



INtersections

2021 ENVIRONMENTAL, SOCIAL & GOVERNANCE REPORT





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About This Report

This Environmental, Social and Governance (ESG) Report reflects Dow's performance as of, and for the year ended, December 31, 2021. The information in this report is presented on behalf of Dow Inc. and its consolidated subsidiaries, including The Dow Chemical Company (collectively, "Dow").¹

The report includes disclosures prepared in accordance with the Global Reporting Initiative (GRI) Standards Comprehensive option. The Comprehensive option requires that Dow report all the General Disclosures described in the GRI Standards. In addition to the GRI, this report references additional standards and frameworks, including the Greenhouse Gas (GHG) Protocol, the Task Force on Climate-related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB) and World Economic Forum (WEF) Stakeholder Capitalism Metrics. For more information about Dow's approach to reporting, and indexes to each framework, click [here](#).

This document also serves as Dow's U.N. Global Compact Communication of Progress for 2021. This report has been reviewed by the Board of Directors of Dow Inc. In addition, Dow engaged Deloitte & Touche LLP to perform a review engagement on management's assertion related to the ESG disclosures included in the GRI Content Index and the GHG Protocol Disclosure Report as of, and for the year ended, December 31, 2021. See attached links for [Deloitte's GRI review](#) and [GHG Protocol review](#).

Dow's 2021 ESG Report builds on its historic Sustainability Report (2019) and its historic annual Inclusion and Diversity Report, Shine (2019). In 2020, Dow created our first consolidated ESG report – 2020 INtersections ESG Report – and we continued with this approach for 2021. Additional reporting that may be of interest to the reader can be found at [corporate.dow.com](#)², including:

[Sustainability Report \(2019\)](#)³

[Shine \(2019\)](#)²

[2020 INtersections ESG Report](#)³

[2020 Employer Information Report EEO-1](#)⁴ [2021 Investor Day](#)⁵

[2021 Annual Report](#)⁵

[2021 Form 10-K](#)

[2022 Proxy Statement](#)⁵

Thank you for your interest in our report. We welcome your questions, comments and feedback. You may contact any of the following senior leaders – Andre Argenton, chief sustainability officer and vice president, Environment, Health & Safety; Rebecca Bentley, vice president, Public Affairs; Karen S. Carter, chief human resources officer and chief inclusion officer; or Amy Wilson, general counsel and corporate secretary – with your comments or questions at FESGRPT@dow.com.

¹ Consolidated subsidiaries as defined in Dow Inc. Annual Report on Form 10-K for the year ended December 31, 2021, filed with the U.S. Securities and Exchange Commission (SEC) on February 4, 2022.

² The workforce data is gathered through a centralized database containing all employee information. The employee data is updated by employees, Human Resources and managers when employee information changes occur. The data represents the global employee population as of December 31, 2021, and includes all permanent, full-time and part-time employees. Temporary employees, contractors and manual additions are excluded unless otherwise stated. Throughout this report, charts exclude employees whose gender or race is unknown or undeclared, and percentages may not always add up to 100% due to rounding.

³ This symbol indicates that information at this link was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information. The audited financial statements included in the 2021 Form 10-K were audited by Deloitte & Touche LLP and its audit report, dated February 4, 2022, is included therein.

⁴ This symbol indicates that information at this link was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

VISION, STRATEGY & BUSINESS:
Intersection of Science and Sustainability, Culture and Accountability



ENVIRONMENTAL PERFORMANCE:
Inroads for Sustainable Development



HEALTH & SAFETY:
Integrating Safety Into All We Do



INCLUSION, DIVERSITY & EQUITY:
Intention, Action and Sustainable Progress



COMMUNITY:
Investing in Our People and Places Where We Live and Work



CORPORATE GOVERNANCE:
Instrumental to Accountability



REPORTING & DISCLOSURE:
Tracking Our Progress



Dear Stakeholders,

This year Dow marks its 125th anniversary. While we celebrate our rich heritage, we are also imagining how we can build a better, more sustainable and equitable future. As a science and technology company, we eagerly take on the responsibility for finding answers to the most pressing challenges of our time. This is central to our purpose as a company. It is central to our growth strategy. And it is central to driving best-in-class performance and accountability.

Throughout this report, you will see how we are using our Environmental, Social and Governance (ESG) approach as a catalyst for innovation and collaboration to create new products, new business models and new ways to build value for our customers, our people, our communities and our stockholders. It is clear to us that sustainable innovation and profitable growth are not mutually exclusive, but rather mutually dependent. It is also clear that our intentional focus on collaboration and inclusion helps us better navigate challenges and grow our impact to deliver positive change for the world.

We have crafted a portfolio that is well-positioned to meet the increasing needs of our customers and consumers who are demanding more circular and sustainable products around the world. We have a clear, science-based, disciplined and affordable path to carbon neutrality, even while we continue to grow our capacity and improve transparency and accountability on all our sustainability efforts. To advance our efforts, we are continuing to build a strong and inclusive culture, which is evidenced by our recognition as the only materials science company to earn a place on the Great Place to Work and Fortune 100 Best Companies to Work For list. At the same time, we know that best-in-class governance

means continuous improvement, and we are committed to challenging ourselves and raising the bar by further enhancing diversity at all levels throughout the company.

Here are some of the important ways we advanced our ESG agenda in 2021:

- **We are executing on our plan to decarbonize our business and grow value.** To reach our 2030 and 2050 carbon emissions targets we have a plan to replace end-of-life assets with new, more carbon-efficient technologies. In 2021, for example, we announced plans to build the world's first net-zero carbon emissions, integrated ethylene cracker and derivatives site in Fort Saskatchewan, Alberta. In addition, we outlined a detailed roadmap to reduce current CO₂ emissions from our operations in Terneuzen, the Netherlands, by more than 40% by 2030. We are one of the top 20 global corporations using renewable, clean energy, and we expanded our access to renewable energy to more than 900 megawatts. We also continue to invest in next-generation, carbon-efficient technologies such as e-cracking, fluidized catalytic dehydrogenation (FCDH) technology and ethane dehydrogenation (EDH).

- **We are accelerating our sustainability investments to enable design for recyclability and more circular plastics through mechanical and advanced recycling.** To advance our 2030 targets to Stop the Waste and Close the Loop, our team is working across our value chains to enable packaging design with recyclability in mind. We also have our own product line of recycled-content resins under the brand name REVOLOOP™. Today, 85% of our products sold into packaging applications are

reusable or recyclable. As we continue down our path to enable more recyclability and keep plastic waste out of the environment, we are scaling supply partnerships with companies such as Mura Technology and Fuenix to produce circular feedstocks from advanced recycling processes. In fact, we are committed to delivering circular polymers from advanced recycling by the end of 2022. We also are investing in collaborative actions to minimize and manage plastic waste through partnerships such as the Alliance to End Plastic Waste.



- **We continue to take deliberate actions to drive inclusion, diversity and equity throughout our organization and beyond.** We believe diverse teams make more innovative and better-performing teams. That is why we are institutionalizing inclusion in everything we do – from hiring to who has a seat at the decision-making table. We are creating a culture that embraces and values differences. In 2021, we introduced new global paid time-off policies that will provide employees with equal opportunity for parental leave, to take care of their families, and to volunteer and engage in Employee Resource Group (ERG) activities. Our ERG participation is redefining best-in-class performance, with nearly 100% of People Leaders and more than 50% of global employees participating. We also continue to advance supply chain diversity. Since launching four years ago, our Supply Chain Diversity Program has led to more than \$1.74 billion in spend with small and diverse suppliers and delivered over \$15 million in EBIT to our bottom line.
- **We are mobilizing alliances of diverse stakeholders to create meaningful social change across our communities.** In 2021, we increased our

commitment to \$13 million for Dow ACTs, a framework designed to address systemic racism and inequality. We joined OneTen, a coalition of businesses that have pledged to upskill, hire and advance 1 million Black individuals in the United States over the next decade. We also continued engagement with historically Black colleges and universities (HBCUs) to reinforce the STEM and Ph.D. pipelines. Through the Future of STEM Scholars Initiative (FOSSI), we are underwriting the education of 10 students per year who are pursuing STEM degrees at HBCUs to help increase the number of underrepresented professionals in the chemical industry. And because we believe sustainable business creates positive social change, we invested \$2 million in seed grants for projects in 12 countries, including infrastructure projects that help keep plastic waste out of the environment and back into the circular economy.

