



2022
ESG Report

Adtran

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Our sustainability practices help us achieve our mission of being a trusted provider of global communications solutions and develop innovative technologies used to create products and services that make communication simpler and more affordable for people everywhere. They also enable us to foster an entrepreneurial environment supported by enthusiastic employees who exhibit an unwavering commitment to personal integrity and support our customers beyond their expectations.



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Letter from the Chairman and CEO

While this may be our first formal Corporate Social Responsibility (CSR)/ Environmental, Social, and Governance (ESG) Report, sustainability is not new to us. Areas like energy reduction, elimination of harmful substances, giving back to the communities in which we reside, and strong corporate governance practices, among others have been focal points for us for decades.

As a publicly traded global company, we believe in transparency and realize the importance of sharing information about our CSR/ESG efforts with our stakeholders as these efforts will help shape our success moving forward. This report will serve as a baseline. It details our efforts in Environmental, Social, and Governance and sets goals for the near term.

As you may be aware, we have entered into a business combination agreement with ADVA Optical Networks, SE. This report will only focus on the efforts of Adtran, Inc. Our 2023 report will be inclusive of the entire company (Adtran + ADVA) once combined.

From our founding in 1985, we have had the mission to be a trusted provider of global communications solutions, to develop innovative technologies used to create products and services that make communications simpler and more affordable for people everywhere and to foster an entrepreneurial environment supported by enthusiastic employees who exhibit an unwavering commitment to personal integrity and support our customers beyond expectations. It is our belief that to achieve this mission we must approach everything we do with a sustainable mindset. We must continually ask ourselves how we can improve communication to meet the needs of our customers without having a negative impact on the world around us.

I look forward to sharing our progress with you moving forward. Sustainability is not something that can be achieved alone. It will take each of us doing our part to ensure the future of our planet for future generations.



Thomas R Stanton
Chairman and CEO
Adtran Holdings

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About Adtran

GRI 2-1, 2-2, 2-6

General business overview

Adtran is a leading global provider of networking and communications platforms, software, and services focused on the broadband access market. Our vision is to enable a fully connected world where the power to communicate is available to everyone, everywhere. Our business approach, unmatched industry expertise, and innovative solutions enable us to address almost any customer need. Our products and services are utilized by a diverse global customer base of network operators that range from those having regional or national reach and operating as telephone or cable television network operators to alternative network providers such as municipalities or utilities, as well as managed service providers who serve small- and medium-sized businesses and distributed enterprises.

We operate under two reportable segments:

1. **Network solutions**, which includes hardware and software products.
2. **Services & support**, which includes a portfolio of network implementation services, support services and cloud-hosted Software-as-a-Service (SaaS) applications that complement our product portfolio and can be utilized to support other platforms as well.

These two segments span across our three revenue categories:

1. Subscriber solutions
2. Access & aggregation solutions
3. Optical networking solutions

Our Subscriber Solutions portfolio is used by service providers to terminate their access services infrastructure at the customer premises while providing an immersive and interactive experience for residential, business, and wholesale subscribers. This revenue category includes hardware- and software-based products and services. These solutions include fiber termination solutions for residential, business, and wholesale subscribers, Wi-Fi access solutions for residential and business subscribers, Ethernet switching and network edge virtualization solutions for business subscribers, and cloud software solutions covering a mix of subscriber types.

Our Access & Aggregation Solutions are solutions that are used by communications service providers to connect residential subscribers, business subscribers and mobile radio networks to the service providers’ metro network, primarily through fiber-based connectivity. This revenue category includes hardware- and software-based products and services. Our solutions within this category are a mix of fiber access and aggregation platforms, precision network synchronization and timing solutions, and access orchestration solutions that ensure highly reliable and efficient network performance.

Our Optical Networking Solutions are used by communications service providers, internet content providers and large-scale enterprises to securely interconnect metro and regional networks over fiber. This revenue category includes hardware- and software-based products and services. Our solutions within this category include open optical terminals, open line systems, optical subsystems and modules, network infrastructure assurance systems, and

automation platforms that are used to build high-scale, secure, and assured optical networks.

We are focused on being a top global supplier of fiber-based communications infrastructure and SaaS applications spanning from the cloud edge (data center) to the subscriber edge (customer premises) serving both the residential and enterprise connectivity markets. We offer a broad portfolio of flexible network infrastructure solutions, customer premises equipment, software applications, and global services and support that enable service providers to meet their service demands now and in the future. These products and services enable service providers to transition to a common network supporting the simplified delivery of high-capacity services, regardless of subscriber density, network topology, and infrastructure diversity. Adtran began operations in January 1986. Headquartered in Huntsville, Alabama, Adtran is located in Cummings Research Park – the second largest research park in the U.S. and fourth largest in the world.

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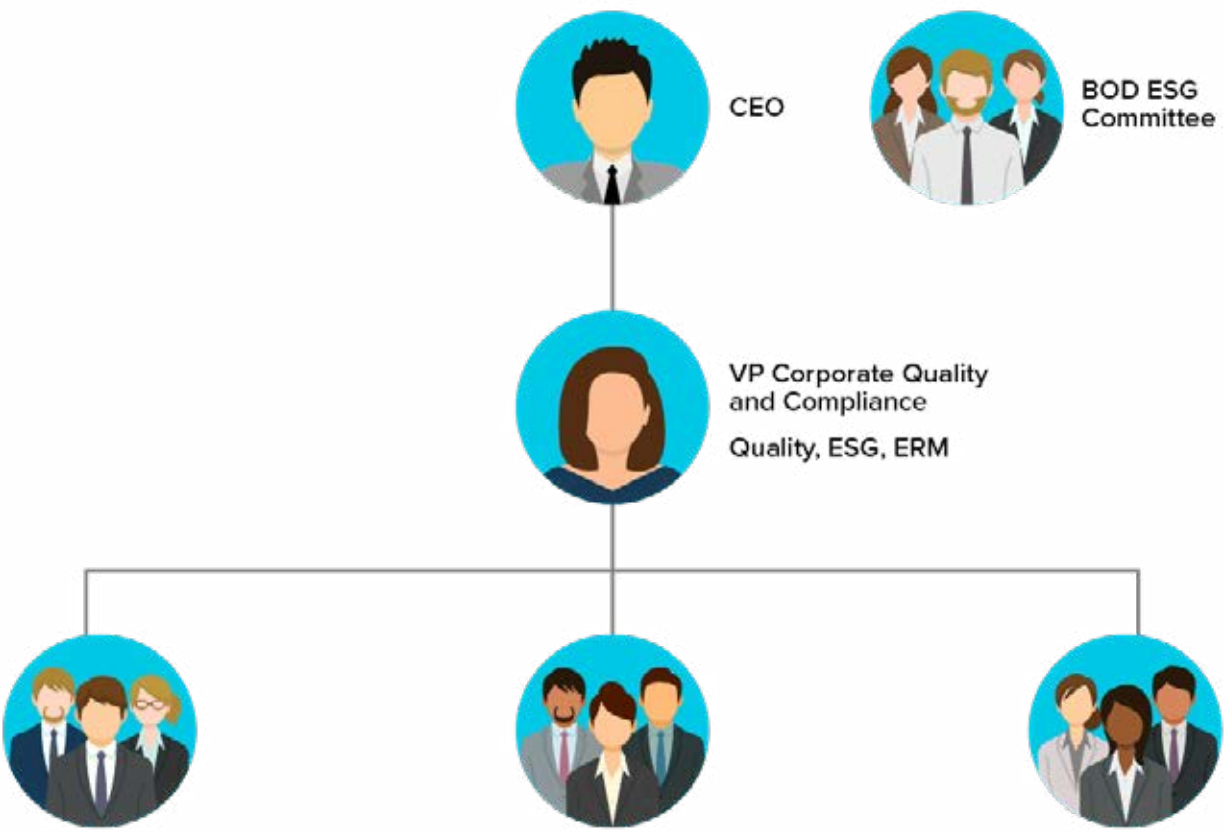
Our Team

GRI 2-9, 2-10, 2-12, 2-13, 2-14, 2-17, 2-18

ESG Organization

The ESG team is a key part of the Quality organization but has direct oversight from the executive management team and board of directors. The team is cross functional and global in presence. Contributing members are from all organizations within Adtran, including Facilities, Purchasing, Marketing, R&D, Product Management, Sales, Quality, Human Resources, and Legal.

Direct leadership of the team comes from the VP of Global Quality and Compliance Mickie Smith, who reports to the CEO. Mickie drives the overall direction of the program, while reporting to the CEO and the Board of Directors ESG committee.



“Sustainability targets are becoming more important to all of us. This includes our employees, investors, and customers. We are establishing some baseline targets using the Global Reporting Initiative where we can establish net neutral and net zero emissions targets for both greenhouse gasses and carbon dioxide emissions.”

– Jay Wilson

Board ESG committee

In 2022, the Adtran Board of Directors established a chartered board committee focused on ESG requirements. The members of this board are all independent directors. The Environmental, Social and Governance Committee will provide oversight responsibilities with environmental, health and safety, corporate social responsibility, sustainability, philanthropy, corporate governance, reputation, diversity, equity and inclusion, community issues, and other relevant public policy matters. The committee is composed of three or more independent directors.

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Corporate quality mission

The Corporate Quality organization exists to support Adtran’s corporate and departmental quality objectives. Our mission is to assure that established systems and processes produce products and services that satisfy or exceed customer expectations. We continually investigate and act on opportunities to improve these established systems and processes. Data collection and analysis, measurements, audits, corrective actions, and risk management are some of the methods used to confirm that Adtran processes result in quality outputs.

We operate within our Adtran Management System (AMS) which is an integrated management system. This system is certified to ISO9001, TL9000, ISO14001 and ISO27001 and supports our ISO17025 Regulatory Compliance Laboratory.

Adtran Management System Policy

Adtran is committed to our customers’ satisfaction, providing dependable, cost-effective, on-time delivery of exceptional products and services without interruption to stated specifications.

To this end we will:

- Commit to establish and meet the objectives for the management system and continually improve at the relevant functions and levels for our: Information Security, Environmental, and Quality Management System.
- Commit to the protection of the environment, and the conservation of natural resources in our daily operations throughout the product life cycle.
- Comply with all applicable laws, regulations, and company requirements.
- Communicate and educate our employees and suppliers on environmental, information security, and social responsibilities.

Sustainability working group

We have established a cross-functional Sustainability Working Group Committee that monitors the pulse of CSR and recommends actions based on their findings. They continually monitor the company’s CSR efforts and look for ways to improve our efforts.

Members of this team include:

Jay Wilson – Chief Revenue Officer (Executive Founder)

Guido Brinkmann – Vice President, Engineering

Ed Bryan – Director, Software and Solutions Quality

Mike Fox – Vice President, Technical Sales

Carsten Jordan – Director, Sales

Ronan Kelly – CTO EMEA & APAC Regions, Head of Solutions Marketing

Martin Kuipers – Senior Staff Scientist

Axel Schalt – Senior Strategic Planner

Amanda Scherer – Solutions Marketing Manager

Holger Schmidt – R&D Program Manager

Mickie Smith – Vice President, Corporate Quality and Compliance

Barbara Tonarelli – Senior Sales Engineer

Jeff Whitmire – Senior Manager, Quality Management Systems

Balaji Purushothama – Architect, Product Management

Adam Weast – Product Manager

Kelley Whalen – Facilities Supervisor, Energy Management and HVAC

Christian Musiol – Director, Quality Engineering Support

Martin Lüst – Vice President, DT Group Account

Scott Gunter – Director, Facilities and Campus Operations

Keith Atwell – Senior Director, Business Development

A woman with dark hair tied back, wearing glasses and a green zip-up jacket, is shown in profile, looking intently at a large digital display. The display features various financial data visualizations, including a line chart with green and red lines, a yellow bar chart, and a globe. The background is dark, suggesting a control room or data center environment.

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As we follow our vision to “enable a fully connected world,” we must be a responsible corporate citizen. The Corporate Social Responsibility (CSR) and Environmental, Social, and Governance (ESG) frameworks are important to us and act as a guide for our actions. We have established ESG and sustainability programs and policies that encompass the elements of Environmental, Health & Safety, Ethics, Labor, and Management Systems in alignment with ISO 26000 Guidelines. We are committed to operating in full compliance with the laws, rules, and regulations of all the countries in which we operate.

