Letter From Our CEO

I am honored to return to Intel as CEO, and both humbled by the challenges and excited by the limitless opportunities made possible by the magic of technology.

Digital technology is transforming the world at an accelerated pace, driven by what I call the four "superpowers": cloud, connectivity fueled by 5G, artificial intelligence (AI), and the intelligent edge. They are superpowers because each expands the impact of the others and together, they are reshaping every aspect of our lives and work. This goes straight to Intel's purpose and my own passion: creating world-changing technology that touches and improves the lives of every person on the planet.

That potential impact has never been clearer to me than during this past year. We've seen unprecedented challenges, including a global pandemic that brought untold suffering with loss of life and livelihoods, heightened social injustice and inequities, and continued impact of climate change. As a technologist, I have been inspired to see the collective response to these challenges and the critical role technology has played, from the development of vaccines and new therapeutic treatments in record time, to the rapid deployment of online education and learning resources.

From my early days at Intel to today, I have been extremely proud of our company's long-standing leadership in corporate responsibility and sustainability. This focus has positioned us to effectively create both long-term value and respond to the growing importance of environmental, social and governance issues to our investors, customers, employees, and other stakeholders.

In May 2020, we outlined our 2030 RISE strategy and corporate responsibility goals for the next decade to accelerate the integration of responsible, inclusive, and sustainable practices and innovative approaches in our operations and supply chain, across the technology industry, and beyond. All of this enabled through our technology and the passion and expertise of our employees.

While we are just one year into our work on these ambitious goals, I am proud of the progress and accomplishments detailed throughout this report. Most notably:

- **In our own operations and supply chain,** we made progress toward our 2030 goals of 100% renewable energy and net positive water use, increasing renewable energy from 71% to 82% and conserving 7.1 billion gallons of water in 2020. For the fourth consecutive year, we received a Leadership score in CDP's Supplier Engagement Rating for our work to engage our suppliers to expand their climate and water disclosure.
- **In collaboration with the industry,** we launched the Alliance for Global Inclusion, a new coalition focused on creating a shared set of diversity and inclusion metrics in four critical areas: leadership representation, inclusive language, inclusive product development, and STEM readiness in under-served communities.
- **For larger global impact,** we worked with over 170 customers, partners, governments, academia, and NGOs on 230 projects around the globe through Intel's Pandemic Response Technology Initiative to accelerate access to technology at the point of patient care and speed scientific research, ensure access to online learning for students, and aid in economic recovery.

As we look ahead, we will build on this momentum to drive progress and take us to even greater heights in 2021 and in the years ahead, including:

- **Advancing diversity, equity, accessibility, and inclusion in our global workforce,** and advocate for public policies and laws that combat discrimination and inequities impacting our employees and our communities, as well as take actions to advance our 2030 goals, including doubling the number of women and underrepresented minorities in senior leadership and increasing representation of women in technical roles to 40%.
- **Accelerating change across the industry,** working with ecosystem partners to significantly expand global impact through responsible minerals sourcing practices, and collaborating to transform safety in transportation through Intel's Mobileye business and Responsibility-Sensitive Safety (RSS) model and integration into standards development.
- **Evolving the Pandemic Response Technology Initiative to become the Intel RISE Technology Initiative (IRTI)** to create a broader platform for action to make a greater impact in the world. This expanded initiative will provide a disciplined framework through which Intel employees can work with customers and partners to solve problems and advance our RISE strategy and progress toward the UN Sustainable Development Goals through accelerated application of technology to global challenges in the areas of health and safety, inclusion and accessibility, and climate and sustainability.

We will help solve the world's greatest challenges through deep technical collaboration with our customers, helping them transform their industries with radical innovation and leadership products, and achieve their own corporate responsibility goals. Along with customers, partners, governments, and NGOs, we also will support smart policies that accelerate the creation of safe and secure digital infrastructure, advanced manufacturing, and an inclusive and skilled future workforce.

I believe deeply in this company and the wonderful future we will create together. Our employees' technology expertise and passion to have a positive impact in the world every day are what inspire my confidence that we can achieve our objectives for the next decade.

Pat Gelsinger, Chief Executive Officer
Intel Corporation

Sustainable

We aspire to be a global leader in sustainability and enable our customers and others to reduce their environmental impact through our actions and technology. Our long-standing commitment to environmental leadership helps us achieve efficiency, reduce costs, and respond to the needs of our customers and community stakeholders. We invest in environmental projects and set company-wide environmental targets, seeking to drive reductions in greenhouse gas emissions, energy use, water use, and waste generation. We also work with others to expand the technology "handprint"—to accelerate the application of technology to reduce climate impact across the global economy.

7.1B gallons of water saved

We conserved 7.1 billion gallons of water internally and invested in water restoration projects that restored more than 1.3 billion gallons during 2020. These both advanced us toward our goal of net positive water use, resulting in 90% of fresh water usage returned or restored in 2020.

82% green power globally

In 2020, we significantly increased our renewable energy supply and purchases, from 71% to 82% globally, including 100% in the US, Europe, Israel, and Malaysia. Over the last five years, we've purchased more than 26 billion kWh of green power, enough to power more than 2.4 million US households for one year.[1]

5% total waste to landfill

During 2020, we sent approximately 5% of our total waste to landfill and continue to work toward our goal of zero total waste to landfill by 2030. At the end of 2020, circular economy practices were applied to 63% of our manufacturing waste streams via reuse, recovery, or recycling.

[1] Based on average US household energy usage figures published by the US Energy Information Administration.

Sustainable: Our Approach

Through conservation, strong collaboration, and application of technology, we have long worked to reduce the environmental impact of our operations. We have also partnered with governments, other companies, our suppliers, and nonprofits to help others reduce their own environmental impacts. Our 2030 RISE goals help answer the call for even more urgent action by expanding our efforts to achieve carbon neutral computing to further address climate change on a global scale.

Our new goals include achieving net positive water use, 100% renewable power, zero total waste to landfill, and additional absolute carbon emissions reductions, even as we continue to expand our manufacturing capacity. They also include creating a collective approach to reduce emissions across the semiconductor industry, increasing the use of technology to reduce climate impact.

We recognize that solving the world's environmental challenges requires broad, collective action—action that starts with individuals. For that reason, we have long encouraged our employees' passion for the environment by supporting sustainability projects within the company and our local communities. Since 2008, we have also linked executive and employee compensation to corporate responsibility factors, including environmental metrics related to energy and water conservation, waste reduction, and completion of water restoration projects.

We believe that Intel's position in the technology ecosystem, our wide range of technology, and the passion of our employees will enable us to form critical partnerships, develop new approaches, and make significant progress over the next decade and beyond.

intel RISE

2030 RISE: Sustainable Goals, Initiatives, and Global Challenges

GLOBAL CHALLENGE:
Achieve carbon neutral computing to address climate change.

TECHNOLOGY INDUSTRY INITIATIVES:

Sustainable Manufacturing. Create a collective approach to reducing emissions for the semiconductor manufacturing industry and increase the use of technology to reduce climate impact in global manufacturing.

Sustainable Chemistry. Enable greener and circular chemistry strategies across the technology industry value chain by transforming chemical footprint methodology.

OPERATIONAL AND SUPPLY CHAIN GOALS:

100% Green Power. Achieve 100% renewable energy use across our global manufacturing operations.

Energy Conservation. Conserve 4 billion kWh of energy.

Emissions Reductions. Drive a 10% reduction in our absolute Scope 1 and 2 carbon emissions as we grow, informed by climate science.

Product Energy Efficiency. Increase product energy efficiency 10x for Intel client and server microprocessors to reduce our Scope 3 emissions.

Net Positive Water. Achieve net positive water use—by conserving 60 billion gallons of water and funding external water restoration projects.