- **We are improving governance, transparency and accountability across Dow.** We have raised the bar in our ESG reporting and disclosures through improved carbon emissions and circularity reporting and improved climate risk disclosures and greenhouse gas intensity metrics. And we are working with the World Economic Forum's International Business Council to help develop consistent international frameworks for reporting and accounting standards for ESG matters.

We continued to actively deepen and diversify our Board, electing three new directors in 2021 and 2022. Also, we modified our Annual Performance Award and Executive Compensation Program metrics to include ESG components – holding every member of Team Dow accountable for the same metrics that we report to all our stakeholders.

A sustainable world is one of intersections – between the environment and society, science and innovation, collaboration and action. Because the challenges facing our local and global communities are increasingly complex and interconnected, they demand a collaborative and integrated approach. They also require game-changing ideas fueled by science.

Within this report, you'll see how Dow is working with our stakeholders to deliver on a broad range of ESG priorities through our purpose-driven strategies and processes. I'm proud of the many ways that Team Dow is making real progress in helping society meet its most urgent needs. While we know there is still much work to do, we are passionately committed – as we have been for well over a century – to imagine a better world. A more equitable world. A more resilient world. A more sustainable world. And a company that will thrive for the next 125 years as it helps build that new future.

Sincerely,



Jim Fitterling
Chairman and Chief Executive Officer

As a science and technology company, we eagerly take on the responsibility for finding answers to the most pressing challenges of our time.



Vision, Strategy & Business





At the Intersection of Science and Sustainability, Culture and Accountability

Many challenges that we face as a society are inextricably interconnected: social inequity, climate change, waste in our oceans, declining biodiversity, and the need for clean water and air among them. By working at the intersections of science and sustainability, culture and accountability, Dow is partnering with others to encourage new thinking and advance ESG priorities that matter to our customers, our employees, our communities and our business success.

Our purpose is simple: to deliver a sustainable future for the world through our materials science expertise and in collaboration with our partners. Achieving this purpose is a responsibility we take seriously. In this report, you'll see how our diverse, dedicated Team Dow is advancing our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world. We are:

- Collaborating with a wide range of stakeholders to advance environmental stewardship.
- Cultivating a culture of inclusion, advancing diversity in our workplace and embedding equity in our practices and processes.
- Achieving results through highly principled and socially responsible business practices.
- Contributing to the well-being of our communities.

These commitments reflect our culture of operational excellence, high ethical standards, strict financial discipline and transparent risk management.

AMBITION

To be the most innovative, customer-centric, inclusive and sustainable materials science company in the world

PURPOSE

To deliver a sustainable future for the world through our materials science expertise and collaboration with our partners

GOAL

Value growth and best-in-class performance

VALUES



Integrity



Respect for People



Protecting our Planet



ESG Priorities – An Overview

Dow's ESG report focuses on four strategic areas of action: Environmental Performance; Inclusion, Diversity & Equity; Community; and Corporate Governance. These areas reflect how we are working as a team to deliver solutions to global challenges and create lasting value for our customers, communities, employees and businesses.



ENVIRONMENTAL PERFORMANCE

Our strategy for building a more sustainable world focuses on three priority areas: circular economy, climate protection and safer materials. These areas address some of the most pressing challenges facing our planet and offer the most opportunity for Dow to use our science and global scale to make a positive impact.



INCLUSION, DIVERSITY & EQUITY

Realizing our purpose and ambition as a company requires an inclusive culture that enables our people to develop, advance, be heard and contribute their greatest value. It requires a diverse workforce that brings wide-ranging, fresh perspectives on how to tackle global challenges and innovate for our customers.



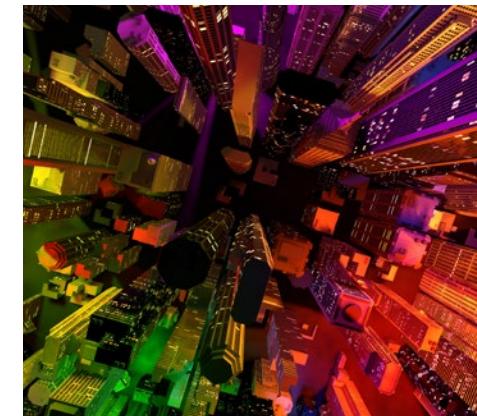
COMMUNITY

We believe in sustainable business that creates positive social change. The global citizenship strategy is a roadmap for how we connect our core strengths – our science and technology expertise, and global reach and resources – to enhance the lives of people in our communities and help make our planet more sustainable.



CORPORATE GOVERNANCE

Best-in-class governance strengthens accountability and protects the long-term interests of all of Dow's stakeholders. ESG leadership starts with our diverse and highly skilled Board and well-defined committee structure. The Board actively engages with management in oversight and stewardship of the company's strategy, risk management and overall performance.





Company Profile

At Dow, our pursuit of solutions to the world's toughest challenges inspires us to collaborate and use our materials science expertise to create innovative solutions that deliver a sustainable future.

Across four market segments – packaging, infrastructure, consumer and mobility – sustainability is a key driver of opportunity and growth for Dow. We see our total addressable market expanding from \$650 billion to more than \$800 billion as we seek to lead the change to a fully sustainable economy in our industry and the markets we serve.

INDUSTRY TRENDS AND SUSTAINABILITY ENABLE >\$800B ADDRESSABLE MARKET

Market Verticals	Key Growth Drivers	Dow Participation Highlights
Packaging	<ul style="list-style-type: none">• Low carbon, circular and renewable• Societal food waste reduction• Downgauging/lightweighting	 <p>Packaging to enable freshness en route and on the shelf</p>  <p>Packaging solutions made with bio-based feedstocks</p>
Infrastructure	<ul style="list-style-type: none">• Decarbonization of electricity• Building efficiency• Longevity• Connectivity	 <p>Elastomers, fluids, composites and silicones enable wind and solar power</p>  <p>Materials that enhance the efficiency of high-performance buildings</p>
Consumer	<ul style="list-style-type: none">• Safer materials• High-efficiency end products• Low carbon, circular and renewable	 <p>Recycling of end-of-life consumer products into raw materials for reuse</p>  <p>Bio-based home and personal care ingredients</p>
Mobility	<ul style="list-style-type: none">• Electrification and autonomous• Lightweighting• Low carbon, circular and renewable• Reduced noise, vibration	 <p>Silicones, urethanes and acrylics enable weight reduction and improve fuel efficiency</p>  <p>Battery assembly materials for safe and reliable electric and autonomous vehicle designs</p>

\$650B

TODAY

ADDRESSABLE MARKET

>\$800B

2025 & BEYOND



2021 Business Highlights

2021 SALES BY OPERATING SEGMENT (DOLLARS IN MILLIONS)

Corporate
\$317



Performance
Materials &
Coatings
\$9,672

Industrial
Intermediates
& Infrastructure
\$16,851

Packaging &
Specialty Plastics
\$28,128



Delivered record Operating
EBIT¹ of **\$9.5B**
and net sales of **\$55B**



>\$3B
returned to stockholders
through dividends and
share repurchases



\$7.1B
of cash flow from
operations generated



Decreased
gross debt by
\$2.4B



~35,700
employees



104 manufacturing
sites in **31 countries** with
12 Innovation Centers in
10 countries on **4 continents**

¹ Excluding a \$1 billion voluntary pension contribution, 2021 cash flow from operations would be \$8,069 million and free cash flow would be \$6,568 million.



Business Segments and Products

Dow operates worldwide with leading innovations, products and technologies in six business units across three operating segments: Packaging & Specialty Plastics, Industrial Intermediates & Infrastructure and Performance Materials & Coatings.



PACKAGING & SPECIALTY PLASTICS

The Packaging & Specialty Plastics operating segment consists of two highly integrated global businesses: Hydrocarbons & Energy and Packaging and Specialty Plastics. Offering the industry's broadest polyolefin product portfolio, this segment delivers solutions designed for recyclability, enhanced plastics circularity and sustainability for key markets. These markets include packaging; health and hygiene; caps, closures and pipe applications; consumer durables; mobility and transportation; and infrastructure.