Adtran recognizes the Responsible Business Alliance (RBA) Code of Conduct (the “Code”) and actively pursues conformance to it and its standards in accordance with our management systems. Adtran further recognizes the Code as a total supply chain initiative.

As our program moves forward, we have committed to implementing the Global Reporting Initiative (GRI) framework in our reporting for 2022. We have participated in the CDP project since 2017 and measure ourselves through evaluation programs such as ISS and EcoVadis. We actively participate with our energy providers in seeking alternatives to existing carbon intensive electricity sources.

Stakeholder engagement

We engage our stakeholder’s to help define relevant areas within ESG. This engagement gives us valuable feedback in key areas of our programs.

- Customers
- Shareholders/Investors
- Suppliers
- Government agencies
- Employees
- Communities
- Associations, NGO’s Standards bodies

We regularly engage our customers, through various means, either request for proposals, customer dashboard meetings, quality business reviews or any other forum that is available. We engage our investors through direct requests or through common rating services. We support Industry organizations such as TIA, and Fiber Broadband Association Sustainability Working Group.

Adtran is a charter member of the Fiber Broadband Association Sustainability Working Group. Ronan Kelly CTO, EMEA and APAC and Head of Solution Marketing of Adtran is currently the chair of this group. The working group is focused on educating and informing others on the ability for Fiber networks to promote carbon reduction, energy reduction, and circular deign for the networks of the future.

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2022 Sustainability goals

- Implement the Global Reporting Initiative (GRI) framework for assessing the materiality and status of our ESG program.
- Monitor and improve sustainability assessment scores by engaging company stakeholders in the process.
- Reduce energy and water consumption.
- Increase the visibility of the CSR Program both inside and outside of the company.
- Verify emissions reporting for Scopes 1 and 2 as a base to define targets.

- Establish a baseline for Scope 3 “Use of Sold Products”.
- Define targets for Scope 2 and Scope 3 “Use of Sold Products”.
- Purchase Scope 1 offsets.
- Acquire external verification of CDP report.
- Submit commitment letter to SBTi.
- Increase purchase of renewable energy.

For reported emissions numbers see CDP section of this report.

A photograph of a vast, dense forest of tall evergreen trees covering a steep hillside. The trees are dark green and appear to be spruce or fir. The hillside slopes upwards from the bottom left towards the top right. The sky is a pale, hazy blue. The word "Environmental" is written in a large, white, sans-serif font in the lower-left corner of the image.

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Commitment to the environment

As a good steward of the environment, Adtran actively promotes eco-friendly manufacturing processes, energy efficiency, and conservation. Our commitment is not only to global regulations and policies but it is part of a green philosophy extended into our local community, as well as our corporate, campus-wide environment.

As we follow our vision to enable a fully connected world, we embrace sustainability. As more people are connected, work and life can be accomplished using fewer resources.

On the journey to our vision, we must continue to be responsible corporate citizens of the world.

We will accomplish this in the typical Adtran entrepreneurial, reliable, and ethical way by:

- Using our Environmental Management System (EMS) as a tool to support our initiatives as we explore and understand environmental issues and adapt our processes.
- Developing and delivering products that meet our customer requirements, while incorporating material and energy conservation initiatives.

- Striving to communicate and incorporate sustainability initiatives throughout the supply chain.
- Continually reviewing our operations to increase efficiencies through our Continuous Improvement teams. Improving and protecting our environment while conserving natural resources using our unique Adtran culture.
- Educating, developing, and empowering our employees, and thus enabling them to identify and adopt best practices that will enhance sustainability.

- Maintaining our financial responsibility to our shareholders and employees while supporting our sustainability initiatives.
- The major components of our environmental CSR/ESG program are the elimination of waste and emissions, maximizing energy efficiency and productivity, and minimizing practices that can adversely affect the utilization of natural resources by future generations.



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Account description	January US Tons	February US Tons	March US Tons	April US Tons	May US Tons	June US Tons	July US Tons	August US Tons	September US Tons	October US Tons	November US Tons	December US Tons	Monthly Average	Total
North DC Cardboard	5.1	3.38	3.63	4.36	0	5.43	7.8	4.69	7.91	2.21	4.13	0	4.42	48.64
Single Stream South	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trash Compactor South Kitchen	2.01	4.93	6.12	4.21	4.72	5.8	4.31	5.88	6.12	3.11	4.95	0	4.74	52.16
Single Stream East	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East DC Cardboard	1.17	2.12	1.94	2.49	1.67	2.55	3.01	2.68	2.51	1.74	1.41	0	2.12	23.29
Trash Compactor East Kitchen	1.78	4.69	2.71	2.17	3.39	2.94	2.46	2.34	2.58	2.64	2.96	0	2.79	30.66
Temporary Trash Compactor	0	0	0	0	2.15	0	2.68	0	0	1.81	0	0	0.66	6.64
Construction Trash	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scrap Electronics	2.43	0	6.85	0	22.69	0	0	0	19.27	0	0	0	5.12	51.24
Shredding	0	0.5	0.7	1.1	0.65	0.5	0.7	0.5	0.6	0	0	0	0.53	5.25
Lighting	0	0	0	0.51	0	0	0	0	0	0	0	0	0.05	0.51
Pallet	0	0	24	0	0	24	0	0	24.33	0	0	0	7.23	72.33
Batteries	0	0	0	0	0	0	0	0	0.09	0	0	0	0.01	0.09
Printer and Toner Cartridges	0	0	0	0	0	0.07	0	0	0	0	0	0	0.01	0.07
Metal Scrap Recycling	4.33	0	1.36	0.77	5.1	0	0	0	3.32	0	0	0	1.49	14.87
	16.82	15.62	47.31	15.61	40.37	41.29	20.96	16.09	66.74	11.51	13.45	0	27.8	305.75

Elimination of waste and emissions

Hazardous waste

Adtran is listed as a small-quantity generator of hazardous waste. To ensure the greatest safety and compliance, all hazardous waste is hauled and disposed of by a licensed hazardous waste transporter.

Landfill diversion

At our Huntsville headquarters, a campus-wide recycling program is in place for corrugated cardboard, wood pallets, and batteries. Materials that cannot be recycled are sent to the Covanta Steam Plant for incineration where the steam created from that process is sent to neighboring Redstone Arsenal and is used to heat and cool many of its buildings. This method of waste disposal is widely recognized for reducing greenhouse gases – particularly methane – by eliminating emissions from landfills. The chart below shows the annual tonnage collected by category and the tonnage diverted due to recycling or incineration. It should be noted that Adtran was the first large company in Cummings Research Park to achieve 100% landfill diversion. Adtran is proud to boast 100% landfill diversion.

Group	January US Tons	February US Tons	March US Tons	April US Tons	May US Tons	June US Tons	July US Tons	August US Tons	September US Tons	October US Tons	November US Tons	December US Tons	Monthly Average	YTD Total US Tons
Cardboard	6.27	5.5	5.57	6.85	1.67	7.98	10.81	7.37	10.42	3.95	5.54	0	6.54	71.93
Single Stream	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Incinerated Trash	3.79	9.62	8.83	6.38	10.26	8.74	9.45	8.22	8.7	7.56	7.91	0	8.13	89.46
Construction Trash	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scrap Electronics	2.43	0	6.85	0	22.69	0	0	0	19.27	0	0	0	5.12	51.24
Shredding	0	0.5	0.7	1.1	0.65	0.5	0.7	0.5	0.6	0	0	0	0.53	5.25
Light Bulbs And Ballast	0	0	0	0.51	0	0	0	0	0	0	0	0	0.05	0.51
Pallets	0	0	24	0	0	24	0	0	24.33	0	0	0	7.23	72.33
Batteries	0	0	0	0	0	0	0	0	0.09	0	0	0	0.01	0.09
Printer And Toner Cartridges	0	0	0	0	0	0.07	0	0	0	0	0	0	0.01	0.07
Metal Scrap Recycling	4.33	0	1.36	0.77	5.1	0	0	0	3.32	0	0	0	1.49	14.87
	16.82	15.62	47.31	15.61	40.37	41.29	20.96	16.09	66.74	11.51	13.45	0	27.8	305.75

Month	January	February	March	April	May	June	July	August	September	October	November	December
Landfill diversion %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

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The European Union has recognized that waste from electrical and electronic equipment (WEEE) is one of the fastest-growing waste streams. To combat this issue, the EU has enacted the WEEE directive that addresses the collection and treatment of WEEE as well as establishes targets for WEEE collection, recovery, and recycling.

Each European country has implemented a specific compliance scheme to address the proper handling of electronic and packaging waste. By fulfilling our reporting duties (and payments to compliance schemes) Adtran contributes to environmental protection throughout the EU.

Adtran partners with the European Advanced Recycling Network in Europe to comply with the Waste Electrical and Electronic Equipment Directive. Through this partnership, we provide customers with the ability to return and recycle Adtran hardware once it reaches the end of its useful life.

Additionally, Adtran uses recycled packaging materials wherever possible, and all packaging materials are recyclable.



Air emissions

Adtran has effectively eliminated air emission concerns associated with its manufacturing processes by utilizing water-based, non-hazardous flux on all manufacturing lines. Additionally, we use Impel filtering system hoods to exhaust our manufacturing equipment enabling the greatest air-filtering efficiency.

Water discharge

Adtran submits annual reports to governing authorities outlining compliance with water discharge regulations. Our local government inspects annually to ensure total compliance with these regulations.

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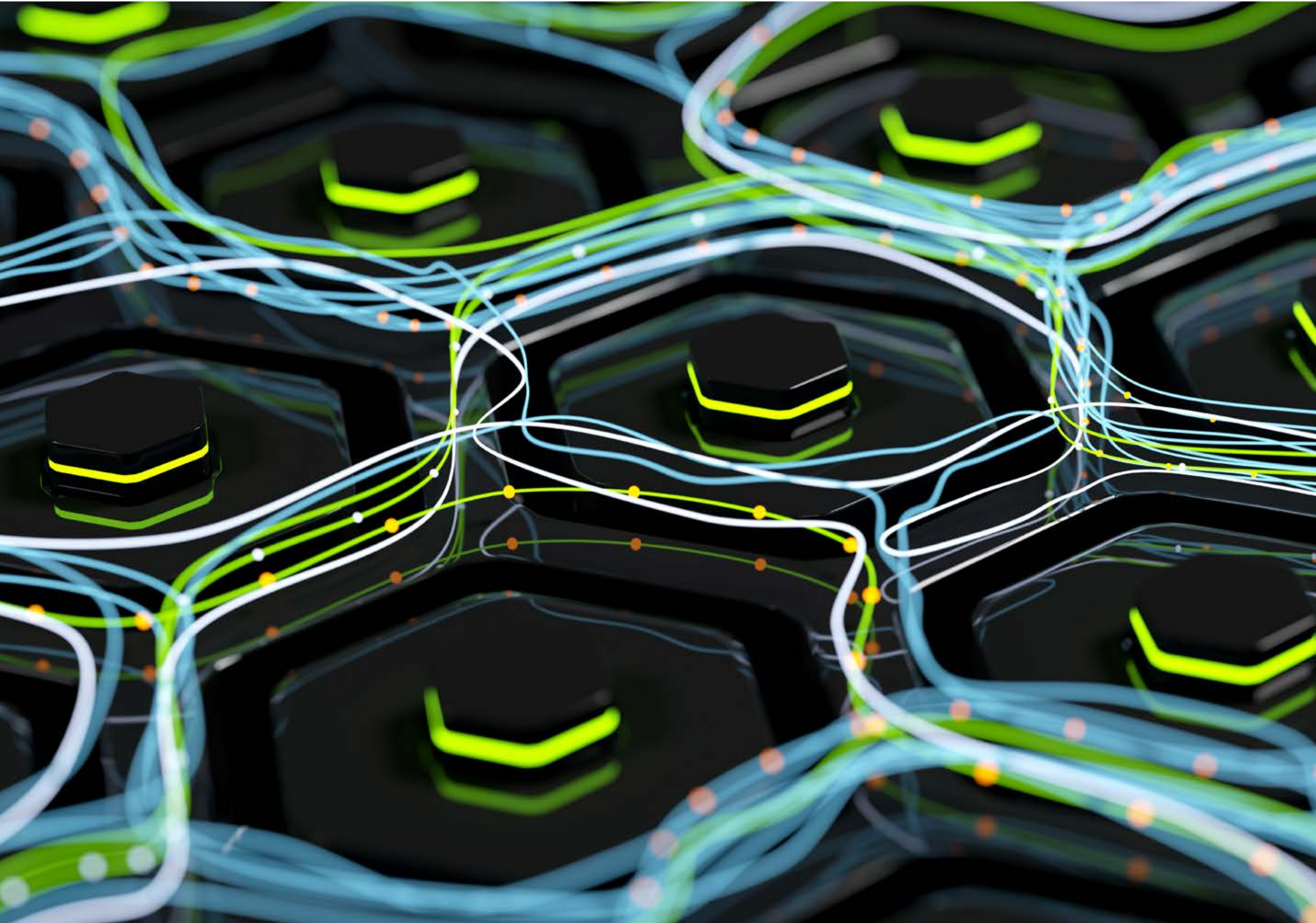
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Energy management strategy

There are three pillars to Adtran’s Energy Management Strategy.

