	79.5	92.0	74.3

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 | Unit | 2016 | 2017 | 2018 | Including contractors | | |
					2019 (including IMI)	2020 (including IMI and new USA site)	2021 (including IMI and new USA site)
Fatalities	Number	0	0	0	0	0	0
Injury frequency rate (LTIFR)	# per million hours worked	2.69	2.44	3.64	3.71	2.98	2.81

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. We are pleased to note that we had no fatalities for the reported years.

The goal set for 2021 was 20% reduction from the 2020 baseline. We did not manage to achieve the target but did manage to reduce the injury frequency rate by about 6%. Our target for 2022 is 10% of reduction from our 2021 baseline.

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 with lattice structure, 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:

- o 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.
  - o 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.
  - o 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 also is 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 hydride - 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. Utrawis'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.