Zero Total Waste to Landfill. Achieve zero total waste to landfill and implement circular economy strategies for 60% of our manufacturing waste streams in partnership with our suppliers.

Environmental Management

Unlike many companies in the electronics industry that outsource their production, we manufacture the majority of our products in our own wafer fabrication facilities. As a result, Intel's direct environmental footprint is more significant than those of our "fab-less" competitors, whose manufacturing footprints sit in their supply chains. This business model also gives us a unique advantage when it comes to integrating sustainable practices, as we have direct control over manufacturing processes.

Governance and Management

The Intel Code of Conduct, Climate Change Policy, Global Water Policy, and Environmental, Health, and Safety Policy guide our sustainability strategy and help us set goals. We consider environmental impact when we select sites, design buildings, set performance levels for manufacturing tools, and establish goals for production processes.

For over a decade, Intel has maintained multi-site, third-party-verified ISO 14001 registration to evaluate the effectiveness of our environmental management system. Our Corporate Energy management system follows the ISO 50001 Energy Management standard; to date, we have received third-party ISO 50001 accreditation for five of our 12 manufacturing sites. To minimize our emissions of particulate matter (PM) including particulate matter less than 2.5 microns (PM2.5), volatile organic compounds (VOCs), hazardous air pollutants (HAPs), nitrogen oxides (NOx), and carbon monoxide (CO), we use emissions reduction strategies, including abatement equipment such as thermal oxidizers, wet electrostatic precipitators (WESPs), wet scrubbers, and ultra-low NOx burners.

We also regularly complete environmental, health, and safety (EHS) program self-assessments to validate site-level EHS compliance. In addition, our senior corporate EHS professionals partner with legal counsel to complete internal audits related to compliance, management systems, and business risk at various Intel sites. The audits include in-depth documentation and records reviews, interviews with site leadership, and physical inspections related to EHS compliance.

Key to our chemical management strategy is a comprehensive review of materials, which starts with a regulatory search of all applicable chemical regulations and use restrictions. The search includes Intel-specific restrictions (which often go beyond regulatory requirements), and local and global regulations. We then identify the environmental and safety controls needed to protect personnel and the environment during a chemical's intended use. In addition, in January 2021 we launched new chemical management software systems to improve employee access to hazard information and increase the efficiency and quality of EHS review of new chemical introductions.

On an annual basis, we report Intel's emissions, waste transfers off-site, and treatment of reportable chemicals in the US in accordance with state and US Environmental Protection Agency (EPA) regulations.

To better understand how Intel compares to others in our industry, we regularly benchmark our environmental performance with semiconductor and other large companies. To build a supportive policy environment for private sector leadership on climate change, Intel participates in organizations such as the Center for Climate and Energy Solutions (C2ES), the American Council for an Energy-Efficient Economy (ACEEE), and the

Intel's Ocotillo manufacturing campus in Chandler, Arizona.

Alliance to Save Energy (ASE). We also engage with our suppliers on sustainability issues to help them reduce their climate and water impacts, reduce waste and identify circular solutions, advance green chemistry and footprinting practices, and identify collaboration opportunities.

To learn more, see "Public Policy and Political Accountability" and "Supply Chain Responsibility" in the Our Business section of this report.

EHS Compliance Reporting Data

Year	Number of NOVs	Fines or Fees
2016	8	$0
2017	11	$8,075
2018	8	$1,600
2019	7	$400
2020	9	$7,086

In 2020, officials made 130 visits (including audits and inspections) to Intel sites across the globe, including 46 health and safety agency inspections, 30 fire protection agency inspections, and 54 environmental agency inspections. Intel received five environmental Notices of Violation (NOVs) and four fire protection-related NOVs in 2020. Details on NOVs are provided in the Appendix of this report, and previous NOV data can be accessed on our Report Builder website. Senior management reviews all NOVs to ensure that root cause corrective actions for all identified concerns are put in place and tracked to completion.

Linking Compensation and Financing to Environmental Performance

Our employees play key roles in enabling Intel to achieve our 2030 sustainability goals. Since 2008, we have linked a portion of executive and employee compensation to corporate responsibility factors. Our 2020 bonus included environmental-related metrics aligned to our 2030 goals focused on climate and water, including: conserving more than 5 billion gallons of water in our operations, restoring more than 1 billion gallons of water to our local watersheds, and increasing use of renewable energy to 75% globally. We exceeded each of the targets, conserving 7.1 billion gallons and restoring 1.3 billion gallons of water, and reaching 82% renewable energy use globally. In 2021, environmental metrics include conserving 125 million kWh of energy and 7.5 billion gallons of water in our operations, and restoring 1.5 billion gallons of water to local watersheds. For more information, see our 2021 Proxy Statement and the Our Business and Inclusive sections of this report.

In early 2021, we also integrated sustainability metrics into our financing activities for the first time. We entered into a $5 billion, five-year variable-rate revolving credit facility which, if drawn, is expected to be used for general corporate purposes. The interest rate is subject to adjustment if we achieve, or fail to achieve, certain annual energy and water conservation targets established to maintain our progress toward our 2030 corporate responsibility goals on energy and water. We believe that at the time of closure, it was the largest sustainability-linked credit facility executed to date by a technology company.

Smart and Green Building Practices

Our engineers have long incorporated green design into the new construction and renovation of our facilities, which helps us achieve efficiencies in energy consumption, water use, and recycling. We also partner with companies and nonprofits to expand the number of manufacturers implementing green building practices. We have achieved LEED certification for more than 17.9 million square feet of space in 50 buildings. Since 2015, we have achieved LEED Silver certification on one building, LEED Gold on six, and LEED Platinum on three buildings. We have incorporated many innovative energy conservation and heat recovery technologies into our new buildings, along with water conservation and recovery technologies for our new fabs and offices.

We continue to install smart lighting systems in our buildings. At our warehouse in Malaysia, our smart lighting system upgrade resulted in 111% brighter floor space and 62% lower energy bills. The custom-designed Internet of Things lighting solution, which includes 400 dimmable lights, is powered by Intel Atom® processors and Intel® Quark™ microcontrollers, which feed data into an energy management unit. Calf-level motion sensors at the entrance and exit of each warehouse aisle trigger overhead parabolic lights. When warehouse employees walk or drive by in carts to collect items from storage bins, the lights turn on. The lighting solution is now commercialized and available to customers worldwide.

Intel also partners with a robust ecosystem of equipment manufacturers and systems integrators to deliver a new generation of smart building solutions built on interoperable, secure, and scalable Internet of Things technologies and advanced data analytics—at the network edge. Read more about smart buildings with Intel® Internet of Things technologies.

Product Ecology

Intel's vision is to avoid the use of substances in our products that could harm the environment or human health, and to ensure that we act responsibly and with caution. Intel material restrictions are based on consideration for legal requirements, international treaties and conventions, and specific market requirements.

For more than a decade, we have collaborated with suppliers and customers to work toward eliminating lead and halogenated flame retardants from our products. While legislation does not require the elimination of halogenated flame retardants, Intel has played a role in facilitating industry consensus around low-halogen practices. We engage with industry committees on the development of materials declaration, test methods, and eco-design standards. Intel leads several global environmental regulation influencing and harmonization efforts within multiple industry trade associations. We also meet the requirements of the European Union's Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) regulation and comply with applicable product ecology regulations. When we must use hazardous materials, we take steps to ensure that they are handled safely from the time they enter our operations until they are properly disposed of or recycled.

Managing electronic waste (e-waste) such as computers, monitors, and phones is a global concern. Most of our products—including motherboards, microprocessors, and other components—fall within the scope of e-waste laws when they are incorporated into a final product, generally by an original equipment manufacturer (OEM). As such, we work with OEMs, retailers, customers, and others to identify shared solutions for used electronics. We also take steps to integrate environmental considerations into the design of our products to minimize environmental impacts of electronics at their end of life.