1. **Reduce operating expenses and promote sustainability.** The Tennessee Valley Authority (TVA) and Huntsville Utilities (HU) have implemented rate structure changes and increases over recent years. Adtran recognizes that an effective energy management program can reduce expenses and promote sustainability through more efficient operation of its energy-consuming equipment.
2. **Continuously improve energy efficiency.** Adtran developed an Energy Conservation Measure (ECM) plan with prioritized projects over multiple years. We engaged SAIN Engineering to perform a Level 1 hybrid energy audit to identify additional ECMs and additional HVAC retro-commissioning projects.
3. **Leverage end-of-useful-lifecycle and technology obsolescence.** Adtran utilizes a five-year capital expenditure (CAPEX) plan to communicate, prioritize, and implement approved CAPEX projects within corporate budget parameters. We have found that a sound energy management program can help justify CAPEX projects, including those with equipment end-of-useful-lifecycle and technology obsolescence issues. Feasible energy projects provide both qualitative benefits (e.g., new air conditioning units and lighting retrofits will make the workspace more comfortable for employees) along with quantitative operating cost, heat load, and maintenance reduction benefits.



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Key components of our energy management strategy

The overall goal is to reduce energy consumption when operationally, financially, and sustainably feasible. To accomplish this objective Adtran uses the following processes:

Benchmark energy performance

An energy performance baseline was established to quantify the energy use intensity (EUI) for the campus. EUI is defined as energy consumption (KBTUs) per square foot of building floor space. EUI is used to

1. Measure and monitor campus energy performance over time
2. Compare building performance to other similar buildings
3. Prioritize energy-related CAPEX projects

We implemented a metering program and benchmarked energy performance using EUI. The data collected from the metering program provided a more comprehensive understanding of the energy performance of our campus.

Planning and prioritization

Energy conservation projects are researched, quantified, and prioritized based on several factors including:

- **End of useful life cycle** – Capital improvement projects that require replacement lighting, heating/ventilation/air conditioning, control systems, and other building-related projects typically have the opportunity for General Business to reduce building energy consumption and improve workspace comfort and functionality.
- **High priority** – These projects include “low hanging fruit” projects with a one-year or less simple payback/return on investment.
- **Medium priority** – Projects with a simple payback period of one to three years and are typically justifiable if funds are available.
- **Low priority** – These projects typically have three-to-10-year simple paybacks. Rebates and incentives often help justify the investment.
- **High visibility** – This includes projects that may not have a favorable payback period but significantly increase energy awareness such as lighting dimmers and solar photovoltaic panels.

Energy awareness

The purpose is to implant an energy conservation emphasis in the employees through education and participation. This is achieved by communicating plans and accomplishments via company Green Team events, newsletters, dashboards, and participation in professional associations.

Standards

- **Lighting** – Our goal is to reduce energy and improve illumination. Adtran will consider energy reduction lighting projects when the ROI is feasible, the technology is proven, and aesthetics are improved and/or end of the life cycle. Adtran also uses motion and occupancy sensors and other smart lighting controls when technology and return on investment are favorable.
- **Interior workspace temperature** – Normal office occupancy hours are 7:00 am to 5:00 pm Monday through Friday. In general, HVAC thermostats are operational but have the following set point limits:

- Cooling 73° to 80°F
- Heating 60° to 73°F

After-hours unoccupied set points are:

- Cooling 82°F
- Heating 60°F

Conference rooms and VIP areas may have lower cooling limits for specific requirements.

- **Space heaters** – In recent years, Adtran has curtailed the use of employee space heaters due to power issues, energy management, and HVAC conflicts. Space heaters are now only issued for specific medical reasons or system gaps as approved by management.

Adtran’s commitment to energy efficiency is evidenced through its ISO 14001:2015 certification, which can be viewed [here](#).

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Continuous improvement teams

We have implemented continuous improvement teams to study our internal processes to reduce waste and improve product quality and cost. By empowering these teams, it allows for faster response times and a timely release of innovative products and services. From environmental initiatives to supply chain management to design reviews, we are always looking for improvements that will focus on our 4 Rs – **Reduce**, **Reuse**, **Recycle** and **Rethink**.

- **Reduce** – Use less and save resources that cannot be eliminated
- **Reuse** – Extend the usable life of natural, company resources by using the material in other applications
- **Recycle** – Transform the material into another useful form after their initial application life and reduce landfill space for waste
- **Rethink** – Reconsider a better way of doing things. Consider options to reduce resource and energy use as well as costs

Renewable energy

Adtran sites in Germany (Berlin and Greifswald) have been using 100% green energy since 2021. In Huntsville, we participate in the Green Flex Program for large-scale wind generation through our purchase of 9,000 MWh. This is an increase from 3,000 MWh from 2021. The Green Flex Program is 100% wind energy sourced from Illinois, Iowa, and Kansas and is delivered to the Tennessee Valley. This program is Green Energy® Certified which guarantees renewable generation coverage for all purchased Renewable Energy Credits (REC).

By purchasing RECs, we help to reduce the impact of electricity consumption by using renewable energy to replace 10% or one month of our electricity.



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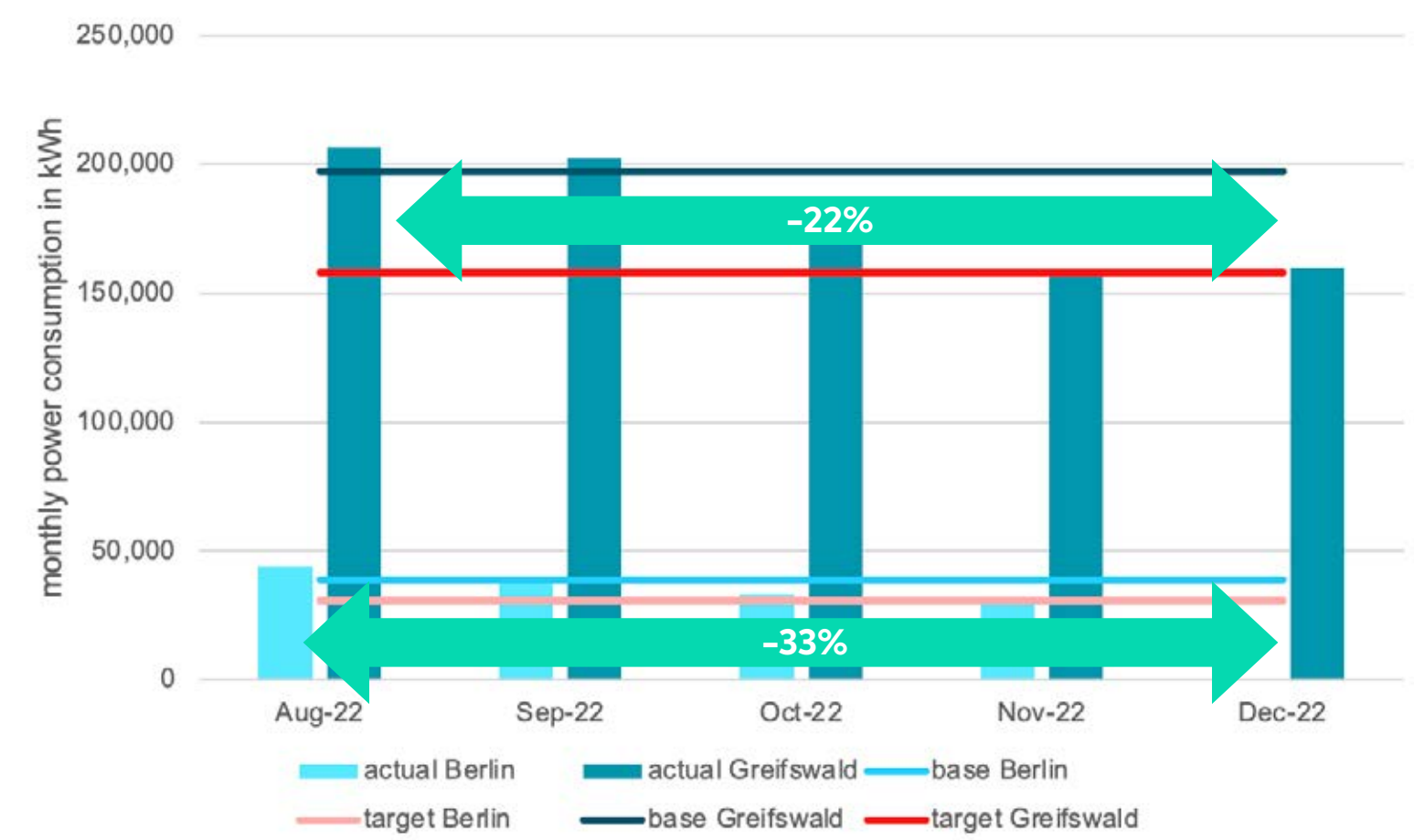
Energy reduction

Adtran has established energy management initiatives for its key facilities. In Huntsville, these initiatives have saved over 148 million kilowatt hours since their inception in 2005, enabling Adtran to avoid over 105,000 metric tonnes of carbon emissions.

Adtran has been benchmarking energy usage at the corporate headquarters in Huntsville since 2005. By calculating the Energy Use Intensity (EUI), we can monitor and measure campus energy performance over time, compare the performance of similar buildings, and prioritize energy-related CAPEX projects. To help with this effort, we implemented a metering program that enables us to understand energy performance across campus. Based on this knowledge, we have implemented practices that better utilize and conserve energy.

An Energy Management Team has been established for our German facilities. Immediate action items include moving testbeds to where they are only on when necessary, and defining energy-reduction targets for 2023 in both Berlin and Greifswald. Additionally, we will evaluate if older, power-intensive devices can be replaced by new less power-intensive, or virtualized devices.

Adtran locations in Huntsville are partnering with TVA as part of its Save It Forward program. This is a strategic energy management pilot program. As part of the program, TVA will work directly with Adtran over a two-year period conducting workshops, on-site sessions, webinars, and consulting services. The goal is to increase energy efficiency through low- and no-cost energy conservation measures. As a bonus, Adtran has pledged to reinvest a portion of its savings in the local community.



ENERGY MANAGEMENT

Adtran

Reduce operating expenses and promote sustainability, continuously improve energy efficiency, and leverage end-of-life and technology obsolescence.

2022 compared to 2021



Savings equivalent to 12.4 homes' electricity use for 1 year



Since 2005



Reduction equivalent to 22,927 homes' electricity use for one year



Key accomplishments equivalent to



Annual kwh totals

2021: 22,679,772 kwh

2022: 22,589,984 kwh

Total annual savings
89,788 kwh



Annual kwh total

2005: 40,572,941 kwh

Overall Total Savings 2005 through 2022

166,271,315 kwh

Overall Cost Avoided

\$12,470,349

Overall Metric Tons Avoided

117,834

Renewable Certified Wind RECs

9,000,000 kwh

Awards



Southeast Award

Adtran East Tower Chiller Plant Optimization project received the First Place 2019 ASHRAE Region VII Regional Technology Award for the Commercial Building, Existing Category (EBCx).



Global Award

Honorable Mention winner of an ASHRAE Technology Award in the Commercial Buildings – EBCx Category for the Adtran East Tower project in Huntsville, Alabama. The ASHRAE Technology Awards program recognizes outstanding achievement in the design and operation of energy-efficient buildings.