INDUSTRIAL INTERMEDIATES & INFRASTRUCTURE

Within the Industrial Intermediates & Infrastructure operating segment, two businesses – Industrial Solutions and Polyurethanes & Construction Chemicals – develop intermediates that are essential to many manufacturing processes, as well as provide value-added sustainable solutions to a wide range of applications for such segments as home comfort and appliances; building and construction; energy transition; pharmaceuticals; mobility and transportation; and adhesives and lubricants.

PERFORMANCE MATERIALS & COATINGS

The Performance Materials & Coatings operating segment includes industry-leading franchises that deliver a wide array of solutions into consumer, infrastructure and mobility end markets. The operating segment has two businesses – Coatings & Performance Monomers and Consumer Solutions – that utilize the Company's acrylics-, cellulosics- and silicone-based technology platforms to serve the needs of architectural and industrial coatings; home and personal care; consumer and electronics; mobility and transportation; industrial and chemical processing; and building and infrastructure end markets.



Sustainability Drives Opportunity

Across our businesses, we are delivering market-driven, breakthrough, sustainable innovations that are deeply rooted in rigorous science. By helping our customers manufacture products that reduce carbon emissions and resource consumption, and enable circularity, we bring value to our customers and society, while increasing our competitiveness.

NEW VALUE POOLS	Packaging & Specialty Plastics	Industrial Intermediates & Infrastructure	Performance Materials & Coatings
Circularity	●	●	●
Lower-Carbon and Sustainable Materials	●	●	●
Green Buildings	●	●	●
Digitalization	●	●	●
Energy Transition	●	●	●
Resource Efficiency	●	●	●



Environmental Performance





Our Sustainability Strategy

We're working to deliver a sustainable future by collaborating and innovating to expand our ability to make a positive impact on society and the planet. As a leading materials science company, we have the responsibility and opportunity to act and lead the industry in areas where our science and innovation can make a difference. This means we are reducing our environmental footprint, developing and implementing circular economy solutions, and creating new materials that are more sustainable.

OUR FOCUS AREAS: ACCELERATING OUR SUSTAINABILITY COMMITMENTS

Climate Protection, Circular Economy and Safer Materials are critical to our license to operate and represent areas where we are using our science, scale and global relationships across our value chains to create shared opportunity for Dow and society.



Climate Protection

We are committed to protecting our planet by combating climate change, including contributing to a lower-carbon future, both in our operations and value chains.



Circular Economy

We are taking a leading role in driving a more circular economy by designing for circularity, building new business models for circular materials and partnering to end plastic waste.



Safer Materials

We are innovating new materials that offer a more favorable health and environmental profile over their life cycles compared to incumbent solutions.





OUR TARGETS: ACCELERATING CARBON NEUTRALITY AND PLASTICS CIRCULARITY

In 2020, we set new, multi-decade targets to put us on a path to achieve carbon neutrality and eliminate plastic waste. These targets build upon our 2025 Sustainability Goals: 10-year commitments aimed at magnifying our company's positive impact through collaboration with like-minded partners. Our targets are as follows:

Protect the Climate



By 2030, Dow will reduce its net annual carbon emissions by 5 million metric tons. This represents a 15% reduction from Dow's 2020 baseline, and a 30% reduction from the 2005 baseline. By 2050, Dow intends to be carbon neutral (Scopes 1 + 2 + 3 plus product benefits).

Stop the Waste



By 2030, Dow will enable 1 million metric tons of plastic to be collected, reused or recycled through its direct actions and partnerships.

Close the Loop



By 2035, Dow will enable 100% of Dow products sold into packaging applications to be reusable or recyclable.



Protecting Our Climate

We are intensifying our actions to reduce global carbon emissions and achieve a carbon-neutral Dow by 2050, demonstrated by our commitment to reduce our net annual Scope 1 and 2 carbon emissions by 5 million metric tons by 2030 compared to our 2020 baseline. Reflecting our focus to make meaningful progress in the near term, we will reduce CO₂ emissions by approximately 2 million metric tons per year while growing underlying earnings by an estimated \$2 billion by 2025.

OUR APPROACH – DECARBONIZE AND GROW

Our science-based strategy includes a phased approach to decarbonize while meeting growing demand for our products and contributing to a low-carbon future through continued investment in new products, technologies and processes. Our actions include:



Replacing end-of-life assets with higher-efficiency, lower-emissions technology

We are taking a phased, site-by-site approach to reducing our carbon footprint by replacing end-of-life and high carbon-intensity assets with more carbon-efficient technologies, and by investing in carbon abatement technologies, including circular hydrogen and carbon capture and storage.



Accelerating investment in renewables

In 2021, we expanded access to renewable power to more than 900 megawatts (MW), such that more than 25% of our purchased electricity comes from renewable sources.



Innovating low-carbon materials and solutions

We are helping our customers achieve their climate-related goals through products that enable benefits such as energy efficiency, lightweighting, fuel transition, circularity, increased operational efficiency, resource reductions and reduced emissions.



Investing in transformative, next-generation technologies

We are innovating next-generation manufacturing technologies, such as fluidized catalytic dehydrogenation (FCDH), ethane dehydrogenation (EDH) and electric cracking technology (e-cracking). These breakthrough manufacturing processes are at various stages of development and are part of our solutions to create a lower-carbon industry footprint.



2021 ACTIONS

Announced plans to build the world's **1st net-zero carbon emissions integrated ethylene cracker** and derivatives site in Fort Saskatchewan, Alberta, Canada, while tripling the site's manufacturing capacity

CO₂ savings:

>1MM MTA¹

Shared a multi-generation plan to convert our Terneuzen manufacturing site in the Netherlands to use clean energy from a **new hydrogen plant**

CO₂ savings:

1.4MM MTA¹
(phase 1)

Expanded access to renewable power to

>900 MW capacity

Advanced retrofit of proprietary FCDh pilot plant in Louisiana for planned 2022 start-up

20% CO₂ reduction vs. traditional processes

Collaborated with **>100** suppliers to drive transparency on Scope 3 carbon emissions and advance climate action with suppliers and non-governmental organization (NGO) partners