The Electronic Product Environmental Assessment Tool (EPEAT) rating system is designed to help purchasers in the public and private sectors evaluate, compare, and select electronic products based on environmental leadership and corporate social responsibility attributes. We support the development and use of EPEAT by participating in EPEAT standards development committees and providing information about EPEAT conformance to channel partners and customers.

Climate and Energy

Climate change is a serious environmental, economic, and social challenge. We focus on reducing climate risks related to our direct climate "footprint"—the emissions resulting from our own operations, our supply chain, and the marketing and use of our products. We also focus on increasing our "handprint"—identifying ways that Intel technologies can help others reduce their footprints, including Internet of Things solutions that enable intelligence in machines, buildings, supply chains, and factories, and make electrical grids smarter, safer, and more efficient. Our Climate Change Policy outlines our formal position on climate change and our policy advocacy principles.

Reducing Our Operational Carbon Footprint

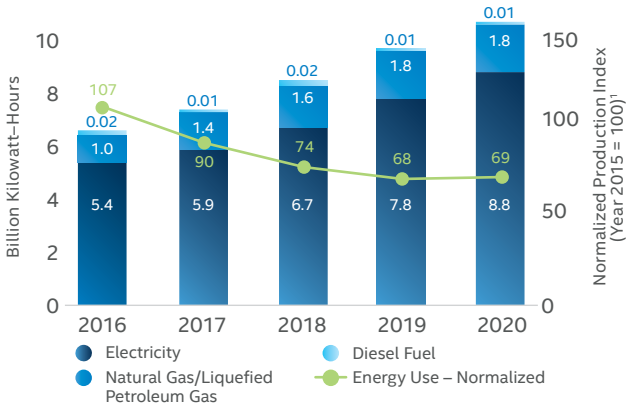
For over two decades, Intel has set aggressive greenhouse gas (GHG) reduction goals to conserve energy and minimize air emissions. Since 2000, our Scope 1 and 2 emissions have decreased by about 28% on an absolute basis, even as we expanded our manufacturing capacity significantly. We collaborate with others in the semiconductor and other manufacturing industries to identify new and innovative approaches to reduce emissions. For more information, see "Sustainable Manufacturing and Chemistry Initiatives" later in this section.

Energy Conservation

Reducing operational energy use is core to Intel's overall climate strategy and our 2030 goals. We conserved more than 4.5 billion kWh of energy between 2012 through the end of 2019, also resulting in cumulative savings of more than $500 million.

Our energy management systems follow the international ISO 50001:2018 Energy Management System standard. Although energy conservation opportunities are present across the spectrum of Intel's manufacturing operations, we have identified strategic investment areas in efficient lighting, chilled water cooling, compressed air, and heat recovery and electrification. Read the blog.

Energy Use



Our 2020 absolute energy use increased 11% compared to 2019 due to our manufacturing growth around the world. In 2020, approximately 83% of our global energy use was grid energy (electricity).

2030 Goal: Energy Conservation

Description. Achieve cumulative energy savings of 4 billion kWh from 2020 to 2030.

Baseline. Progress measured from baseline of Jan. 1, 2020.

Progress in 2020. In 2020, we invested in projects that enabled us to conserve approximately 161 million kWh of energy.

Looking Ahead. In 2021 we plan to invest in new projects that will conserve an additional 125 million kWh of energy.

Alignment with TCFD

We have leveraged the framework developed by the Task Force on Climate-Related Financial Disclosures (TCFD) to communicate our approach to climate governance, strategy, risk management, and metrics and targets. In terms of governance and strategy, we follow an integrated approach to addressing climate change, with multiple teams responsible for managing climate-related activities, initiatives, and policies, including manufacturing and operations, government and public affairs, supply chain, and product teams. Senior executives and the Board's Corporate Governance and Nominating Committee review strategies and progress toward goals.

We describe our overall risk management processes in our 2021 Proxy Statement, and we describe our climate-related risks and opportunities within this report; in our Climate Change Policy; in the "Risk Factors" section of our 2020 Annual Report on Form 10-K; and in our most recent CDP Climate Change survey, which is available on our Report Builder website. Regarding metrics and goals, for two decades we have set aggressive GHG reduction goals, and we continue to build on this through our new 2030 climate goals. We employ a variety of climate-related assessments and scenarios across multiple aspects of our business; however, we have not yet completed a formal climate-related scenario analysis in line with TCFD guidelines. In 2020, we continued to assess approaches for incorporating climate scenario analysis into our existing risk and opportunity assessment processes and plan to conduct a formal scenario analysis in 2021.

A more detailed mapping of our climate disclosures aligned with the TCFD and Sustainability Accounting Standards Board (SASB) framework is included in the Appendix.

[1] For detail on our Normalized Production Index, see "About this Report" in the Appendix.

2030 Goal: Scope 1 and 2 GHG Emissions

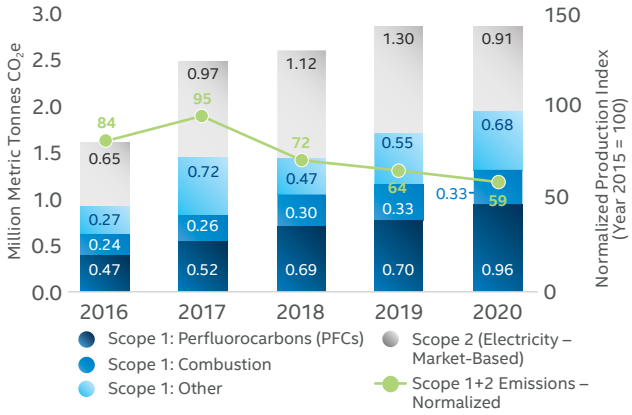
Description. Drive a 10% reduction in our absolute Scope 1 and 2 GHG emissions from 2020 to 2030.

Baseline. The percent reduction will be measured from our 2019 full-year emissions. Our combined Scope 1 and Scope 2 GHG emissions in 2019 were 2.88 million metric tonnes of CO_2e.

Progress in 2020. Through the end of 2020, we maintained Scope 1 and 2 emissions roughly flat to the 2019 baseline, even with significant manufacturing growth.

Looking Ahead. In 2021, we will continue to take action on emissions reduction strategies focused on emissions abatement, continued investments in renewable electricity, process and equipment optimization, and energy conservation.

Scope 1 + 2 GHG Emissions

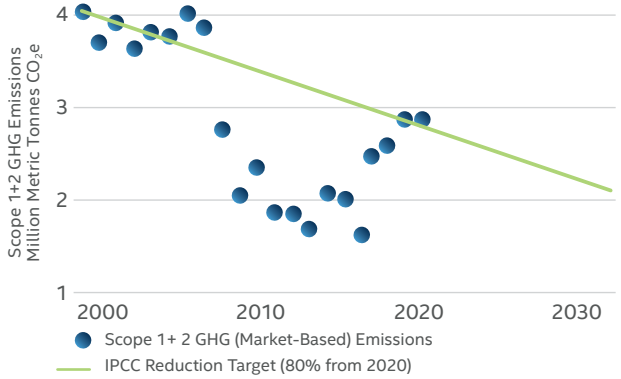


Our combined Scope 1 (direct) and Scope 2 (indirect) GHG emissions remained roughly flat on an absolute basis in 2020 to the 2019 baseline, even with manufacturing growth. With the kick-off of our 2030 goal, we refined our GHG inventory in 2019 and 2020, including adding sources that were previously considered insignificant and changes to global warming potentials. 2019 figures have been updated to reflect this.