Association of Energy Engineers Region II

Energy Manager of the Year Award for 2021 for Adtran energy conservation projects.



2022 Energy Project of the Year

Energy Use Index (EUI)

Is the amount of energy consumed measured in Thousands of British Thermal Units (KBTU's) divided by the gross conditioned area in square feet.

$EUI = KBTU / \text{Gross Square ft}$

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Adtran has established a corporate Energy Management System (EnMS). This system is designed to reduce power consumption and operating and maintenance expenditures by implementing Energy Conservation Measures (ECMs). Some of the ECMs adopted by Adtran include:



Light-Emitting Diode Lighting Retrofits in Manufacturing and Office Areas



Retro-Commissioning of HVAC Systems and Controls



Energy Audits by an Energy Engineering Consultant



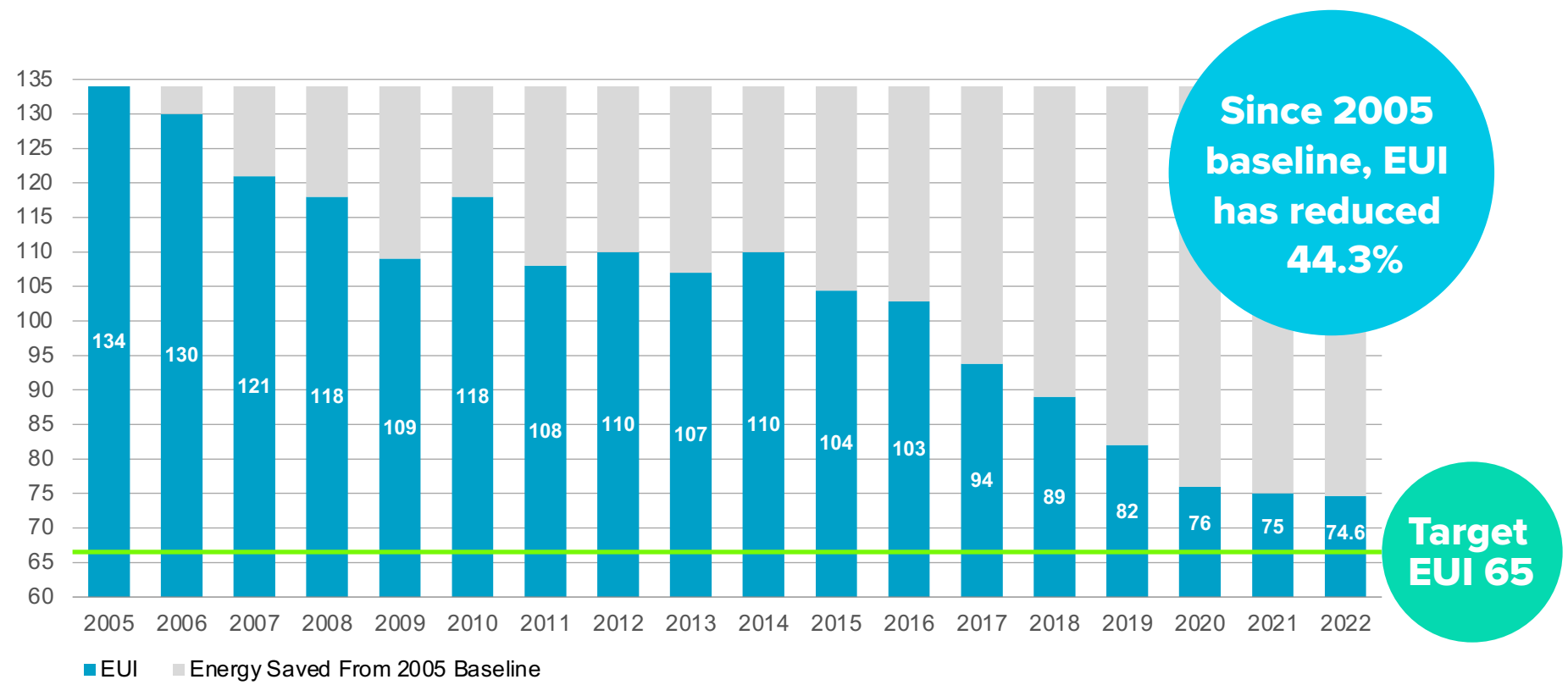
Low-Cost and/or No Cost ECMs

Target Energy Utilization Index – 65 by 2030

The chart on this page depicts Adtran’s Energy Utilization Index (EUI) from 2005 to 2020. Since the baseline was initiated in 2005, EUI has been reduced by 44.3%, from 134 to 74.6 in 2022. With the assistance of SAIN Engineering Associates, we performed an energy assessment in 2013. At that time, we established a target of 82 based on our multi-use facility. We have achieved that goal and have additional projects planned through our energy management program. Based on this, we have established a new goal of 65 EUI by 2030.

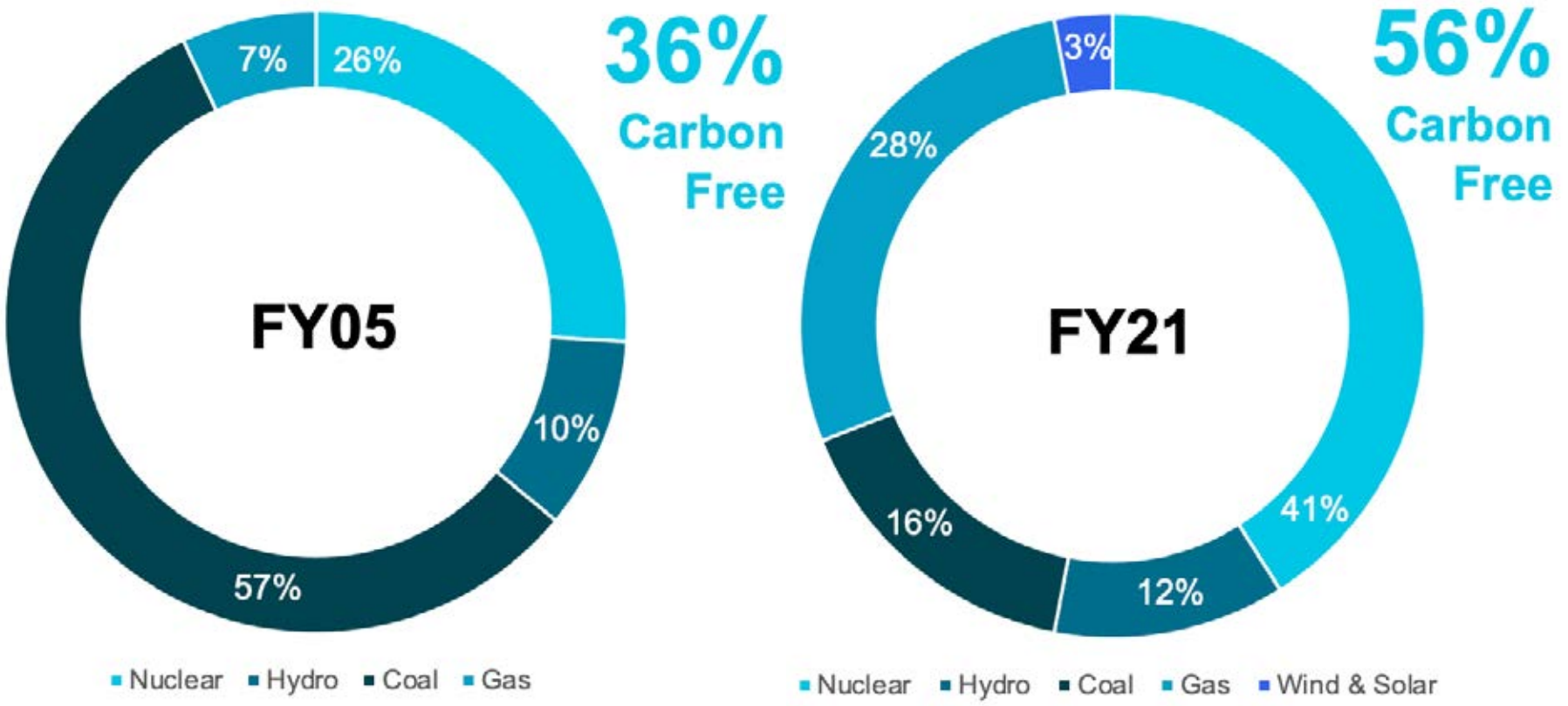
Since 2005, Adtran has also placed significant focus and resources toward the diversification of its energy mix. As you can see from the chart below, coal which was 57% of the energy mix in 2005 was only 12% in 2021. Coal has been replaced by cleaner forms of energy including wind & solar, increased hydroelectric power, EE, and increased nuclear energy and natural gas.

Headquarters Energy Utilization Intensity (EUI) index



Since 2005 baseline, EUI has reduced 44.3%

Energy mix



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Minimizing our impact

We understand that we must not only limit any negative impact we make on our planet today but also work to eliminate or reduce anything that may have a negative impact on the environment for future generations. We are striving for continuous reduction in our carbon footprint and reduction or elimination of greenhouse gases wherever and whenever possible.

The main contributors to Adtran’s Green House Gas emissions are listed below.

Facility energy consumption

Greenhouse gas emissions decreased by 24% from 2020 to 2021 and 28% from 2021 to 2022. This improvement was the result of replacing traditional energy sources with green energy. Our facilities in Germany utilize 100% green energy saving over 1,038 tonnes of CO2. In Huntsville, our Renewable Energy Certificate saved 981 tonnes of CO2, and an additional 128 tonnes of CO2 were saved by energy reduction measures implemented.

Product transportation

CO² emissions decreased by 31% from 2020 to 2021, (savings of 2,095 tonnes) and 27% from 2021 to 2022 (savings of 3,629 tonnes).



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Outsourced production (EMS)

Emissions decreased 56% from 2020 to 2021, saving 1,707 tonnes of CO².

Water

Water is an important natural resource. With more than 1,359 full-time employees in Huntsville alone combined with an 82-acre campus, we have a high-water demand. That said, we have established target thresholds for usage for 2022. These include the following.

Water utilization index (intensity) for domestic water of 15 gallons per ft².

Water utilization index (intensity) for irrigation water of 20 gallons per ft².

The chart shows the water utilization index for domestic and irrigation water and the combined total water usage. As you can see, we came in below our targets for both categories.

In addition to our efforts, Huntsville Utilities, the local provider of water in the Huntsville area, publishes an annual water quality report. The 2021 water quality report can be accessed [here](#).

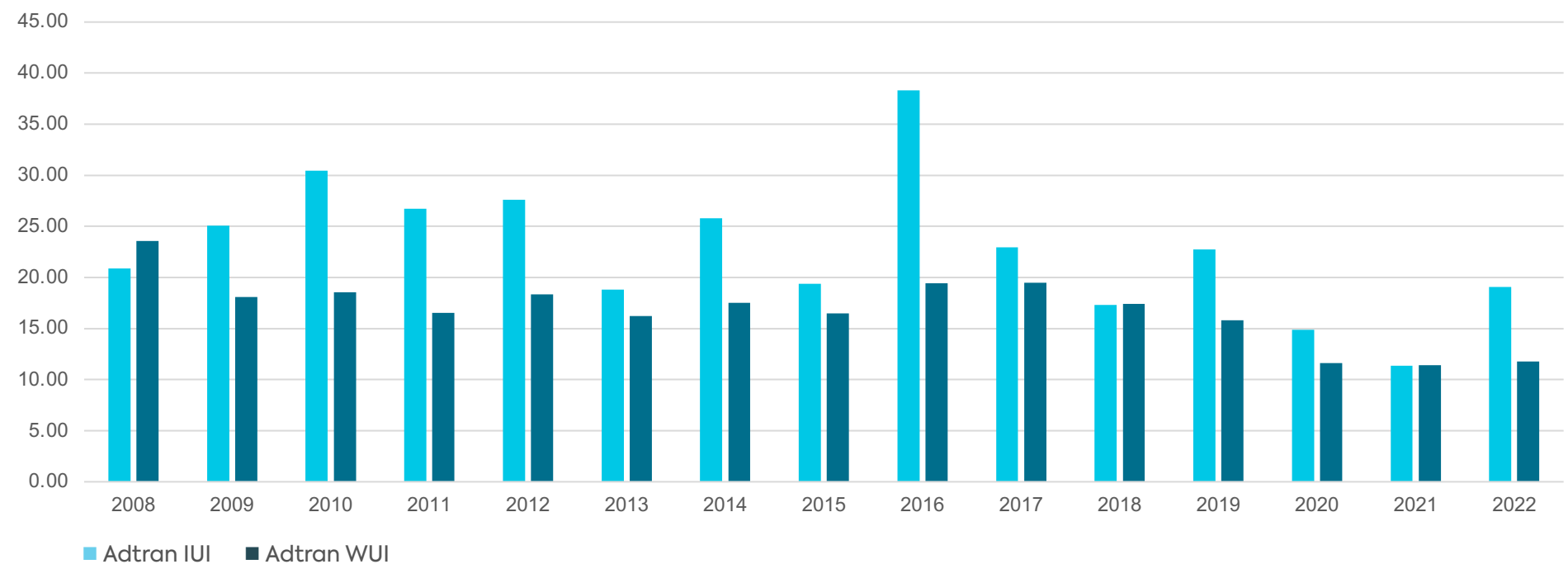
Save it Forward

Adtran is participating in the Tennessee Valley Authority’s Save it Forward Strategic Energy Management (SEM) program to assist in the development and implementation of a continuous and self-sustaining energy management improvement process focused on capital, operations, and maintenance. Our goal is to develop a program that will implement actions that align within the triple bottom line sustainability zone that considers employees, the earth, and economics with an impartial balance. The economics portion of this program will use improvements in energy efficiency as a key financial contributor.