ecovadis

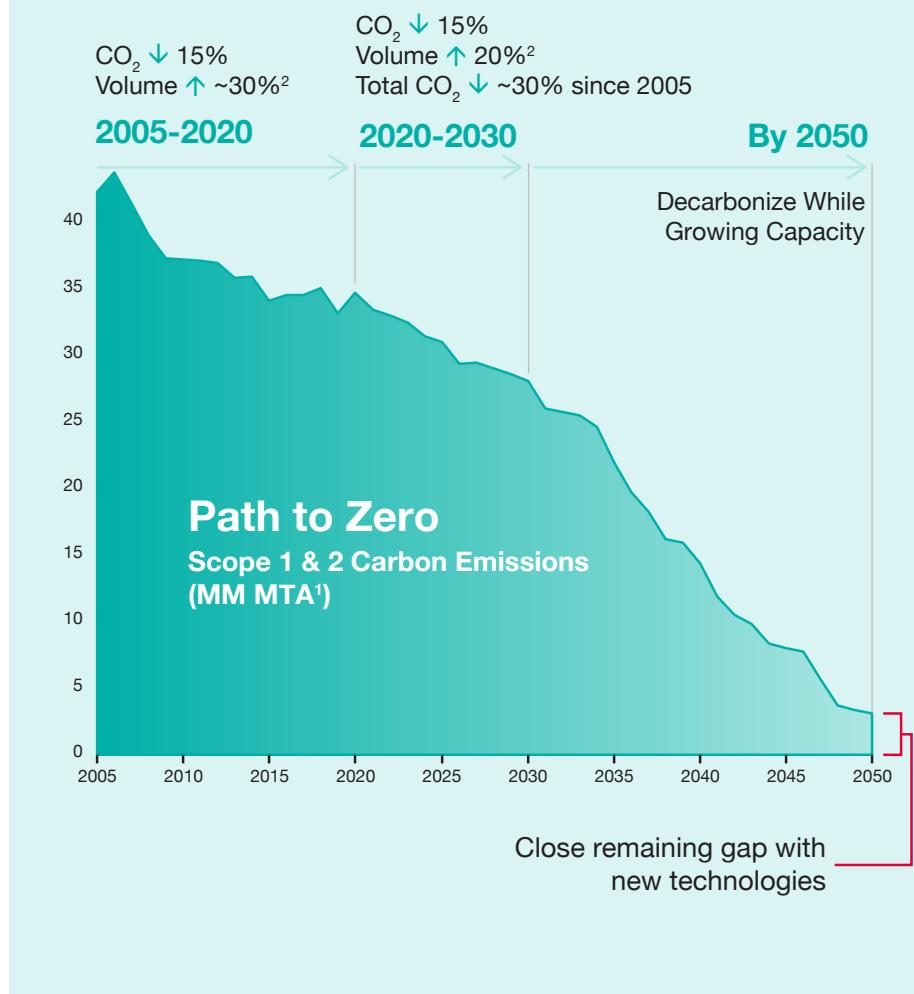
CDP
DISCLOSURE INSIGHT ACTION

TOGETHER FOR SUSTAINABILITY

¹ MTA=meric tons per annum

² Volume growth represents ethylene capacity, excludes joint ventures (JVs)

A Clear Path to Decarbonize and Grow





REPLACING END-OF-LIFE CAPACITY WITH HIGHER-EFFICIENCY, LOWER-EMISSIONS ASSETS

To deliver low-carbon solutions to our customers, we are working to reduce the emissions from our manufacturing assets. Our plans build on the 15% emissions reductions we have already achieved since 2005 – during a period of significant growth – and enable us to reduce our Scope 1 and 2 emissions by another 15%, for a total of 30%, by 2030, while continuing to grow earnings. This modernization of our manufacturing assets will be a catalyst in helping us reach our 2050 zero-carbon³ emissions target.

Fort Saskatchewan: World's First Net-Zero Carbon Emissions Integrated Ethylene Cracker and Derivatives Site

In 2021, we announced our plan to build the world's first net-zero⁴ carbon emissions integrated ethylene cracker and derivatives site at our Fort Saskatchewan, Alberta, complex. The project will triple the site's ethylene and polyethylene capacity and decarbonize 20% of our global ethylene capacity.

In addition to the new cracker, we will retrofit existing assets to achieve net-zero carbon emissions at the site. It will enable our company to produce and supply more than 3 million metric tons of certified low- to zero-carbon emissions polyethylene and ethylene derivatives for customers and joint venture partners around the globe.

- The project will leverage the **best-in-class manufacturing technology** deployed at our Texas-9 facility in Freeport, Texas, which delivers ethylene and derivatives products at up to 60% lower carbon emissions intensity and 65% lower conversion costs than our average cracker at 20% lower capital cost versus the industry.
- To get to net-zero carbon emissions for the Alberta site, we also will **invest in capabilities to convert cracker off-gas into circular hydrogen** to be used as a clean fuel in the production process. Carbon emissions will be captured, transported and stored by adjacent third-party CO₂ infrastructure.

Terneuzen: A Roadmap to Reduce CO₂ Emissions by 40% by 2030

Another example of low-carbon innovation is taking place in Terneuzen, the Netherlands, which is one of Dow's largest integrated sites. The Terneuzen team announced plans in 2021 to reduce the site's overall carbon emissions by 40% by 2030 using technology and engineering advancements. This puts the site on a path to achieve carbon neutrality by 2050. The plan has three phases⁵:

- **Phase 1: Build a clean hydrogen plant where byproducts from core production processes are converted into hydrogen and CO₂.** Hydrogen is then used as a clean fuel in the production process. The hydrogen plant will enable the site to reduce CO₂ emissions by approximately 1.4 million metric tons per year. This is equivalent to the annual emissions of more than 300,000 cars. Building the new hydrogen plant and the associated infrastructure is expected to create 3,500 to 4,000 engineering and construction jobs over a three-year period and 400-500 permanent jobs at Dow, in the region and across associated service providers.
- **Phase 2: Capture CO₂ from Dow's ethylene oxide plant and replace several gas turbines with electrical motor drives by 2030.** This will avoid a further 300,000 metric tons of CO₂ emissions per year.
- **Phase 3: Develop and implement additional breakthrough technologies to replace fuel usage in the production processes.** An example is our [collaboration with Shell³](#) to electrify ethylene steam-cracking furnaces.

³ Zero-carbon emissions: Means reduction of Scope 1, 2 and 3 carbon emissions, including offsets from product benefits and technology advancements. Dow's 2050 carbon-neutrality target refers to Dow's intention to achieve zero-carbon emissions by 2050.

⁴ Net-zero carbon emissions: Means reduction of Scope 1 and 2 carbon dioxide emissions, including offsets from technology advancements.

⁵ Subject to final investment decision.



ACCELERATING INVESTMENT IN RENEWABLE ENERGY

In 2021, we were one of the top 20 global corporations using clean energy, and we added 132 megawatts of wind and solar clean power capacity through new renewable power purchase agreements. The power supplied by the new agreements is expected to reduce our Scope 2 emissions by more than 600,000 metric tons of CO₂ per year. The new agreements bring our total access to clean energy to more than 900 megawatts, well ahead of our 2025 Sustainability Goal aligned to power from renewable sources.

New renewable purchase agreements include:

- **In Europe**, six agreements have enabled eight Dow sites across Spain, the United Kingdom, Sweden, France and Germany to transition to 100% green electricity. Several other Dow sites across Europe have also transitioned to a cleaner grid power mix or are importing renewable power to complement the self-generation needed to assure reliable operations.
- **In Latin America**, we signed a long-term agreement in Brazil with Casa dos Ventos aligned to the construction of a new wind power plant in the state of Rio Grande do Norte. The agreement provides our site in Cabangu, Brazil, with access to cost-competitive capacity for wind-generated electricity, with the assurance of 60 MW of continuous renewable power, which will supply power for silicon metal production.
- **In North America**, a long-term agreement with Capital Power Corporation in Alberta, Canada, will provide clean power capacity, replacing approximately 40% of the energy demand at our Prentiss, Alberta, site for polyethylene production. The agreement with Capital Power, supplied through the company's Whitemud 2 wind farm project, supports grid diversity and provides greater access to renewable power for Dow.



INNOVATING LOW-CARBON MATERIALS AND SOLUTIONS

Applying our materials science expertise, we are helping the world's best brands make their products more sustainable while expanding opportunity for innovation and future earnings growth.

Sustainable packaging: We are reducing the climate impact of packaging by offering post-consumer recycled (PCR) resins, using renewable feedstocks to offer plant-based polymers, and developing materials to help our customers design packaging that is resource efficient and recyclable.

- Look no further than your local supermarket to find packaging for **frozen foods, cereals, beverages**

Designing Solutions to Advance a More Sustainable Mobility Industry

As the Official Materials Science Partner of Jaguar TCS Racing, Dow is collaborating with Jaguar Racing to create solutions that advance safety, range and energy output for racecars and allow engineers to use the track as a real-world testing ground for electric vehicle (EV) technologies intended for a low-carbon future. It is through creative partnerships like this that Dow is seeking to help solve the mobility challenges of our time and enable the future of mobility.

Our MobilityScience™ platform team is focused on developing cutting-edge material innovations that will enable the next generation of EVs and autonomous vehicles to achieve longer range, greater comfort, enhanced safety and a lower carbon footprint. Whether it is optimizing battery performance, enhancing safety systems or reducing vehicle weight, Dow is using its knowledge and broad portfolio of technologies, including ENGAGE™, SILASTIC™, DOWSIL™ and VORATRON™ technologies, to help accelerate the electrification of transportation.





and detergents, among others, that now have a lower-carbon footprint thanks to Dow's AFFINITY™ RE bio-based, high-performing polyolefin elastomers. The AFFINITY RE range of products are made with bio-based feedstock and designed to optimize the carbon footprint of hot-melt adhesives used in packaging.