Our emissions calculations are based on Global Reporting Initiative Standards, the World Resources Institute/World Business Council for Sustainable Development's The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, and internal criteria defined by Intel management. Additional GHG emissions reporting is publicly available in our CDP questionnaire response on our Report Builder website.

Intel GHG Emissions – Where Are We Headed?

Scope 1 + 2 GHG Emissions



We have tracked our Scope 1 and Scope 2 emissions over the past two decades against a science-based reduction target of 80% from 2000 levels by 2050. In recent years, our absolute GHG emissions have increased due to significant growth. Since 2000, our Scope 1 and 2 emissions have decreased by about 28% on an absolute basis, even as we expanded our manufacturing capacity significantly. We are committed to driving reductions through our 2030 RISE goals, as well as through collaboration with others in the semiconductor and other manufacturing industries. For more information, see "Sustainable Manufacturing and Chemistry Initiatives" later in this section.

2020 GHG Emissions Reported by Category (metric tonnes of CO_2e)

Scope	Emissions	Notes
Scope 1 (Direct) Emissions	1,973,000	Manufacturing process, onsite fuel combustion, refrigerants, onsite fleet/ air travel
Scope 2 (Indirect, Electricity)	909,000	Market-based method;[1] includes renewable energy purchases.
Scope 1 and 2 Total	**2,882,000**	
Scope 3 Total	**29,866,000**	Indirect/value chain.
Leased Vehicles and Commuting	296,000	Employee leased vehicles and commuting.
Logistics and Distribution	189,000	Upstream and downstream transport and distribution.
Employee Business Travel	24,000	Air travel, car rentals, and hotel stays.
Supply Chain	4,484,000	Represents the 2020 estimate based on key suppliers' 2020 CDP Climate Change Questionnaire information.
Capital Goods	93,000	Extraction, production, and transport of capital goods purchased.
Fuel and Energy Related Activities	95,000	Impacts related to extraction, production, and transportation of fuels and energy purchased, not already included in Scope 1 or 2. Market-based method.[2]
Waste Generated in Operations	7,000	Disposal and treatment of waste generated in our operations.
Product Energy Usage	24,407,000	Represents the GHG emissions of the product lifetime (5,596,000 metric tonnes of CO_2e annualized).
Processing of Sold Products	271,000	Processing of intermediate products sold to downstream manufacturers.

[1] Location-based method Scope 2 emissions (does not account for any renewable energy purchases) = 3,700,000 metric tonnes CO_2e/year.

[2] Market-based method includes renewable purchases. Location-based method emissions (does not account for any renewable energy purchases) = 253,000 metric tonnes of CO_2e/year.

Renewable and Alternative Energy

In addition to conserving energy, we invest in purchasing green power and on-site alternative energy projects that provide power directly to Intel buildings. Over the last five years, Intel's renewable energy supply and renewable energy attribute purchases have totaled more than 26 billion kWh of green power, enough to power more than 2.4 million US households for one year,[2] including 7.2 billion kWh purchased in 2020.

Over the last decade, Intel's alternative energy installations and our installed capacity have grown exponentially. We now have more than 100 alternative energy installations generating over 50,000 kW of green power across 23 Intel campuses, with an additional 15 installations under construction. The installations use 22 different technology applications, such as solar hot and cooling water systems, solar electric photovoltaic-covered parking lots, and mini bio-energy, geothermal energy, and micro wind turbine array systems.

These on-site projects, which include pilots of innovative technology applications, help us displace grid-supplied, carbon-intensive energy sources and identify future installation and technology opportunities for both Intel and the broader alternative energy market. When installed, our projects are often the largest corporate on-site projects of their type in a country or region.

In September 2020, we also became a member of RE100, a global coalition of businesses committed to 100% renewable electricity use.

[2] Based on average US household energy usage figures published by the US Energy Information Administration.

2030 Goal: Renewable Energy

Description. Achieve 100% renewable energy across our global operations, including manufacturing.

Baseline. As of January 1, 2020, we had reached 100% renewable energy use for our US and European operations, 50% for our Israel operations, and 71% globally.

Progress in 2020. We continued our 100% green power purchase commitment for our US and European operations, reached 100% renewable energy in Israel and Malaysia, and 82% globally by the end of 2020. In September 2020, we also became a member of RE100, a global coalition of businesses committed to 100% renewable electricity use.

Looking Ahead. We will continue to explore additional locations to increase electric power purchase from renewable sources.

Green Power Purchasing

For more than a decade, Intel has been one of the top voluntary corporate purchasers of green power in the US EPA's Green Power Partnership (GPP) program. In addition to generating on-site and off-site green power and purchasing green power from our utility suppliers, we purchase green attributes from multiple sources of generation. These include wind, solar, low-impact hydroelectric, and geothermal, which are certified and verified by nonprofit validation accreditors such as the Center for Resource Solutions' Green-e program to meet GPP program requirements.

Our approach to green power and alternative energy investments has been to reduce our own carbon footprint while encouraging others to take similar actions. We are encouraged by actions we have seen over the past decade—by companies, investors, utilities, and governments—to increase commitments and investments in renewable energy supplies and apply new technologies.

Recent Green Power Projects

In 2020, we implemented several renewable and alternative energy projects as part of our commitment to achieve 100% renewable energy across our global operations. For example, our Ocotillo campus began receiving power from East Line Solar, a 100-megawatt solar facility in Coolidge, Arizona, and we enabled our utility provider to enter into an agreement to develop a new 138-megawatt solar facility in Wasco County, Oregon. In addition, we installed Intel's largest solar farm outside the US, an 8,877-panel array that blankets the car park and building roofs at Intel's campus in Kulim, Malaysia. The project will add about 2.9 megawatts of solar energy to the site's existing 0.9 MW capacity.

The solar installation at the Intel chip and assembly test manufacturing facility at Kulim Hi Tech Park in Malaysia.

Product Energy Efficiency

Each new generation of products offer higher performance and improved energy efficiency compared to previous generations. Building energy efficiency into our products not only reduces our scope 3 GHG emissions, but also presents an opportunity to create value for our customers by helping them lower their scope 2 GHG emissions, energy use, and overall environmental impact.

Over the course of 2020, Intel worked on energy-efficiency initiatives and has made substantial progress with Modern Standby to replace traditional system sleep and idle states. Intel achieved 100% adoption of Modern Standby on notebook PC designs using 11th Generation Intel® Core™ (TGL-U) processors. The transition of desktop PCs to Modern Standby has also begun and will continue to ramp up in 2021.

Intel announced the Intel® Evo™ Platform (aka Project Athena), a multi-year innovation program to help the PC ecosystem create advanced laptops that meet ambitious key experience indicators, including those related to battery life. To be verified through the program, devices must be co-engineered, tuned, and tested with Intel to show they have met or exceeded—among other requirements—certain power efficiency and fast-charging capabilities. Intel announced the first wave of Intel® Evo™ verified designs with more than 20 laptop designs from our partners.

Intel collaborated with the technology industry and the California Energy Commission to successfully influence adoption of new technologies in the computers and computer monitors standard that were not available at the time of the previously completed standard. Working with the European Commission and other stakeholders on EU Lot 3 Computers regulation revision, Intel is collaborating with DIGITALEUROPE to characterize a new software tool for PC active mode energy efficiency labeling recommendations. In China and South Korea, Intel is working with government policymakers to influence the direction of the computers standards currently under development.

For server energy efficiency, Intel collaborated with technology industry consortia and European Standardization Organizations to support development of new harmonized standards in support of EU Lot 9 server regulation already in effect. In China, as part of industry consortia we are working with China National Institute of Standardization (CNIS) to agree on a workable solution for a China server energy efficiency standard, in line with international best practices.