Efforts will initially focus on the Adtran headquarters campus. The entire facility footprint, including all energy systems and energy-intensive equipment, will be included. Our expectation is to gain experience with SEM and draft a plan for the global implementation of the process. Success will be measured by tracking kWh/std. unit, Energy Utilization Intensity (EUI), and adopting the Performance Tracking Model that will be built during the program. The goal is to reduce Adtran’s EUI to a score of 65 by 2030.

After the review of Energy Conservation Measures (ECMs), we understand that the Save It Forward program will compete for resources. We will prioritize ECMs and concentrate Energy Team efforts on items of high priority with high returns. This will enable us to better manage competing initiatives.

Water utilization



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Awards and recognition

Adtran has received many awards for its sustainability efforts. Selected awards are outlined below.



**2020
Global Award
Honorable Mention**

ASHRAE Technology Award
EBCx Category
Adtran East Tower Project

**2018 – 2019
Southeast Award
First Place**

ASHRAE Region VII
Regional Technology Award
EBCx Category
East Tower Chiller Plant
Optimization



**2019
Energy Engineer
of the Year**

**2021
AEE Energy
Manager of the Year**

**2022
AEE Project
of the Year**

Carbon emissions reductions

Adtran is focused on reducing our carbon emissions. As a result, we have participated in the CDP since 2017, continually looking at ways to reduce our carbon emissions. Our 2021 score for climate was C, which is comparable to the North America average of C. We initiated significant efforts to improve this score. The company has established a focused ESG initiative that is overseen by the Board of Directors. For 2021, our Scope 1 emissions were Net Zero and we have submitted initial targets. For 2022, The score remains a C.



Carbon emissions reported through CDP (Scope 1 and Scope 2)

Year	Reporting period	Scope 1	Scope 2
2017	2016	13	24501
2018	2017	65.6	25670
2019	2018	60	21991
2020	2019	60.6	10185
2021	2020	58.5	8509
2022	2021	216*	6510

Emissions reported in Metric Tonnes CO2e

*An unusual event, water damage in our North building impacted electrical connections to the grid. The facility ran on Diesel Generators to power critical areas and diesel powered air conditioners were used to cool critical infrastructure and reduce mold impact. Scope 1 emissions were almost four times normal. Carbon Offsets were purchased from South Pole Carbon Asset Management Ltd. to fully offset these Scope 1 emissions.

Science-based target initiative

Adtran recognizes the need to not only reduce or eliminate emissions but to do so in a timely fashion thus preventing harm to the environment. In 2022, we submitted our letter of commitment to the Science Based Targets Initiative. Our participation in this initiative will enable us to establish science-based targets that set forth a meaningful timeline for completion.



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Product sustainability

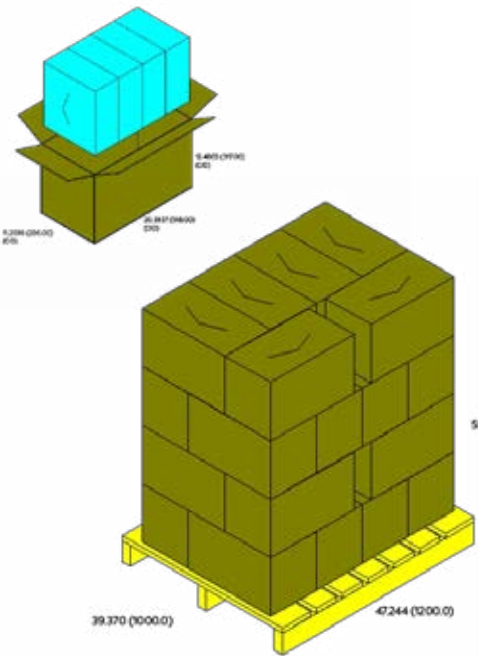
We are committed to upholding and promoting policies that protect the environment. Our dedication to environmental compliance includes engaging in internal, corporate-wide initiatives, and adhering to and championing global standards established for the original equipment manufacturer community.

Eco-design

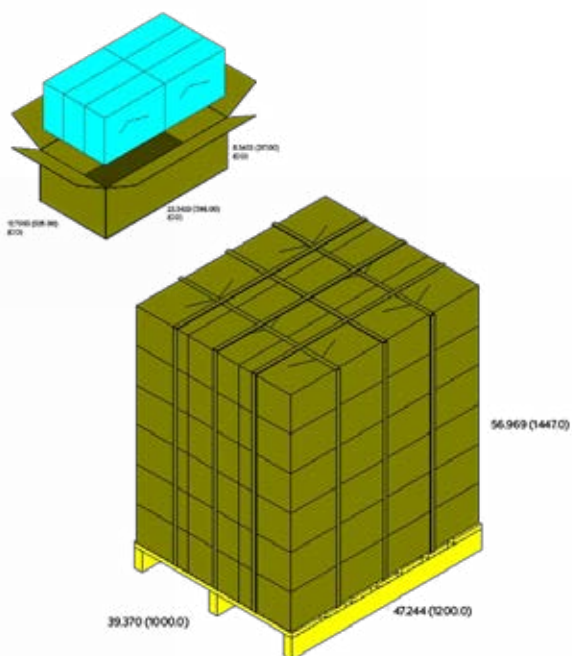
Achieving eco-design is dependent upon our ability to meet current needs, without hindering the ability to meet the needs of future generations in terms of economic, environmental, and social challenges. At Adtran, we believe that it is not only possible but necessary to do this. As an innovator of networking products, we understand it is our responsibility to provide businesses with solutions that not only support eco-sustainability efforts but do so in an affordable, responsible, and ethical manner. Our product sustainability initiatives include efforts to improve product design, product packaging, materials design, and compliance with energy ratings for reduced carbon missions and increased material and energy conservation. The resulting eco-design initiatives can then be used to help other businesses reduce their carbon footprints, lower their power consumption, and minimize their impact on the environment.

In 2022, we began Life Cycle Assessment (LCA) of our products with an initial pilot project. This project validated the tool and the ability to identify the appropriate information required. Going forward we have plans for completing LCA for key new products. We also initiated Eco-Design guidelines to be used during product definition. These guidelines will help guide our R&D teams to develop products with the environment considered from the inception.

Old packaging solution



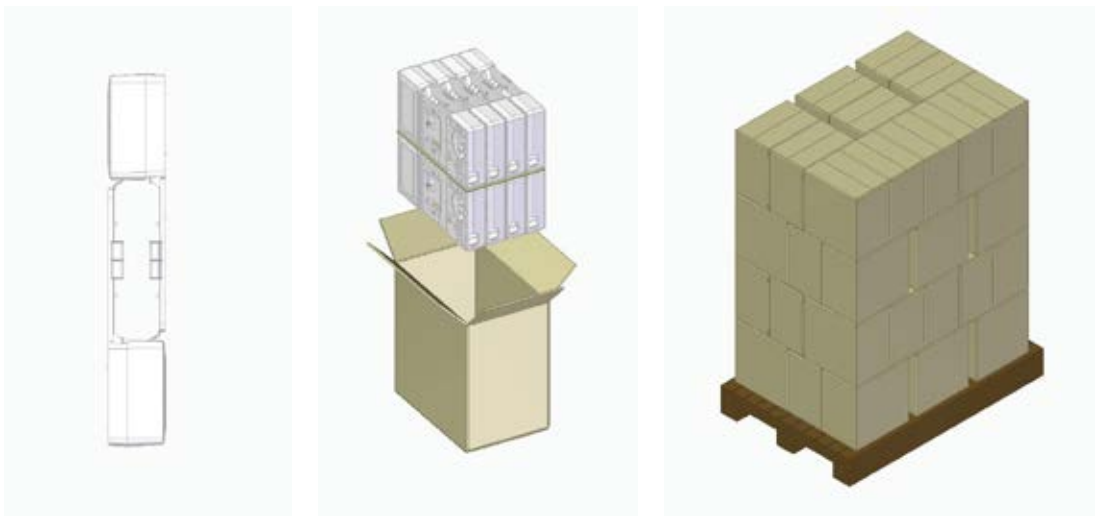
New packaging solution



Initiatives

Packaging is an area that can have a significant impact on the product's life cycle. Our efforts to improve our product packaging have been highly successful. We switched from an individually packaged fiber tray in an overpacked box to a nested bulk package design to reduce the amount of packaging materials per unit and therefore increase shipping pallet efficiency.

In another packaging reduction effort, we decreased the size of packaging materials per unit and therefore increased our shipping pallet efficiency. Through this effort, we increased the number of units per pallet by 125% and decreased the air freight cost per unit by 54%.



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Product compliance

We provide products that conform to environmental directives across the globe. The Restriction of Hazardous Substances (RoHS) is an initiative to reduce the use of Lead (Pb) and other substances commonly used in the electronics industry. We have been providing RoHS-compliant products since its inception in 2006. We also adhere to other sustainability initiatives including WEEE and REACH.

Banned and monitored substances

We recognize the need to identify and control the chemicals (substances) used in our products and/or packaging. Due to the growing number of substances being monitored, our Black and Grey substance list will be continuously updated as new substances are identified. This Black and Grey list specifies substances that Adtran has banned, restricted, or targeted for reduction. These restrictions cover both known regulatory and Adtran-specific requirements. These mandatory requirements are applicable worldwide.

The scope of the Black and Grey List covers substances present in the products (including components, parts, subassemblies, and accessories) as well as substances present in packaging materials.

The sections of the lists are defined as follows:

Restriction in force: This identifies substances that are banned or restricted in applications (components, materials (solders, pastes, etc.), parts, subassemblies, and accessories) related to Adtran products and/or packaging.

Monitored substances: This identifies substances that we expect, based on reasonable facts, to be reduced and phased out from our products and/or packaging, subject to the availability of technically, environmentally, and economically sound alternatives. Suppliers are strongly advised to investigate suitable alternative solutions.

We exercise due diligence before any supplier’s components are selected for our products.

To be environmentally compliant, suppliers must submit the following documentation.

- RoHS Documentation – Statement of Compliance (SoC) - Blanket or Component Specific
- Letter of Conformance to our Black and Grey List
- Must have a Responsible Business Alliance Code of Conduct on file that shows conflict mineral compliance or provide CMRT report

Supplier responsibilities

In 2022, Adtran began working with IntegrityNext to implement a more complete supplier program evaluation and monitoring program. To date, we have approximately 50% of our major suppliers within the system.

With this tool, we communicate our required supply chain ESG responsibilities through a questionnaire. The supplier completes the questionnaire and we review the supplier feedback on topics such as: Anti-Bribery & Anti-Corruption, Environmental Protection, Human Rights & Labour, Health & Safety, Supply Chain Responsibility, Energy Management, Conflict Minerals, Diversity, Equity & Inclusion, Carbon Footprint, and Living Wages.

We validate that the supplier meets our key criteria. We then use the tool to monitor each supplier for negative news to make sure they are maintaining the required conduct and not exposing the company to additional risk.