Sustainable infrastructure: Energy efficiency is one of the greatest opportunities for sustainable innovation in infrastructure, industrial, commercial and residential construction applications. Dow has a broad portfolio of solutions in this area, including technologies that enable the transition to renewable energy and create more efficient buildings.

- ENDURANCE™ compounds for cable systems support next-generation, longer-life, and lower-carbon emissions infrastructure, including **on- and off-shore windfarms**. Our Novel ENDURANCE™ HFDD 4201 enables significantly lower-carbon emissions (~80%), and material and energy savings during cable production.
- In **buildings**, carbon emissions reductions can start at the roof, where Dow's reflective roof coatings and membrane materials enable cool roofs that can reduce energy use by about 20% while prolonging the life of a roof system. At the bottom of the building, Dow's WALOCEL™ cellulose ethers and redispersible latex powders enable dry mix mortars to utilize up to 70% less raw materials by weight, resulting in a lower carbon footprint. Our technology enables significant CO₂ savings across end-use applications through reduced cement consumption.

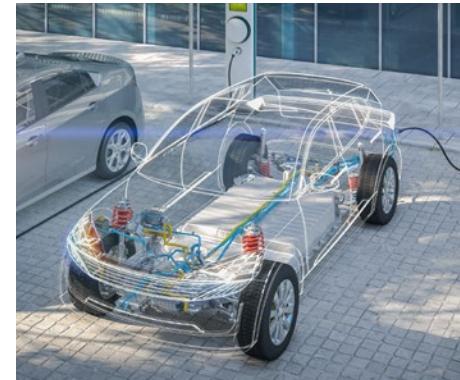


Sustainable mobility: Our materials science is helping transition to a world of low-carbon mobility with products that dissipate heat and provide long-lasting protection for electric and hybrid vehicles, and lightweighting solutions that expand design options to increase fuel- and energy-efficiency and improved range for automobiles. Some of our product examples include:

- DOWSIL™ Thermal Radical Cure™ adhesive technology for use in automotive electronics control units, sensors, lighting and displays reduces the energy required in the production phase up to 90% compared to standard thermal cure adhesives.
- NORDEL™ ethylene propylene diene terpolymers (EPDM) for weatherseals, hoses and belts reduces CO₂ emissions by ~40% compared to conventional EPDM technologies.
- SPECFLEX™ C and VORANOL™ C polyurethanes for flexible foams offer circularity content to 30% and reduce CO₂ emissions compared to fossil fuel equivalent.

Sustainable consumer applications: We are supporting the development of **higher-performing and more sustainable consumer products** that save energy, conserve natural resources and reduce emissions.

- We are working with brand owners, such as Ralph Lauren, to make dyeing clothes more sustainable using Dow's ECOFAST™ Pure Sustainable Textile Treatment technology, which is a chemistry that enables existing textile mills to retrofit their process and dye cotton using up to 90% less process chemicals, up to 60% lower carbon footprint, up to 50% less water and up to 40% less energy.
- Dow announced a collaboration with Crocs to reduce the CO₂ impact of Croslite™ resin – the material that Crocs uses to create its iconic footwear. Crocs is currently scaling up production of Croslite™ resin materials with the help of Dow's technology.





INVESTING IN TRANSFORMATIVE NEXT-GENERATION TECHNOLOGIES

Fluidized Catalytic Dehydrogenation (FCDh): We are investing in process technologies for producing ethylene and propylene that will help the industry in its journey to low- and zero-carbon emissions by 2050. For example, Dow is retrofitting our Louisiana-3 cracker with Dow's UNIFINITY™ dehydrogenation process technology, which produces propylene with fewer CO₂ emissions and less energy. Additionally, the technology requires less capital and has a streamlined process that supports greater reliability. In late 2022, Dow's Louisiana-3 cracker retrofit will be the first industrial olefins unit to use this advanced technology, demonstrating its versatility to right-size or tailor capacity to meet supply needs more sustainably.

Electric cracking: In 2021, Dow and Shell reported progress on our joint technology program to electrically heat steam cracker furnaces. In the first year, the program has advanced electrification solutions for today's steam crackers while also pursuing game-changing technologies for novel designs of electrified crackers in the longer term. This dual-path approach aims to support emissions reductions required to meet the companies' 2030 carbon reduction ambitions and their targets to achieve zero-emissions businesses by 2050 or sooner. The project was awarded \$4.2 million in Mission-driven Research, Development and Innovation (MOOI) funding by the Netherlands government and will join forces with The Netherlands Organization for Applied Scientific Research (TNO) and the Institute for Sustainable Process Technology (ISPT). This multi-stakeholder collaboration aims to accelerate key milestones for near-term progress and longer-term breakthroughs.





Reducing Emissions Across Our Value Chain

Scope 3 emissions are inclusive of upstream emissions from products and services we procure from suppliers, as well as downstream emissions from the transportation of our products and the emissions emanating from the use and disposal of our sold products. These emissions are critical to Dow and represent approximately 70% of our total emissions. Because more than half of our Scope 3 emissions come from raw materials, transportation and other services we purchase as a company, it is critical to partner with suppliers and customers across the value chain to reduce emissions.

Purchased goods and services

We have partnered with CDP (formerly the Carbon Disclosure Project) to collect climate data from approximately 100 suppliers, representing 31% of our 2020 spend. Of those suppliers, 92% of respondents reported Scope 1 carbon emissions, and 80% have set a carbon reduction target. We are expanding the CDP program to target engagement with approximately 350 suppliers in 2022 and 500 globally in 2023, with an ask to disclose carbon emissions data and reduction plans. With this data, we will improve the accuracy of our Scope 3 values along with our ability to take action and track progress toward our emissions reduction goals.

Transportation footprint

Our Integrated Supply Chain (ISC) team developed the Transportation Carbon Footprint Tracker, which collects shipment data and uses with the Global Logistics Emissions Council (GLEC) Framework to calculate the carbon emissions generated at the shipping stage. This tracker produces much more granular data than historical reporting and will serve as the main source of transportation emissions data internally. Externally, this tracker can provide a baseline for discussions with customers and lead to collaborative efforts to reduce transportation emissions across the value chain.

Value chain and enhancing ESG engagement

Several efforts are underway to embed ESG criteria into supplier engagement activities, including all requests for proposals, tenders, contracts and supplier relationship management

strategies. This will help us access robust ESG data and include sustainability as a key metric in the decision-making matrix.

Beyond our efforts within Purchasing and Integrated Supply Chain, we are investing in external collaborations to meet the goals we share with many stakeholders across our value chains. For example, in 2021, we joined Together for Sustainability, an industry group that enables us to engage with suppliers in a streamlined and strategic way alongside our peers in the chemical sector. We also are collaborating with the World Business Council for Sustainable Development (WBCSD) through the Partnership for Climate Transparency (PACT) to develop robust methodologies and systems for sharing product carbon footprint data along supply chains. In addition, we actively participate in several working groups that focus on improving sustainability in the chemical industry through the European Chemical Industry Council (Cefic) and the American Chemistry Council (ACC).

Our logistics supplier award programs (S4TAR and DowGOL) are designed to encourage and recognize logistics partners for excellent performance in the areas of safety, sustainability, social responsibility and service. The award program acts as a platform for sharing best practices, partnership cultivation, operation excellence recognition and sustainability advocacy.

Every year, Dow surveys its logistics partners about their sustainability strategies, certifications, carbon reduction efforts, waste reduction, recycling efforts and water conservation, as well as employee training and incentivization. Responses are shared with all participants to encourage a collaborative environment and cultivate new ideas for improvement.

Transportation Carbon Footprint Tracker



- Shipping Type
- Weight



- Distance
- Region



- Mode of Transportation
- GLEC Carbon Factor





Enhancing Water Stewardship

As part of our pledge to the Water Resilience Coalition (WRC) under the U.N. Global Compact [CEO Water Mandate¹](#), we are committed to advancing water stewardship within our own operations and to working collaboratively to enhance water management at the watershed level. We have set a global target to reduce freshwater intensity by 20% at our key water-stressed sites by 2025. In 2021, we reduced our freshwater intake intensity by implementing water conservation projects and technologies with improved water efficiency and that were further aided by favorable impacts from increased rainfall. We continue to take actions to improve our water efficiency, management and measurement approaches to drive sustainable progress.