We have estimated the GHG emissions due to energy consumption by Intel® processors sold in 2020. The annual and lifetime emissions of Intel processors when used in customers' compute applications (i.e., server, desktop, notebook and workstation) equate to approximately 5,596,000 and 24,407,000 metric tonnes of CO_2e, respectively.

The increase in annual and lifetime emissions compared with 2019 is driven primarily by continuous improvements in our calculation methodology for product energy usage. Refinements for 2020 included client mode weightings based on ENERGY STAR updates, a longer server processor lifetime based on published data, expansion of new device categories to include select workstation processors, and updating server processor annualized energy consumption calculations to better reflect real world server utilization in data centers.

See Achieving Carbon Neutral Computing later in this section for more information on Intel's collaborations with our customers and other stakeholders on reducing climate and energy impacts through technology.

2030 Goal: Product Energy Efficiency

Description. Increase product energy efficiency 10X for Intel client and server microprocessors to reduce our Scope 3 emissions.

Baseline. Progress on the client component of our product energy efficiency goal is measured using SPEC CPU2017 Integer Rate benchmark and Display On Idle Power using an end of 2019 baseline. Desktop and notebook product efficiencies will be reported together as a single number through a weighted average of desktop and notebook processor sales volumes. Progress on the data center component of our product energy efficiency goal is measured using Server Efficiency Rating Tool (SERT) of Intel and/or OEM commercial systems, using an end of 2019 baseline.

Progress in 2020. Client – On Track. In 2020, 11th Generation Intel® Core™ processors achieved 1.5X over our 2019 baseline exceeding our internal goal of 1.2X. **Servers –** Based on Intel's product reporting criteria for 2030 energy efficiency goals, there was no significant high-volume server platform launched in 2020.

Looking Ahead. For 2021, we plan to report on server progress toward the 2030 goals based on newly launched 3rd Generation Intel® Xeon® Scalable processors (code-named "Ice Lake") and client progress based on our next-generation processor code-named "Alder Lake."

Water Stewardship

Semiconductor fabrication requires significant water use. By responsibly managing our water use, guided by our Global Water Policy, we can meet our business needs as well as those of our communities. In 2020, we returned and restored approximately 90% of our water withdrawals to our communities through municipal water treatment operations and restoration in local watersheds enabled by project funding.

Our water strategy has three main objectives: **conserve** water used in our operations, **collaborate** on water initiatives with local communities, and **create** technology solutions to help others reinvent how they use and conserve water. As a part of our 2030 RISE goals, we aim to achieve net positive water use by conserving 60 billion gallons of water (cumulative from 2020) and funding external water projects that will restore more fresh water than we consume to our local watersheds.

We estimate that our water conservation efforts saved approximately 7.1 billion gallons of water in 2020. We also completed new projects in 2020 that we estimate will save more than 700 million gallons annually, once operational. Over the last 10 years, our water conservation efforts have saved approximately 37 billion gallons of water, enough to sustain over 337,000 US homes for one year.[1]

[1] Based on average US household water usage figures published by the US Environmental Protection Agency.

During 2020, we continued to fund water restoration projects benefiting the watersheds that we impact and the communities where we operate, including new projects that support water resources of Arizona, Oregon, New Mexico, Texas, India, and Costa Rica.

See details about our water footprint by location and water risk assessment in the Appendix. Additional information is also available in our most recent CDP Water Security report posted on our Report Builder website.

2030 Goal: Net Positive Water Use

Description. Achieve net positive water use by conserving 60 billion gallons of water and funding water projects that restore more fresh water than we consume to our local watersheds.

Baseline. Progress measured from baseline of Jan. 1, 2020.

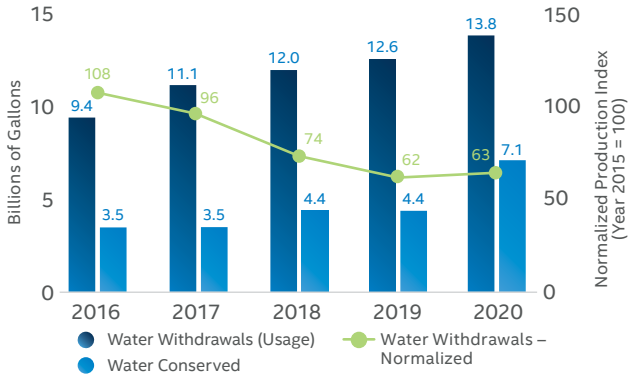
Progress in 2020. We conserved 7.1 billion gallons of water internally and invested in water restoration projects that restored more than 1.3 billion gallons during 2020. These both advanced us toward our 2030 goal of net positive water, resulting in 90% of fresh water usage that was returned and restored.

Looking Ahead. In 2021 we expect to conserve an additional 7.5 billion gallons of water in our operations, and enable restoration of 1.5 billion gallons of water to local watersheds.

We will achieve our goal of net positive water use when:

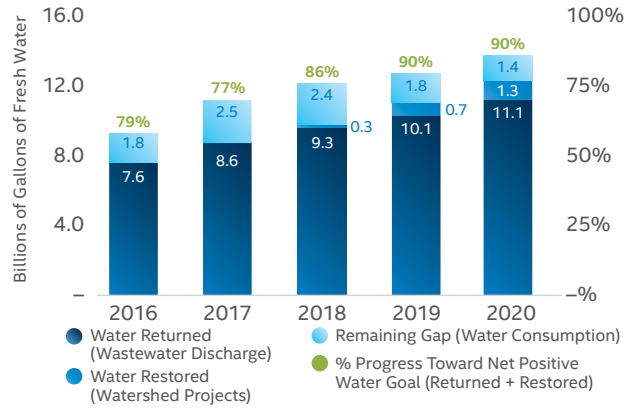
Water from operations treated and returned to communities or environment + Water restored through watershed projects > Water coming in from fresh water sources

Water Usage and Conservation



Our 2020 absolute water use increased 10% as we continued to grow and expand manufacturing output. We increased our water conservation from 2019 to 2020 by more than 61%, due to significant investments in water conservation projects. We define water withdrawals, or water usage, as total gallons of incoming fresh water (i.e., potable water) used. "Operations" includes all manufacturing and non-manufacturing sites with 2,000 or more employees where Intel has operational control.

Net Positive Water



Water Conservation and Restoration

Below are examples of water conservation and restoration projects Intel recently implemented or funded as part of our commitment to achieve net positive water use:

Our Ronler Acres facility implemented ultra-pure water efficiency projects in our factories by optimizing or eliminating bypass flows. We are now implementing similar projects at our other factory sites. We estimate that we will achieve total savings of 375 million gallons during 2021, increasing to 625 million gallons per year by 2025.

During 2020, we made significant progress in construction and operation of our on-site water reclaim facilities. These innovative water treatment plants allow Intel to treat and reuse water within our operations in systems such as cooling towers and scrubbers, resulting in a substantial increase in water conservation. Our Oregon water recycling facility, for example, treated and reused approximately 2.4 billion gallons of water during 2020.

Ronler Acres reclaim project, located in Hillsboro, Oregon.

Travis County, Texas riparian forest planting project.

Dyavasandra Lake Restoration – CLEAN, International. India, the second most populous country in the world, is facing water scarcity. Many of Bangalore's lakes have vanished and groundwater levels have dropped significantly. CLEAN International and local partner SayTrees are implementing a lake restoration project to address water scarcity at Lake Dyavasandra. The project includes increasing the capacity of the degraded lake to promote groundwater recharge and rejuvenate the lake, which will provide habitat benefits and improved water quality through natural wetland filtration. The project also includes planting 1,500 trees and creating an outdoor space for local community members.