Going forward this tool will support our efforts to meet the requirement of the EU Supply Chain regulations.



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The social component of our ESG component is especially important as it relates to our employees and the communities we serve. We believe that our most valuable asset is our people. To ensure our Company continues to succeed, our objective is to be able to recruit, hire, and retain top talent. Our ability to attract and retain a high-quality workforce is dependent on our ability to maintain a diverse, equitable, and inclusive workplace that provides opportunities for our employees to learn and grow in their careers. This is supported by strong compensation, benefits, community service, and other programs that enable employees to build connections within the community.

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Employees

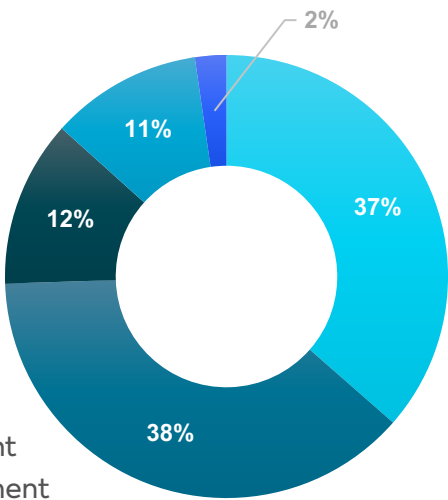
Our employees are the basis of our success. To ensure Adtran continues to succeed, we must recruit, hire, and retain top talent. Our ability to attract and retain a high-quality workforce is dependent on our ability to maintain a diverse, equitable, and inclusive work workplace that provides opportunities for our employees to learn and grow in their careers. This is supported by strong compensation, benefits, community service, and other programs that enable employees to build connections within the community.

Our diverse workforce is spread among many groups throughout the company, with the largest groups of employees in R&D (35%) and Manufacturing (26%).

Adtran is proud to boast of the longevity of its employees. Our employees average 15.6 years of service.

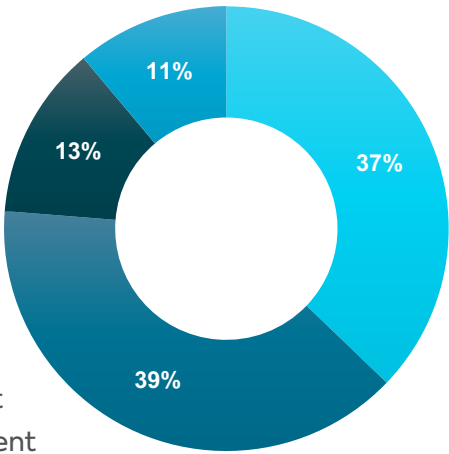
2020

- Males total
- Females total
- Not disclosed
- Males in management
- Females in management



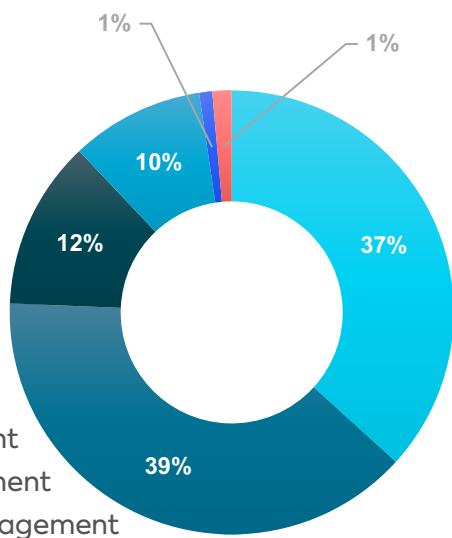
2021

- Males total
- Females total
- Males in management
- Females in management



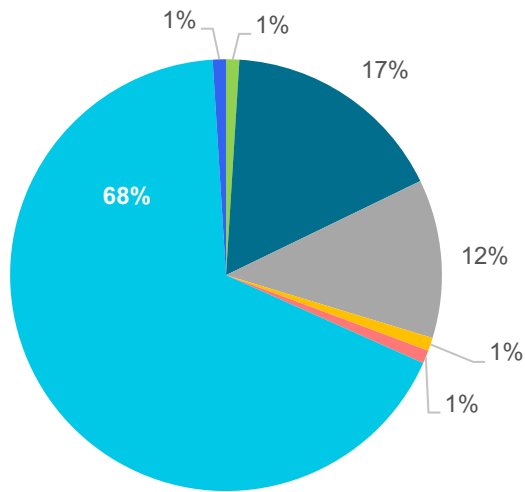
2022

- Males total
- Females total
- Not disclosed
- Males in management
- Females in management
- Not disclosed in management



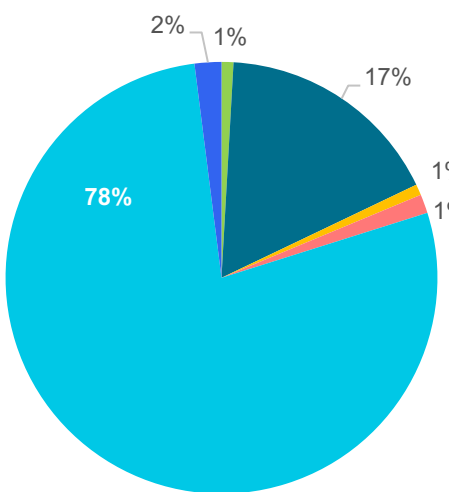
2020

- Australia
- Germany
- India
- Mexico
- United Kingdom
- United States
- All other combined



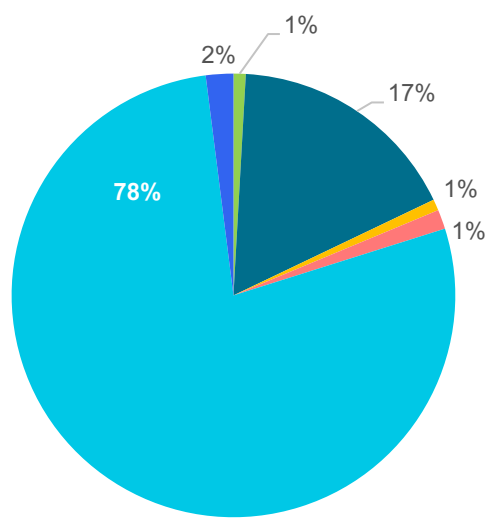
2021

- Australia
- Germany
- India
- Mexico
- United Kingdom
- United States
- All other combined

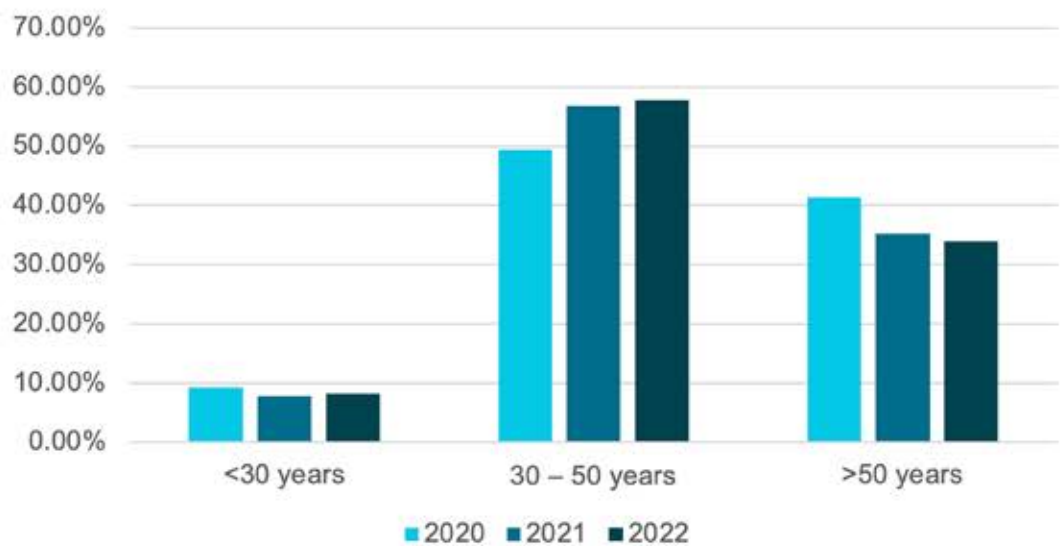


2022

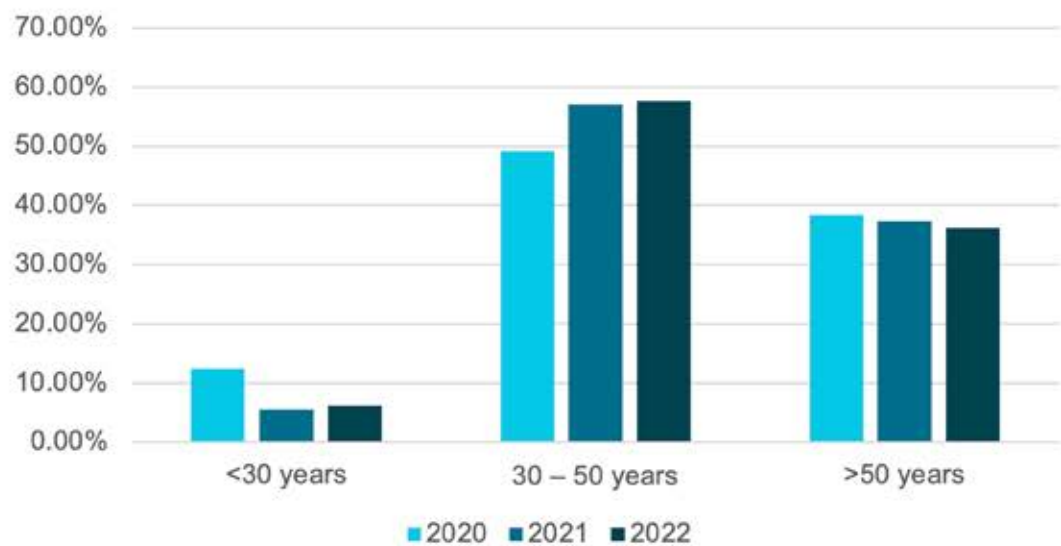
- Australia
- Germany
- India
- Mexico
- United Kingdom
- United States
- All other combined



Males



Females



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Benefits

Equally important to monetary compensation is the benefits package we provide for our employees. Adtran proudly offers a competitive and comprehensive benefits program for its employees that ranges from insurance and associated pre-tax spending accounts (medical, dental, vision, life, disability) to 401(k) with a qualified employer contribution, paid time off (vacation and sick), employee assistance programs, and a variety of optional benefits, among others.

The company also offers some unique benefits like paid volunteer hours and on-site low or no-cost services including a fitness center, cafeteria, and nurse practitioner. Adtran believes in the power of education. After completing one year of full-time employment, employees are eligible to take part in our tuition reimbursement program. With approval, the program will reimburse employees the cost of tuition for a degree benefitting the company. This program not only provides financial assistance for employees but also gives them a means of seeking higher-level or higher-paying positions within the company.