OUR ACTIONS

Among our actions, we are:

- **Implementing projects to increase water circularity.** At our site in Terneuzen, the Netherlands, we are working with farmers and the regional water board to store fresh water underground – collecting it in the winter and using it in the summer, so farmers can benefit in periods of drought.
- **Collaborating with customers to drive innovation around water-saving technologies** such as our ECOFAST™ Pure Sustainable Textile Treatment, which enables using up to 90% less process chemicals, up to 60% lower carbon footprint, up to 50% less water and up to 40% less energy in the cotton dyeing process.
- **Partnering with others to focus on addressing community freshwater needs.** For example, our Dow Böhlen site in Germany is participating in a European Union-funded project to help implement technologies that will alleviate competition for freshwater resources.
- **Investing in projects that are good for business and better for ecosystems.** To help stem the loss of critical wetlands in the Mississippi River Delta, we are working with multiple partners to restore habitats and build water resilience in and around our sites.
- **Implementing strategic water-savings technologies.** For example, at our Freeport, Texas, site, we implemented water-conservation projects in 2021 that saved the equivalent of 2% of the site's freshwater withdrawal associated with production. Freeport accounts for roughly 80% of our overall freshwater intake intensity reduction goal.

Dow Sites in Key Water-Stressed Regions





Collaborating with Ralph Lauren to Accelerate Water Solutions in the Textile Industry

Every year, water-intensive industries such as the textile and fashion industry use trillions of liters of water in fabric dyeing.¹ These industries are seeking new ways to create garments more responsibly. Dow and the iconic global brand Ralph Lauren began working together in 2018 as Ralph Lauren actively searched for solutions to more sustainably and effectively color their cotton apparel to reduce water use, emissions and harmful chemicals.

The solution? **Dow's ECOFAST™ Pure Sustainable Textile Treatment**, an award-winning technology for cationic pretreatment applied before the cotton-dyeing process. This technology can dramatically reduce the number of resources needed to color cotton, enabling brands to use up to 50% less water, up to 40% less energy with room-temperature dyeing, up to 90% less chemicals, and reduce their carbon footprint by up to 60%.

Together, Dow and Ralph Lauren made great strides advancing ECOFAST™ Pure in the textiles industry including:

- The launch of “Color on Demand™,” Ralph Lauren’s multi-phased platform powered by ECOFAST™ Pure, with the ambition to create the world’s first scalable, zero-wastewater cotton-dyeing system. Ralph Lauren, the first brand to use ECOFAST™ Pure, partnered with Dow to optimize and implement the technology in its cotton-dyeing operations, as part of the first phase of its Color on Demand platform.
- The launch of select cotton products in Ralph Lauren’s 2020 Team USA Collection dyed using ECOFAST™ Pure, including village wear and Opening Ceremony Olympics pieces.
- The release of a detailed, open-source manual by Dow and Ralph Lauren. This step-by-step guide shares how to use ECOFAST™ Pure – helping lower industry barriers to adoption of this new technology.

Dow will continue working with Ralph Lauren to achieve its goals for Color on Demand™, including on future phases of the platform.

90% less process chemicals

60% lower carbon footprint

50% less water

40% less energy



BUILDING CLIMATE RESILIENCE THROUGH NATURAL INFRASTRUCTURE

The Mississippi Watershed is a water-stressed basin identified by the CEO Water Mandate's WRC. We are working with The Nature Conservancy, Ecolab, the Caterpillar Foundation, the National Fish and Wildlife Foundation, and other partners to restore more than 10,000 wetland acres in the lower Mississippi Alluvial Valley near our Plaquemine site in Louisiana.

The project will install water control structures to increase water supply to the interior of Loch Leven, a floodplain that has been isolated by levees since the 1800s, and reconnect the tract to the Mississippi River. This will restore hydrology to the wetlands, improve water quality through sediment and nutrient reduction, enhance the land for wildlife habitat, and provide 23.4 billion gallons of flood storage capacity – helping build resilience against storms.



¹ <https://www.wri.org/insights/apparel-industries-environmental-impact-6-graphics>



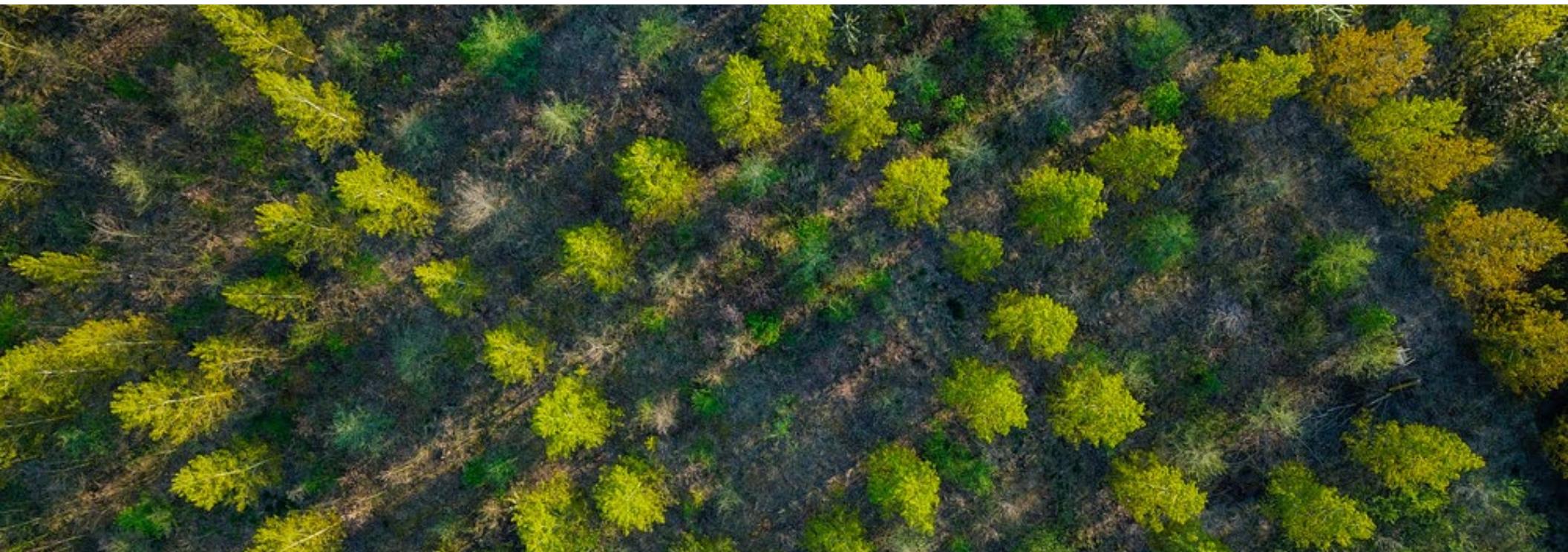
Taking Action on Biodiversity

Through our pioneering [Valuing Nature Goal¹](#), one of Dow's 2025 Sustainability Goals, and our 10-year collaboration with The Nature Conservancy (TNC), we have demonstrated how nature can be a source of sustainable business value. We are now broadening our work with TNC to include biodiversity.

OUR ACTIONS

In 2021, in partnership with TNC, we assessed the potential impact that our global sites may have on areas of significance for biodiversity. We developed a land value assessment tool that can help us make informed decisions by exploring solutions and recommending the best land management strategy. The tool is helping us:

- Analyze the environmental risk of global Dow locations and identify priority sites for implementing nature-based solutions; and
- Optimize land-use transformation strategies at a selected site to capture optimal value from ecosystem services. Land-use transformations such as reforestation, restoration, remediation or wetland construction can provide natural-capital and environmental benefits that can supplement man-made mitigation systems such as carbon capture and storage. Several Dow-owned land parcels were identified as the priority areas to focus our continued work.





Empowering Amazon Communities to Protect Biodiversity and Generate Social Development

Could the seeds of the Andiroba tree also be a seed that protects the Amazon rainforest, increases local family incomes and generates value-added products? We believe so. Under a Dow strategic sustainability initiative, Project Ybá – Conservation that Transforms, we are collaborating with multiple parties to develop and scale a community-oriented “bio-business” model in Brazil’s Amazon rainforest that sustainably uses standing-forest resources, such as seeds and fruits, and provides livelihoods for families.