Deer Creek Floodplain Enhancement Project – McKenzie Watershed Alliance. Deer Creek, a tributary of the McKenzie River within the Willamette River Basin in Oregon, delivers drinking water to the area and provides important habitat for numerous fish species. This project reconnected and restored natural flow to the entire valley to re-establish physical, chemical, and biological processes that support a healthy and resilient ecosystem.

Travis County Floodplain Reforestation Project – TreeFolks. Healthy riparian forested areas provide natural water quality improvements by filtering pollutants, shading streams, and stabilizing stream banks, as well as wildlife habitat and carbon sequestration. Many historically forested areas in Travis County, Texas have been degraded by grazing and become barren or overgrown with invasive species. This project supports the planting and maintenance of healthy trees on approximately four acres, in collaboration with landowners and the City of Austin.

Colorado River Indian Tribes Drought Contingency Project – Audubon Arizona and National Audubon Society. The Colorado River Indian Tribes (CRIT) have lands that stretch 56 miles of the length the Colorado River, and hold 720,000 acre-feet of water rights for use on their reservation. As part of the Arizona Drought Contingency Plan (DCP), the CRIT is leasing water typically used for farm irrigation and leaving it in the river to support Lake Mead water levels. The project will reduce the likelihood of water shortage declarations and play a key role in helping Arizona comply with its DCP system conservation commitments.

For more information on these and other projects, visit our Water Restoration website.

Colorado River Indian Tribes Drought Contingency project in Arizona.

Waste and Circular Economy Solutions

Much of the waste we generate is tied to the construction of our facilities and our manufacturing activities. Since the mid-1990s, we have increased our global recycling rate of non-hazardous waste from 25% to 94%, and we achieved zero hazardous waste to landfill by 2020,[1] all while Intel's business and production continued to grow.

As part of our 2030 goals, we are expanding our commitment to achieve zero total waste to landfill, and also increasing our focus on implementing circular economy strategies for our manufacturing waste streams.

Circular Solutions for Manufacturing Waste

Major semiconductor manufacturing-related waste streams include lithography-related solvents, metal plating waste, specialty base cleaners, spent sulfuric acid, ammonium sulfate, and calcium fluoride. Our operations also generate plastic, metal, kitchen, and general office waste.

We have focused on finding ways to recover materials and regenerate resources to create circular economy solutions that reduce costs and environmental impact. In 2020, we directly reused, recovered, or recycled 63% of our manufacturing waste, or approximately 179,000 tons.

We recover and sell copper and other metals that previously were part of our plating process waste streams. Capturing the wastes from the manufacturing of chips enables creation of a circular economy: the excess of metals used to create transistors—including semi-precious and responsibly sourced metals—is reclaimed for the secondary market.

In 2020, we recycled over 160,000 tons, or 97%, of our construction waste.

Our handling of sulfuric acid waste from our manufacturing operations is another example of our recovery and reuse strategy. In 2018, we began sending it to an off-site facility, where it is processed to technical grade sulfuric acid and directed back to our manufacturing operations, where we use it in on-site wastewater treatment systems. By the end of 2020, we were recovering and reusing all sulfuric acid waste.

2030 Goal: Zero Waste[1]/ Circular Economy

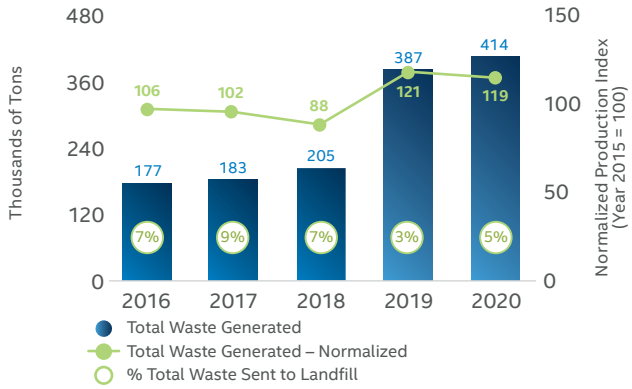
Description. Achieve zero total waste to landfill and implement circular economy strategies for 60% of our manufacturing waste streams in partnership with our suppliers.

Baseline. As of January 1, 2020, <1% of hazardous waste went to landfill and we had implemented circular economy strategies for 65% of manufacturing waste.

Progress in 2020. At the end of 2020, we achieved 5% total waste to landfill and implemented circular strategies for 63% of manufacturing waste. Our 2030 goal of 60% will be challenging in future years given our projected growth and new waste streams, suppliers, and locations that will require new circular economy strategies.

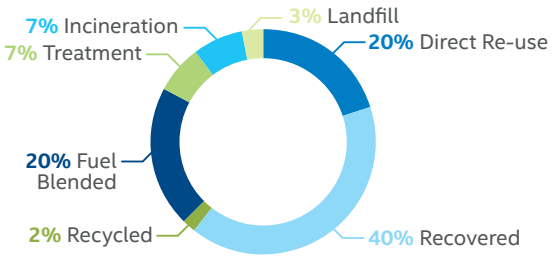
Looking Ahead. In 2021, we plan to continue to focus on opportunities to upcycle waste by working further on waste segregation practices and collaborating with our suppliers to evaluate new technology for waste recovery.

Waste Generated and Landfilled



We updated the definition of "total waste" in 2020 to align with our 2030 goals. Our new 2030 total waste definition includes hazardous waste and non-hazardous solid waste, as well as additional non-hazardous liquid waste and chemical debris. However, in line with common waste reporting practices, we do not include salts and biosolids from our on-site water reclamation systems in Israel, Oregon, and Arizona. 2019 and prior years followed the definition from our 2020 goals, which included hazardous waste and non-hazardous solid waste.

Circular Solutions for Manufacturing Waste Streams



In 2020, 82% of Intel's manufacturing waste was fuel blended, recycled, recovered, or reused. Manufacturing waste represented 43% of our total waste in 2020, and included hazardous and non-hazardous waste associated with manufacturing processes at Intel's wafer fabrication manufacturing sites. For our circular solutions strategy, Intel follows the Ellen McArthur Foundation definition of circular economy and "upcycling" of waste. Upcycling is defined as keeping products and materials in use via reuse, resale, repurposing, and recycling. It includes recovering and restoring products, components, and materials through strategies like reuse, repair, remanufacturing, use as a feedstock, and recycling. It does not include fuel blending unless it is done after a recovery of a major constituent of the waste stream.

[1] Intel defines zero waste to landfill as less than 1%.

Reverse Logistics and the Circular Economy

Our supply chain organization works to reduce the environmental impact associated with reverse logistics operations—that is, the return of products and materials to Intel and our supply chain. We seek opportunities to capture circular economy value on returns, including restocking back to inventory, repairing, reuse as warranty spares, or extending product life through resale in the secondary market. On average, Intel reuses approximately 50% to 60% of returned products. Electronic components that cannot be reused or resold are routed through Intel's network of recycling vendors, with over 99% of materials reclaimed for precious metals or recycled.

In 2020, we launched a multiyear program focused on expanding circular economy strategies across Intel's supply chain. Included were new asset recovery programs that extended product life and increased the reuse of returned solid-state drives, CPUs, and other products. In addition to reducing environmental impact, the program resulted in $30 million in financial benefits. We will continue our efforts to increase recycled material content in all reverse logistics packaging and aim to achieve 70% recovery and reuse rates on returned products by 2025.

We envision a future where reverse logistics further expand the environmental benefits of the circular economy, enable new "reverse circular" sources of supply, and help our customers and suppliers achieve their circularity goals. Learn more.

On average, Intel reuses approximately **50% to 60%** of returned products.