Employee training

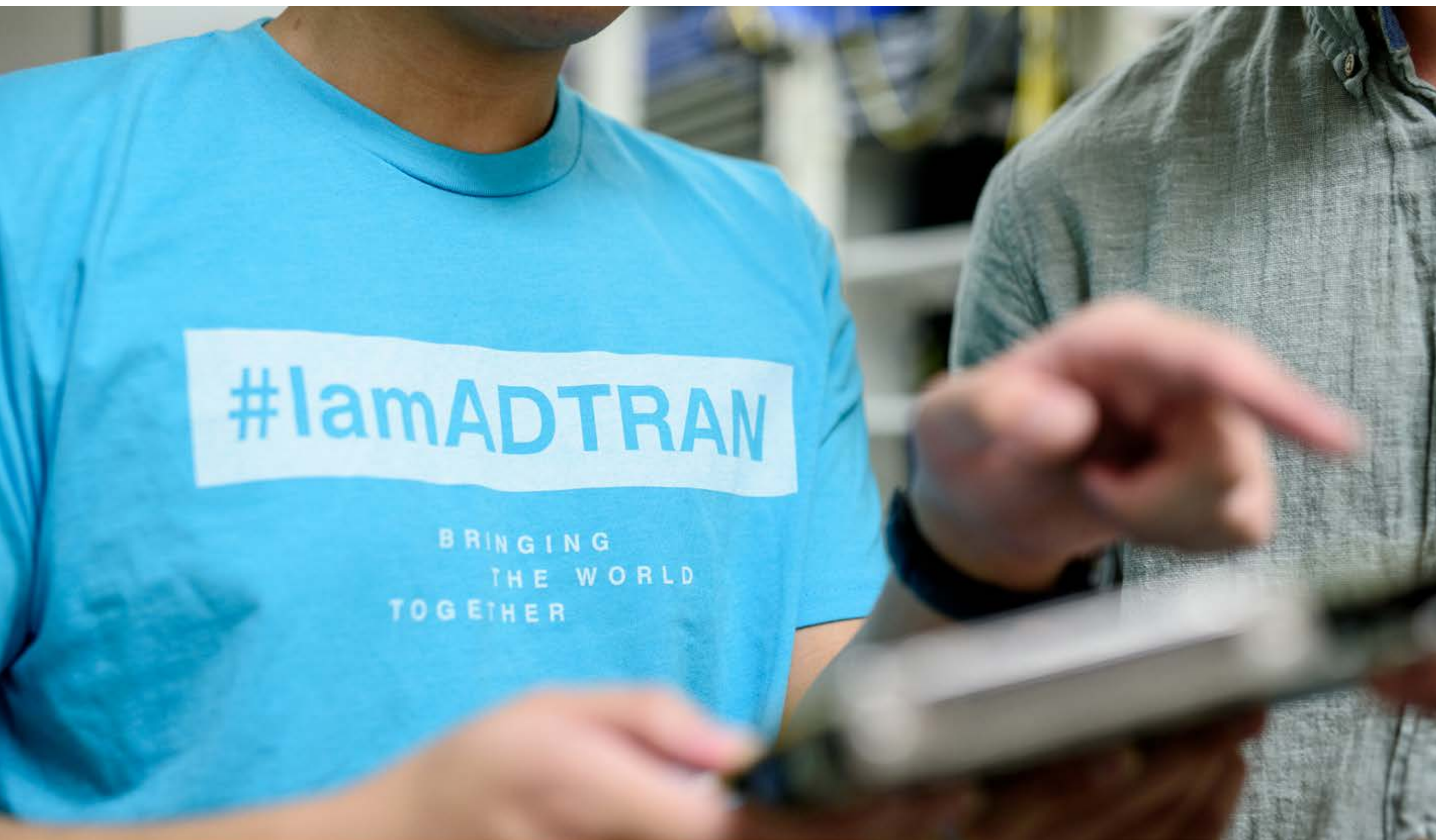
Adtran offers a variety of in-person, online, and prerecorded training classes for employees. Employees must complete training yearly or bi-yearly, such as GDPR (General Data Protection Regulation), preventing discrimination, anti-corruption, and information security and cyber risk awareness. We also offer employees access to various productivity classes on tools we use daily, like Microsoft Excel and Teams. Additionally, employees have access to Udemy, where they can access training on hundreds of topics.

Employee engagement

Adtran continually works to maintain positive relationships with its employees. We monitor employee engagement using employee satisfaction surveys and using Net Promotor Scores.

Collective bargaining agreements

As of December 31, 2021, approximately 168 employees (76%) of Adtran GmbH were subject to collective bargaining agreements of either the Association of Metal and Electrical Industry in Berlin and Brandenburg e.V. or NORDMETALL Association of Metal and Electrical Industry e.V. Although these collective bargaining agreements will expire on September 30, 2022, negotiations with the employees of Adtran GmbH for a new collective bargaining agreement are ongoing and we have not experienced any work stoppage. None of our other employees are subject to collective bargaining agreements.



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Community involvement

Team Adtran

We believe in supporting the communities in which we operate. The company has always given generously to local charitable organizations. However, in 2016, the desire to move from just making monetary donations to encouraging employees to get involved in our community evolved into Team Adtran.

While the Team Adtran Committee is made up of employees in Huntsville, AL, Team Adtran consists of all employees worldwide. The goal is for employees to feel like their company wants them to pursue their individual passion for different non-profits that are vital to making our communities great.

These activities include supporting a local food distribution center, reading/ tutoring in the classroom, lending gardening expertise, donating much-needed personal hygiene items to local non-profits, and much more.

Below are a list of the nonprofits that were helped by Team Adtran in 2022.

- 305 8th Street
- A New Leash on Life
- Academy for Science and Foreign Language
- Alabama Constitution Village Foundation EarlyWorks Children’s Museum
- Alabama Kidney Foundation
- ALS Association
- Association of the United States Army
- Big Brothers Big Sisters of the Tennessee Valley
- Blue Bananas First Lego League Team
- Bob Jones High School Patriot Racing
- Burritt on the Mountain
- Canines for Coping funded by Huntsville Hospital Foundation
- Castin’ ‘N Catchin’ benefiting Children’s of Alabama
- Central North Alabama Health Services
- Christmas Charities Year Round
- Crisis Services of North Alabama
- Decatur Morgan Hospital Foundation
- Eli’s Block Party Childhood Cancer Foundation
- Girls Inc. Huntsville
- HaveiHope
- Heart to Heart Pet Partners, Inc
- Huntsville Inner City Learning Center
- Huntsville Police Department Community Bonding Event
- Huntsville Police Department SRO Youth Camp
- Huntsville Urban Bike Share Cooperative
- Huntsville Utilities delinquent account payoffs for Christmas
- Kids to Love Foundation
- Kiwanis Club of Huntsville
- Lee High School Esports
- Liberty Learning Foundation
- Lions Club
- Little Wishes
- Luke’s Wings
- Make A Way Foundation
- March of Dimes
- Microwave Dave Music Education Foundation
- National Multiple Sclerosis Society
- New Futures, Inc
- Next Step Farms
- Partnership for a Drug-Free Community
- Prepare and Respond (PAR)
- Secret Meals For Hungry Children
- Serving With a Purpose
- Special Camps
- Star Charity Golf Classic benefiting the Military Child Education Coalition and the National Children’s Advocacy Center
- TeamBuilderz
- The ELM Foundation/ True Charity Initiative



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Adtran Charitable Foundation

The Adtran Charitable Foundation is a 501(C)(3) established in 2011 to provide financial assistance to Adtran employees who have been affected by natural disasters and other catastrophic events or who may be experiencing severe personal or family hardships. A portion of the funds is also distributed to other 501(C)(3) organizations in the community that our employees request we support.

Employees can submit requests for financial assistance and all requests will be considered by the Adtran Charitable Foundation board. The foundation is funded by Adtran and through donations from Adtran employees.

For over a decade, the Quality Environmental program has sponsored a group of employees with similar community interests to make up the Adtran Green Team. This cross-functional team has established regular meetings. The team shares knowledge of environmental events and identifies opportunities within the workplace and the local community.

Our goal is to reduce corporate costs through innovative strategies such as recycling, using green materials, and reducing waste. Our Green Team works in close collaboration to support the environment and enhance employees’ reputation as a thoughtful business atmosphere.

Our Business Objectives are focused on minimizing the use of water, energy, and raw materials as we go about our business. We have an added emphasis on reducing carbon emissions and finding ways to utilize materials in a renewable or more eco-friendly manner.

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Green Team

As the Adtran Green Team continues to grow, we are always looking for Green events to increase employee engagement and education. We continue to focus on opportunities to reduce emissions and promote opportunities for inclusion within our local economies.

Green Team activities for 2022: As pandemic restrictions began to loosen, and more employees returned to campus we restarted this initiative.

1. Observance for Water Day March 22 – Groundwater is invisible, but its impact is visible everywhere. Out of sight, under our feet, groundwater is a hidden treasure that enriches our lives. Almost all of the liquid freshwater in the world is groundwater.
2. The Environmental Impact of Coronavirus – Shared information on how to increase the amount of biomedical waste being generated, improper disposal of personal protective equipment such as face masks and gloves, and reduction of recycling. [The Environmental Toll of Disposable Masks](#)
3. Volunteered with the Huntsville Green Team on these activities–
 - March 26, UAH Big Event, 9 AM – 1 PM at the UAH Campus
 - April 16, Ditto Landing Clean Up, 9 AM – 1 PM, Ditto Landing
 - May 21, South Hsv. Clean Up, 9 AM–Noon, Sandra Moon Complex

4. Our master gardeners always provide educational information on gardening.
5. Volunteered to help with the Huntsville Green Team Plant and Clean Up.
6. Shared information to engage and volunteer for Earth Day activities throughout the community.
7. Recycling Day – engaged employees to recycle and clean out unwanted items Our Results for Recycling Day 2022:
 - Collected 20 13-gallon bags of clothes donated to the Downtown Rescue Mission.
 - Collected five bags of batteries.
 - Collected nine pairs of glasses donated to the Lions Club.
 - Collected three bags of towels donated to the Greater Huntsville Humane Society.
 - Collected recycled electronics weighing 367 lbs.
 - Collected 14 cell phones.
 - We also had a shredded Bin on campus for employees to discard personal papers.

The Adtran Green Team ensured that all employees were engaged in this event.



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Workplace safety

Adtran prides itself on providing a safe work environment for its employees. The percentage of employees impacted by workplace accidents and the percentage of work hours missed due to accidents for the past five years are as follows:

Year	Percentage of Employees Affected	Percentage of Work Hours Missed Due to Accidents
2018	0.20%	0.014%
2019	0.15%	0.002%
2020	0.50%	0.026%
2021	0.005%	0.069%
2022	0.000%	0.000%

Response to COVID-19

In response to the COVID-19 pandemic, we implemented significant changes that were determined to be in the best interest of our employees and the communities in which we operate. Immediate actions taken included restricting access to our key facilities globally, enabling approximately 70% of our workforce to move to an effective work-from-home environment. We introduced enhanced health and safety standards and appropriate facility controls and practices in compliance with local, state, and federal recommendations and regulations in the U.S. and at our international locations.

In areas where it is necessary to have critical, on-site personnel, such as at our manufacturing facilities, additional health and safety measures were implemented to provide the safest environment possible for these workers. These measures included, among other things, workplace health, hygiene, sanitization, social distancing guidance, and alterations to our manufacturing operations to accommodate our COVID-19 safety plans. To date, we have not experienced any significant COVID-19 exposure incidents at our manufacturing facilities. Implementing these measures helped to protect our employees and their families, which in turn allowed our production facilities to remain operational and contributed to our overall performance in 2020, positioning us for future growth.

At the start of the pandemic, Adtran enacted its Crisis Response Team. This cross-functional group was charged with monitoring the state of the COVID-19

pandemic, recommending needed actions to senior management, and keeping employees informed about the pandemic and how it affects them. Adtran chose to follow CDC guidelines for safety throughout the pandemic. The company also hosted multiple COVID-19 vaccination clinics and provided free at-home test kits to symptomatic employees.

In 2021, Adtran adopted a hybrid work model. Based on job type and need to be on campus, employees were placed into one of three designations: on-site, hybrid, or work-from-home. Those in the on-site category work at the corporate headquarters location during all work hours. Hybrid employees work from home three days per week and on-site two days per week. These employees have the flexibility to increase their number of days on campus as needed. Work-from-home employees perform all their work duties from their homes.



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Diversity, Equity, and Inclusion

Adtran is a global business, serving customers in more than 60 countries worldwide. We believe that maintaining a diverse and inclusive workforce is critical to the success of our business. We encourage an environment where individuality is embraced regardless of age, gender, identity, race, sexual orientation, physical or mental ability, ethnicity, and perspective. In this environment, each employee is accepted and respected and can, therefore, bring their most authentic self to work. To this end, we have established an employee-driven Diversity, Equity & Inclusion (DE&I) Council to spearhead our efforts. The DE&I Council is comprised of employee volunteers who are passionate about DE&I and how it affects our workforce.

Adtran has incorporated DE&I into its interview process. Members of the DE&I Council participate in special interview sessions with potential job candidates allowing the candidate to ask questions relating to the corporate culture, DE&I practices, and other relevant issues. This enables the candidate to understand the daily practices of the company from an employee perspective. Adtran has made DE&I training available and encourages participation by all employees.