Near our Breu Branco site, Dow maintains a 38,000-hectare Amazon rainforest preserve, half the size of New York City. Surrounding the preserve, continued deforestation and ecosystem degradation pose major economic, cultural and environmental threats to the region. Project Ybá seeks to empower Amazon communities to protect biodiversity and generate income by developing a local cooperative that would harvest seeds, fruits and other renewable resources – called bioactives – on Dow’s forestland and then sell them for use in cosmetics or other products.

Currently, Dow is collaborating with the Peabiru Institute and TNC to analyze the biodiversity within Dow’s preserved native Amazon forests and identify a local community to manage the commercial cooperative. Dow is also working with cosmetics brand Natura, the first commercial collaborator of Project Ybá. Natura will support the development of the local cooperative and contribute its expertise in the technical evaluation of the bioactives.



In 2021, Dow and our project partners:

- **Completed biodiversity mapping** of Dow’s preserve to evaluate its potential as a source for bioactives. A survey found 17 species of commercial interest identified on the land. Of particular interest to Natura was andiroba, a tropical tree that usually produces 180 to 200 kilograms of seeds per plant each year. Approximately 60% of their weight is oil. Andiroba seed oil is used in the pharmaceutical and cosmetics industry because of its analgesic, antibacterial, anti-inflammatory, antifungal ability and anti-allergic properties.¹
- **Completed 22 social field visits** to identify a local community as a commercial partner for the cooperative. Supported by Dow, the Peabiru Institute will develop and train a local cooperative to harvest and sell bioactives. Once the commercial cooperative is fully trained and organized, it is estimated that up to 150 families will benefit from Project Ybá’s sustainable commerce.
- **Engaged TNC and EcoMetrix Solutions Group to quantify ecosystem services** at the preserve using an existing tool developed through Dow’s partnership with TNC. This will help identify the key parameters needed to incorporate harvesting practices that respect forest life cycles and maintain native species.

Eventually, Dow and its collaborators expect to scale Project Ybá’s sustainable commerce model to other communities to help preserve and restore the Amazon rainforest. By fostering a culture of land stewardship that supports inclusion and generates job opportunities, we intend to show that the environment, society and business growth can all thrive together.

¹ https://bioresources.cnr.ncsu.edu/wp-content/uploads/2019/12/BioRes_15_1_894_SodreSouza_PFODQ_Valoriz_Andiroba_Residue_Optimiz_Alk_Pretreatm_Ferment_Sugar_16508.pdf





Advancing a Circular Economy

OUR APPROACH

At Dow, our vision for turning the tide on plastic waste is centered on solving challenges from designing for recyclability at the beginning of a product's life to encouraging local infrastructure to closing the loop. The issue is complex, and through partnerships, we are working across the value chain to improve collection, access to recycling and processing infrastructure. We also are creating new business models that will impact the overall recycling rates of plastics.

Improving circularity of plastics through recycling and reuse is critical to a world that is also targeting carbon emissions reduction. The lower-carbon benefits of polyethylene-based packaging serve as a key driver and source of value. Moving to circular products means incorporating recycling feedstocks from waste instead of more extraction of fossil fuels.



Stop the Waste



Investing to improve plastics recycling infrastructure



Partnering across the value chain to bring hard-to-recycle plastics into the circular economy



Helping communities address waste management gaps



By 2030, we will enable **1MM** metric tons of plastic per year to be **collected, reused or recycled** through direct actions and partnerships.



In 2021, we enabled the collection, reuse or recycling of **23,000** metric tons of plastic waste, up from **8,000 metric tons in 2020**.



Close the Loop



Helping customers design for recyclability



Growing our recyclable/renewable business



Scaling advanced recycling

Through our Close the Loop (CTL) target, we are tracking our progress toward enabling 100% of the packaging applications we sell to be recyclable or reusable by 2035.

In support of and in collaboration with our value chain partners, we align our innovation and application development programs to ensure we have the right solutions at the right time. And our year-over-year progress shows that it's working.

Close the Loop Progress
% of packaging applications that are recyclable or reusable in 2021:

85%

Dow Flexible PE has the Lowest CO₂ Footprint



Even accounting for higher recycling rates in other materials, flexible low-carbon-emitting PE from Dow has a carbon footprint advantage.¹

¹ Dow analysis using LCA method and Ecoinvent database, comparing all PE stand-up pouch, paper box, rigid PP, and glass and metal jar designs



OUR ACTIONS – STOP THE WASTE

Our **Stop the Waste** target is aimed at significantly increasing global plastics recycling by investing and collaborating to improve key technologies and infrastructure.

We're also accelerating progress through innovative waste management and repurposing solutions, as well as through global partnerships with NGOs and investors, such as the Alliance to End Plastic Waste, Circulate Capital and Global Plastic Action Partnership.

Investing in Recycling Technologies

In the last two years, **Dow has invested a total of \$50 million into impact funds, recycling infrastructure and key technologies to transform waste into solutions that support a circular economy.** With our advanced recycling investments, all of the waste that is brought in to create circular products counts toward our Stop the Waste progress. Our actions to stop the waste include:



INVESTING TO IMPROVE PLASTICS RECYCLING INFRASTRUCTURE

Dow partnered with NOVA Chemicals, LyondellBasell and Sealed Air to establish the **Closed Loop Circular Plastics Fund**, which invests in scalable recycling technologies, equipment upgrades and infrastructure solutions. With an initial fund size of \$25 million, Closed Loop Partners invites businesses across the plastics value chain to join in advancing the recovery and recycling of plastics in North America.



PARTNERING ACROSS THE VALUE CHAIN TO BRING HARD-TO-RECYCLE PLASTIC INTO THE CIRCULAR ECONOMY

In 2021, Dow was recognized with a SEAL (Sustainability, Environmental Achievement & Leadership) Award for our work with **Circulate Capital** and **Lucro**. Together, we invested in capacity expansion to take in more waste and develop disruptive post-consumer recycled (PCR) polyethylene film solutions in India. This collaboration is expected to divert 6,000 metric tons of waste from the environment, while fostering new economic opportunities in the next three years.



HELPING COMMUNITIES ADDRESS WASTE MANAGEMENT GAPS AND CREATE JOB OPPORTUNITIES

Dow has invested in **Mr. Green Africa**, an innovative Kenya-based recycling company. This investment marks the first of its kind from Dow on the African continent and expects to enable **90,000 metric tons of plastic waste** to be recovered and recycled into new packaging applications over four years. At full scale, the investment is expected to create approximately 200 more direct jobs, impact the lives of **5,000 waste pickers** and engage **more than 250,000 consumers** in separation-at-source programs.

Global Partners





OUR ACTIONS – CLOSE THE LOOP

While the majority of products we sell today are recyclable, they may be incorporated into multi-material structures that may not be recyclable. That's why we are committed to helping our customers and brand owners redesign and create packaging solutions that are both high-performance AND recyclable.



HELPING CUSTOMERS DESIGN FOR RECYCLABILITY

In 2021, we demonstrated that recyclable structures were possible for 16 packaging applications that were previously considered unrecyclable. Dow's unique product portfolio, such as RETAIN™ polymer modifier, ELITE™ AT enhanced polyethylene resin, INNATE™ polyethylene resins and more, is driving these conversions toward recyclability. A few design-for-recyclability solutions include:

Toothpaste tubes: Unrecyclable toothpaste tubes alone account for an estimated 100,000 tons of waste each year. Because toothpaste is sensitive to oxygen and humidity, manufacturers traditionally create tubes made from a combination of different plastics as well as a layer of aluminum – making the packaging nearly impossible to recycle. Using high-performance polyethylene-based technologies, Dow developed a solution that solved the recyclability issue by removing the aluminum layer, while still protecting the integrity of toothpaste products.

Phormanto™ polyethylene rich thermoforming technology: Dow's Phormanto™ polyethylene rich thermoforming technology is helping meet increased consumer demand for sustainable packaging by offering a solution for vacuum thermoformed packages that increases the shelf life of poultry packaging for up to two weeks. A leak-proof packaging technology that reduces costs and waste in every step of the value chain, Phormanto™ is made of a single-material plastic so it can fit neatly into the well-established recycle streams that already exist for polyethylene.