Sustainable Packaging

Intel has a history of practicing sustainable packaging methods to improve packaging designs and sustainable material selection, focused on reducing unfavorable material, increasing material efficiency, designing for recovery and recycling, prioritizing recycled content, and sourcing responsible materials.

Working with suppliers we developed a reusable precision thermoform tray for incoming material and for finished goods shipping to customers and eliminated piece part trays that were historically left for landfill. The thermoform tray is 50% the plastic mass of an industry injection molded tray and made of a more recyclable material (PET). The closed pocket eliminates non-recyclable covers that were previously used to prevent product contamination in typical industry trays. In 2020, Intel worked to include post-consumer recycled material in the thermoform trays so that nearly half of the tray is non-virgin material. Since 2009, Intel conservatively estimates it has eliminated over 16,000 metric tons of plastic material through these initiatives. To drive further progress, we set a target that by 2022 over 95% of the materials used in our new product packaging designs, by weight, will be recyclable or reusable. Through the end of 2020, we are trending toward exceeding this goal (96%).

Intel Reverse Logistics Product Lifecycle

By adopting circular economy strategies to maximize recovery value and reduce environmental impact, Intel has been able to reuse and refurbish more than half of all products returned.

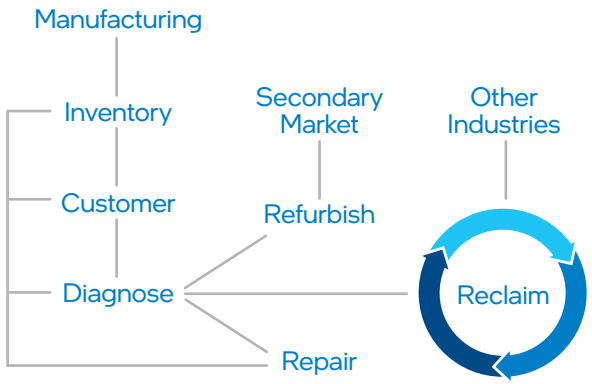
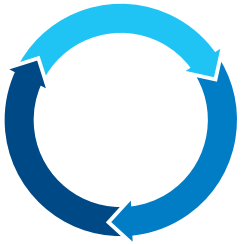


Chart updated on June 18, 2021 to reflect the most current process.

54% of returns
recovered for reuse or refurbish



24% Reuse
- Finished goods inventory
- Warranty exchange spares
- Secondary market sales

30% Refurbishment
- Screen and upgrade for re-use
- Repair for exchange spares
- Component reclaim

46% Reclaim
- Precious metal reclaim
- Materials recycle

Realized **$30M** in additional value in 2020

As part of reverse logistics circular strategies, in 2020, we recovered 56% of returned units for reuse or refurbishment. We also reclaimed precious metal from units sent to scrap.

Sustainable Manufacturing and Chemistry Initiatives

Two of our 2030 RISE technology industry initiatives focus on collaborations within our ecosystem to accelerate progress on reducing climate impact in semiconductor manufacturing and advancing sustainable chemistry use and footprinting.

Sustainable Manufacturing

Intel is committed to contributing to the global effort toward science-based greenhouse emissions reductions in line with efforts to limit global warming to 1.5°C. However, we face challenges to gaining formal approval for an emissions-reduction target under the existing methodology of the Science-Based Targets Initiative (SBTi) due to a number of factors:

First, the absolute contraction approach for setting science-based targets does not take into account early action to reduce absolute emissions. The convergence approach within SBTi's sectoral decarbonization approach (SDA) does consider early action, but there is currently no SDA for the semiconductor industry.

Second, demand for semiconductors is increasing, due in part to the role that technology plays in driving climate solutions. Current frameworks do not include consideration of the application of technology to reduce climate impact in global manufacturing.

In addition, emissions budgets and trajectories under current SDA science-based target frameworks are based primarily on CO_2 emissions pathways. Emissions pathways for non-CO_2 gases differ from those for CO_2 due to differences in factors such as mitigation and abatement potential. Process emissions for the semiconductor manufacturing industry include non-CO_2 gases such as perfluorocarbons (PFCs) and nitrous oxide (N_2O). Consideration of sector-specific differences in emissions trajectories for CO_2 and non-CO_2 GHG emissions is a potential area of importance for future research and for expanding opportunities for sector-specific approaches to targets.

In 2020, we began working with industry stakeholders to assess the potential for the development of a sector-specific approach to setting science-based GHG emissions reduction targets for the semiconductor manufacturing industry. The goal is to expand the number of companies in our sector setting approved science-based targets.

Sustainable Chemistry

Sustainable chemistry involves designing chemical products and processes in ways that minimize the use and creation of hazardous materials. As part of Intel's 2020 goals, we established a process with our suppliers to complete green chemistry screening and alternative assessments on high-volume manufacturing chemicals that met certain hazard criteria.

We continue to provide webinars and sustainable chemistry screening criteria for suppliers to advance their progress in this area. In addition, we participate in the RBA's Chemical Management Workgroup to develop industry-wide chemical management initiatives that can be propagated through the RBA membership and supply chain. We also participate in a multi-stakeholder group, the Clean Electronics Production Network (CEPN), whose primary focus is to eliminate exposure to toxic chemicals in the supply chain through use of safer alternatives where feasible, and on developing tools to understand and further control chemical risks.

Our 2030 technology industry initiative around sustainable chemistry aims to enable greener chemical strategies across the life cycle of the technology value chain by implementing an innovative chemical footprint methodology. This effort is focused on an approach and metric that will encompass other impact factors, which we believe will yield a more effective result overall. These factors, or impact categories, include looking at human health, environmental, climate change, regulatory, and reputational risk. The intent is to use these impact categories to further quantify our manufacturing chemical footprint. In 2020, we engaged with several industry groups and environmental experts to get input on our methodology and identify future collaboration opportunities. We envision this initiative will enable Intel, our suppliers, customers, and others across our industry to better assess the full lifecycle impact of each chemical, including disposal, and enable industry-wide improvements by 2030.

Chemical Footprint Methodology

Manufacturing Chemical Footprint =

Mass of Chemical Used (X) Weighting Factors*

*(reputation impact x expectation of regulation x human health factors x environmental impact x climate impact)

For each chemical used, we have assigned a weighting factor from 1-4, with 4 representing the biggest impact. The methodology will also take into consideration the effectiveness of the control technology.

Once we establish our baseline chemical footprint based on 2020 data, we plan to strategically target the chemicals of "highest impact" to identify and fund projects that will result in a reduction or softening of our overall chemical footprint. We are also looking into how we can integrate other tiers in the chemical lifecycle—for example, our supply chain and its waste streams—into our overall goal.

Achieving Carbon Neutral Computing

As we continue to take actions to reduce Intel's own global manufacturing and supply chain climate footprint and to advance product energy efficiency, we have also taken on the global challenge to partner with the technology industry and other stakeholders to achieve "carbon-neutral computing." Conceptually, carbon-neutral computing is achieved when the positive benefits of the ICT sector "handprint"—the ways in which technology is applied to reduce climate impact across the economy—equals or exceeds the climate and energy "footprint" of product-related emissions and carbon embedded in technology systems.

To do our part, Intel's global challenge framework includes partnering with others to accelerate the sustainability of PCs across their lifecycles, improve the energy efficiency of data centers, and accelerate handprint projects to reduce emissions across high-impact industries such as utilities, oil and gas, and manufacturing.

Collaborating on Sustainable PC Design

Partnering with PC manufacturers, we are assessing the carbon footprint of the PC across its lifecycle to identify carbon reduction opportunities. This includes addressing embedded carbon in the printed wiring board and other components of the PC system such as the display and power supply system. By identifying carbon reduction opportunities in the reference design, OEM implementation, and PC system supply chain partners, we can enable carbon reductions in Intel's scope 3 supply chain and product-related emissions. We can also implement circularity and sustainable design improvements to help our customers reduce their overall carbon footprints and achieve their sustainability goals. Over the past year, we have worked closely with our OEM partners to support their sustainable PC design initiatives, including sustainable design, and solutions to promote a circular supply chain and to maximize reuse and responsible recycling for PCs at the end of life.