In addition to diversity in our workforce, we seek to ensure diversity in our board of directors concerning skills, experience, gender, race, and ethnicity. Our Board of Directors is comprised of nine members, three members are female and three members are ethnically diverse. Additionally, the board of directors has a diversity of skills and experience concerning accounting and finance, management and leadership, vision and strategy, business operations, business judgment, crisis management, risk assessment, industry knowledge, corporate governance, and global markets.

In addition to these initiatives, the company promotes DE&I-related days of recognition and holidays to the employees. Adtran is a corporate sponsor of the annual MLK Unity Breakfast and the Community Foundation's Racial Equity Fund.

Equal opportunity

Human Resources works with the DE&I Council to raise awareness of diversity, equity, and inclusion initiatives within the company and encourages conversation with employees about where change is needed and how that change can be facilitated. Each year Adtran engages an Affirmative Action consultant to benchmark the company's activities per job type. Some of the areas evaluated are pay differential by gender for similar job types and pay differentials related to race or ethnicity.

Some of the Human Resources initiatives underway in this area include:

Focusing on the applicant-to-hire process to ensure the process allows for specific recruiting with a focus on eliminating underutilization.

Planning to further educate hiring managers on new processes and requirements.

Gathering feedback from interviewers on each interview candidate. Feedback is audited to ensure equity. Any issues are addressed with interviewers and hiring managers.

Ongoing reviews of pay equity information.

Performing automated and audited outreach.

Evaluating the effectiveness of our invitation to self-identify at the applicant and post-offer stages.

- Increasing diversity in the high-potential pool and all levels of the succession plan.
- Reviewing compensation rewards and recognition strategies to ensure parity among the hybrid workforce.
- Publish and communicate the Affirmative Action Plan to senior leaders.
- Implement steps in hiring policy to increase diversity in the candidate pool, interviews, and hiring.



Governance




















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The Adtran Holdings Board of Directors adheres to governance principles designed to ensure the continued health of the board and promote excellence in the performance of its duties. Our board of directors is committed to having sound corporate [governance principles](#). These principles are essential to running our business efficiently and to maintaining our integrity in the marketplace.

Governance highlights

- Effective leadership, independent oversight, and strong governance**
 - Independent lead director
 - Directors required to submit resignations if they do not receive sufficient votes for re-election
 - No classified board
 - Annual Board and committee evaluations, as well as director self-evaluations, with focus on tangible improvements
 - Regular executive sessions of independent directors
 - Risk oversight by full Board and designated committees
 - Limitation on directorships of other publicly traded companies
- Stockholder rights and accountability**
 - Annual election of all directors
 - Majority voting in uncontested director elections
 - No poison pill
 - Stock ownership guidelines and equity retention requirements for non-employee directors
 - No supermajority standards — stockholders may amend our bylaws and charter and approve mergers and business combinations by simple majority vote

	Audit Committee	Compensation Committee	Environmental, Social and Governance Committee	Nominating and Corporate Governance Committee
H. Fenwick Huss				
Johanna Hey				
Gregory McCray				
Balan Nair				
Jaqueline Rice				
Nikos Theodosopoulos				
Kathryn Walker				
 Chair  Member				

Board composition

The Adtran Holdings [Board of Directors](#) is composed of members whose experience, qualifications, attributes, and skills, when taken together, will allow the board to satisfy its oversight responsibilities effectively in light of the company’s business and the laws and stock exchange rules that govern its affairs. We have no minimum qualifications for director candidates. In general, however, our board will review and evaluate both incumbent and potential new directors to achieve diversity of skills and experience among our directors. We seek to maintain an effective mix of technical, financial, operating, and management experience. Our board has adopted corporate governance principles to guide the company and the board on various governance matters, and these principles task the Nominating and Corporate Governance Committee of the board with establishing criteria for the selection of potential directors, taking into account the attributes of leadership, independence, interpersonal skills, financial acumen, business experience, industry knowledge, and diversity of viewpoints.

We have a long-standing policy of keeping our board relatively small. We also believe that our board should be comprised predominantly of independent directors from diverse backgrounds external to the company but should nevertheless include the insight and judgment of our senior management. Our board has no specific requirements regarding diversity but believes that its membership should reflect a diversity of experience, gender, race, ethnicity, and age. In assessing the experience, qualifications, attributes, and skills that led our Nominating and Corporate Governance Committee and board to conclude that each director has the appropriate qualifications to serve as a director of the company.

- 8 out of 9 directors are independent.
- Our board is currently 33% female and 33% ethnically diverse.
- The board has four primary committees that address different areas of the business. These are the [Audit Committee](#), [Compensation Committee](#); [Environmental, Social and Governance Committee](#); and [Nominating and Corporate Governance Committee](#). The division of these committees among the board members can be seen in the chart.

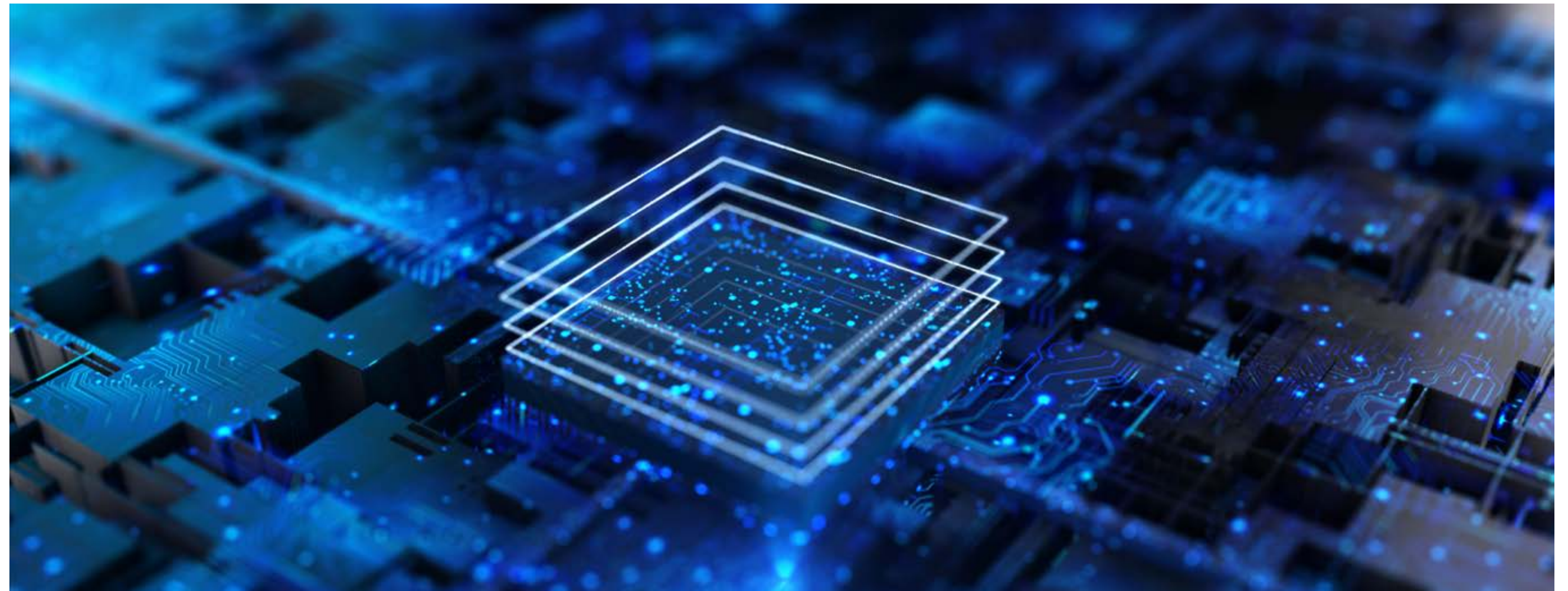
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Risk management

We promote risk-awareness throughout our company through mandatory online training in areas like Cybersecurity, Enterprise Quality Management System, Adtran Management System, Insider Trading, Code of Business Conduct and Ethics, Data Classification, Diversity and Inclusion, GDPR, Global Anticorruption, Privacy Shield, Preventing Discrimination and Harassment, and Export Controls, among others.

Employees can also report potential risks to the board online via www.redflagreporting.com (Client code Adtran), via phone at 1-888-723-8726 (via Red Flag Reporting), or in person to their supervisor, the Human Resources Department, or the director of internal audit.

Oversight of risk management begins with the Adtran Holdings Board of Directors. The board is responsible for assessing the company's approach to risk management and overseeing management's execution of its risk responsibilities. The board and its four committees receive regular updates on corporate risk management. Each of the four board committees examine specific risk components.

- **Audit committee** – Financial and audit risks
- **Compensation committee** – Risks related to compensation programs
- **Social and governance committee** – Risks related to corporate social responsibility, sustainability, environment social, environmental matters
- **Nominating and corporate governance committee** – Risks associated with government and industry regulations

The company's senior management team is responsible for assessing and managing Adtran Holding's exposure to risks on a day-to-day basis.

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Materiality analysis

A materiality analysis is required for reporting based on the GRI standard. The team met with key internal stakeholders to assess the standard topics. The analysis considered key stakeholder concerns and the impact on the business.

Key stakeholders were identified:

1. Customers
2. Shareholders and investors
3. Suppliers
4. Government Agencies
5. Communities
6. Employees
7. Certification Bodies

Adtran strives to maintain open communication with all relevant stakeholders. For many stakeholders, such as customers and suppliers, this communication may include surveys, direct feedback through customer service, or regular business reviews and meetings.

The following indicates the key aspects and the materiality. Key Material aspects are in bold in the table.

GRI Standard	Aspects
305	Emissions/Climate Change
302	Energy Management
306	Waste Management
303	Water and Effluents
204, 308, 414	Supplier Assessment
301	Materials EU (WEEE, REACH, RoHS, etc.)
404	Training
304	Biodiversity
	Data Security (GDPR etc.)
207	Reporting (SEC, IRS etc.)
403	Occupational Health
	Covid 19
405, 406	DEI
401, 402, 407	Employment, Labor, Fair Pay,
413	Community
203	Indirect Economic Impact
410	Security
418	Confidentiality and Security
408, 409, 412	Labor, Modern Slavery
205,206	Ethics
201,202,	Performance
415, 416, 417	Public, Customer Safety

In our analysis, the environmental aspect of emissions and climate change clearly stands out from the other essential aspects. It is followed by energy management, COVID-19/mobile working, and information security.

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Business ethics

Adtran is proud to be known for its business ethics and responsible business practices. We are committed to conducting our business with honesty, integrity, and fairness. The [Code of Business Conduct and Ethics](#) unites all employees with one set of values that guide our daily decisions and actions.

We not only expect our employees to act with the highest ethical standards but those we choose to do business with as well. Our [Supplier Code of Conduct](#) is provided to each supplier that provides products to us and outlines expectations in areas including the treatment of workers, workplace safety, and ethical business practices. Suppliers must familiarize themselves with this code of conduct and act in accordance with the standards it outlines, otherwise the business relationship can be immediately terminated.

Cybersecurity

We have a comprehensive approach to cybersecurity, which includes prevention, detection, containment, and response. This approach is certified to ISO 27001 by external certification body (NSAI). Our layered defense approach encompasses proactive security monitoring of our global infrastructure by both internal solutions and multiple third-party Security Operation Centers. Additionally, we routinely perform patch management, vulnerability scans, penetration tests, and continuous monitoring across our entire enterprise.

Our security policy framework includes meaningful and enforceable Information Security policies and procedures. The cybersecurity program is aligned with our mission and business objectives, reviewed periodically for improvements, and is supported by experienced and certified security professionals. This is supplemented by an information security awareness program spanning our global workforce. We also require biannual information security and cybersecurity training for our global workforce.



Stewardship of our natural resources and minimizing our negative impact on the world around us is critical. This is complemented by an increased focus on our social impact both at the company level and throughout our supply chain. Additionally, we continue our strong governance principles to ensure our business practices are ethical, legal, and address the needs of all of our stakeholders.

As a company, we made some great progress in 2022, but this is only the beginning. With clearly defined goals, and strategic focus from our staff, management, and board of directors we anticipate even greater success moving forward. Our integration efforts will only strengthen our ESG and sustainability programs. We are already working toward the implementation of the ISO 50001 energy management system. Additionally, Net-Zero targets are in place and will be submitted jointly to the SBTi in 2023. We look forward to updating you on our progress in our 2023 report.



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ISO 9001
ISO 14001
TL 9000

TL9000

TL19.1270

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