When looking at the lifecycle analysis of a PC, the two largest opportunities for carbon footprint reduction are in the product use phase and in the manufacturing phase. Intel works in partnership with OEM manufacturing customers to maximize the efficiency of power supply systems and use of low-power states when possible, including contributing to EPEAT, ENERGY STAR, and lifecycle assessment (LCA) frameworks. For more information on these efforts, see "Product Energy Efficiency" earlier in this section. To address system-level manufacturing impacts, Intel actively works to provide reference designs for the main system board through focused engineering work. This has helped drive reductions in board size, number of components, and integration of ingredients such as Thunderbolt™ Technology. In partnership across the industry we have also advanced the use of low-temperature solder, which saves energy in the manufacturing of the PC main board.

Reducing the Carbon Impact of Data Centers

In a data center, a large portion of the overall carbon footprint is related to energy consumption, as well as the cooling of the servers and systems in that data center. As a result, Intel is working with utility system partners to foster and simplify increased availability of renewable energy for data centers. We are also collaborating with our data center operator customers on projects that accelerate data center energy efficiency and optimize the use of renewable energy sources to power the cloud. This includes projects to define measurement models to differentiate energy use from renewable vs. fossil-based sources that inform when and where workloads should be run to minimize carbon impact, e.g., time-shifting of workloads when feasible to when renewable energy availability is highest—generally during mid-day and during the night. To further reduce compute carbon

impact, we are working on engineering advanced cooling solutions that optimize the reuse of compute exhaust heat.

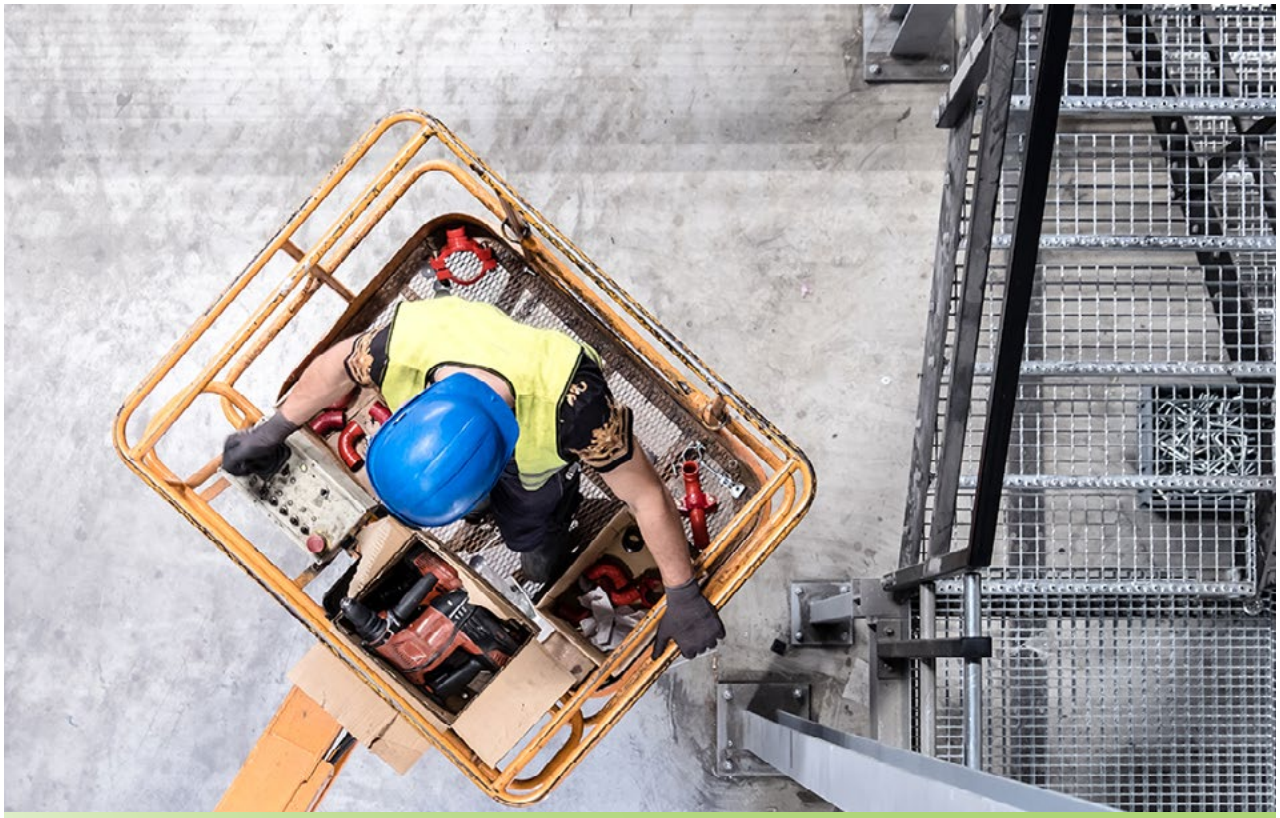
To address embedded carbon, we are partnering with our data center customers on projects that address the data center equipment lifecycle. We are co-leading an Open Compute Project (OCP) workstream project on defining standards and practices on concepts of repair-ability, modularity, circular economy, biodegradability, and ultimately a minimum level of incremental residual e-waste (inspirationally, less than 10% of the original bill of materials).

Expanding the Technology "Handprint"

To build a supportive policy environment for private sector leadership on climate change, we participate in a range of organizations, policy forums, and coalitions. We are working with other companies and policymakers to enable technology-based solutions that provide greater carbon benefit than the carbon embedded in those solutions—for example, a smart building system with sensors and control software that allow a company to save energy in heating and cooling. We aim to accelerate the deployment of such projects within Intel's operations and also in external projects in collaboration with our customers. Read the blog.

In addition, we are working with the Center for Climate Change and Energy Solutions (C2ES) and Gridwise Alliance, which advocate for innovation and investments in climate solutions, including expanding ICT's role in driving change and grid modernization appropriations as part of future infrastructure investments. In 2020, we also announced the creation of the Digital Climate Alliance, aimed at advancing discussions with policymakers on the value and opportunity of the ICT handprint. For more detail, see "Governance, Ethics and Public Policy" in the Our Business section of this report.

Intel's interoperable, secure, and scalable industrial computers and software components are powering the advance of smart energy.



Building the Energy Grid of the Future

Intel is helping build a new ecosystem for energy generation, distribution, and consumption—one where centralized carbon-based generation will be retired and replaced with decentralized, smart grids of cleaner renewable energy. With embedded compute at the edge and across the grids, utility companies will be able to manage their assets more dynamically, decrease maintenance and transmission costs, and improve worker safety. The objective is that consumers will have more energy choices, and will be able to offer up their own demand and supplies—from, for example, a rooftop solar system—to the marketplace. For an example of this transformation, read about Intel and Capgemini's Substation and Edge-of-the-Grid Automation, a purpose-built solution to address the limitations of a one-way grid by helping utilities monitor and manage load and flow across all assets, prioritize production and consumption of clean energy sources, simplify the energy ecosystem, extend asset life duration, and reduce IT infrastructure footprint within the substation.

In 2020, we also worked with Dell and other partners on a grid modernization solution focused on substation automation and virtual protection relays that will enable electric utilities to integrate more sources of renewable energy into the grid, reducing greenhouse gases. The solution consolidates workloads in primary distribution utility substations using edge servers.