GROWING OUR CIRCULAR AND RENEWABLE BUSINESS

This year, we announced several advancements in our efforts to prevent plastic waste, reduce greenhouse gas emissions and provide customers with recycled plastic products that provide the same performance as virgin plastics derived from fossil fuel-based feedstocks. As a result, our plastics made with recycled content, bio-based and/or renewable sources reached over a hundred million dollars in sales and utilized 4,000 metric tons of renewable/circular feedstock this year. With these advancements, our company will be well-positioned to provide an initial supply of fully circular polymers to customers starting in 2022, further reducing fossil fuel feedstocks by incorporating waste as the new feedstock.

ECOLIBRIUM™ technology enables sustainability and Crocs: ECOLIBRIUM™ is a technology that enables more sustainable polymers for applications such as footwear, beverage cartons, food and personal care packaging, caps, labels and hot-melt adhesives. This technology has proven instrumental for our customers in delivering impact toward their corporate sustainability goals.

Last year, this included a collaboration with Crocs. Dow supplied bio-based elastomer materials to reduce the CO₂ impact of Croslite™ resin for use in the iconic shoe brand's manufacturing process. While Crocs is the first footwear brand to go to market with ECOLIBRIUM™ technology, these solutions open up additional possibilities with other brand owners to increase the recyclability of footwear at the end of life.





Turning Automotive Waste into New Car Products

By turning automotive waste into new polyurethane foam-based solutions for vehicle interiors, we are helping car manufacturers meet their market and regulatory demands for more circular products.

Created using a mass balance approach, SPECFLEX™ C and VORANOL™ C solutions are made from a circular feedstock produced from recycled and locally obtained automotive waste that replaces virgin fossil fuel-based feedstock. This approach serves as an efficient and validated way for automotive OEMs to reduce greenhouse gas emissions and fossil feedstock inputs, meet regulatory standards and achieve their own ambitious sustainability goals.

SPECFLEX™ C and VORANOL™ C are initially being offered through two automotive suppliers, Adient and Autoneum. The new foam systems not only offer the same benefits as current automotive polyurethane foams, such as geometrical adaptability and lightweighting, but also significantly lower the cradle-to-gate carbon footprint of car components.

Sustainability Benefits

Circular feedstock
using recycled stream from mobility sector

10% CO₂ reduction
compared to fossil-fuel equivalent

Waste reduction
in mobility sector

Reliable performance
for a wide range of flexible foam systems

REVOLOOP™ Recycled Plastics Resins: Last year, using our Pack Studios in-house conversion capabilities, we commercialized a global line of mechanically recycled plastic resins, branded REVOLOOP™ resins – a family of products that can be used in either flexible or rigid plastic packaging applications. It's the first PCR product in Dow's plastics circularity portfolio to incorporate up to 70% of recycled plastic. In 2021, we sold and launched 12 product grades of REVOLOOP™ resins, with applications ranging from rigid bottles and collation shrink to e-commerce bags and protective packaging.

Mattress recycling now a reality with start-up of RENUVA™ plant: By turning end-of-life mattresses into RENUVA™ polyols for use in new mattresses and other applications, our RENUVA™ Mattress Recycling Program is contributing to both a circular and low-carbon economy.

In 2021, we launched the world's first industrial-scale reactor for the chemical recycling of end-of-life mattresses in France. The collective effort brings together Dow Polyurethanes and chemical innovator Orrion Chemicals Orgaform with mattress collector Eco-mobilier, turnkey solutions provider H&S Anlagentechnik and foam manufacturer The Vita Group. When operating at full capacity, the plant will recycle polyurethane foam from up to 200,000 used mattresses per year – mattresses that otherwise would be incinerated.

At the new RENUVA™ plant, polyurethane foam from end-of-life mattresses is chemically recycled to create a new polyol, which is a key starting material to produce polyurethane. The RENUVA™ polyol produced from the recycled foam contains approximately 40-45% recycled content and can be tailored for different applications. The first batch of RENUVA™ polyols was delivered to The Vita Group, providing a more sustainable offering to the bedding market.

An externally certified lifecycle analysis was conducted for RENUVA™ and found that the process provides a reduction of more than 50% in CO₂ equivalent emissions in comparison with the standard polyol production process.

Through collaboration, materials science and innovation, the RENUVA™ Mattress Recycling Program generates value from waste mattresses, addresses the issue of mattress disposal, creates new business ecosystems and at the same time reduces the carbon footprint.



SCALING ADVANCED RECYCLING

We are on track to launch Dow's first circular polymer in 2022 – an investment in advanced recycling technologies in which mixed-use plastic waste that otherwise would be incinerated or landfilled is broken down into its basic elements and repolymerized into the equivalent of virgin plastic.

We're doing this in partnership with a number of organizations. In 2021, we teamed with **Mura Technology**, which has demonstrated that it can recycle all forms of plastic – including multi-layer, flexible plastics used in packaging, which are currently harder to recycle and often incinerated or sent to landfill. We also expanded our initial partnership with **Fuenix Ecogy Group** to scale its advanced recycling production with the

construction of a second plant in Weert in the Netherlands. The new plant will process 20,000 metric tons of waste plastic into pyrolysis oil feedstock annually, which will be used to produce new circular plastic at our Terneuzen site.

We also received the International Sustainability & Carbon Certification (ISCC) PLUS recognition at five of our largest global manufacturing facilities for our compliance with rigorous tracking of sustainable feedstocks use. The certification was awarded following an independent, external audit to ensure product supply chains are fully traceable and that Dow and its suppliers are adhering to and accelerating sustainable practices.

Operation Clean Sweep®

As a member of Operation Clean Sweep® (OCS), a plastics containment program designed to prevent pellet, flake and powder loss to the environment, we are engaged in this important initiative to help achieve zero pellet loss.

Dow is committed to transparency in pellet loss reporting. We have a sustainable program structure to improve plastics containment in our manufacturing, logistics and environmental facilities worldwide, including auditing, reporting and substantial facility investments. Management systems have been implemented across the value stream, driving progress in manufacturing, logistics and commercial operations. In 2021, two events occurred that resulted in greater than 0.5kg of plastic pellet losses outside our company-operated facilities.

We also are actively working with suppliers, logistics service providers and customers to implement similar robust systems focused on proactive plastics containment. In 2021, we expanded our leadership by incorporating OCS in-sourcing activities, operational performance metrics and supplier relationship management. Our logistics service providers that actively handle plastic pellets are pledged to OCS and have implemented the OCS guidance to reduce the risk of pellet loss. To ensure accountability and joint improvement toward a zero-pellet loss supply chain, standardized OCS contractual language was included in existing agreements. With support from the logistics service providers, we have completed a strategic risk review of the providers that handle packed plastic pellets. Together, we are identifying areas of risk and continuously developing a gap closure plan.





Developing Safer Materials

OUR APPROACH

With a portfolio of more than 14,000 products that support more than 10,000 customers, we know that how we make, distribute and enable the use and disposal of our products can have a meaningful positive impact on people and the environment. Our Safer Materials vision is a future where every new material we bring to market is sustainable for people and the planet.

OUR ACTIONS

In 2021, we:

- **Created a [Product Safety blueprint](#)** to demonstrate the value of chemistry and materials science to society and outline our approach to developing products that are safe for their intended use.
- **Received recognition for new innovations** with an improved health and environmental safety profile.
- **Advanced our corporate roadmap on Safer Materials** by developing an internal definition of safer materials and outlining enterprise actions for continuous improvement.

New Blueprint for Product Safety

Ever wondered how Dow brings new innovations to the marketplace and what steps the company takes to ensure a new product is safe? In 2021, we launched a Product Safety blueprint to demonstrate to the public how Dow brings materials safely to the market through innovation and collaboration. In addition to links to published studies and other content, the blueprint page also includes a link to "[The Product Safety Story: The Birth of a Molecule](#)." This short animation illustrates the many ways a new molecule must undergo safety and performance testing and assessments before it continues in Dow's R&D process.



- **Proactively conducted more than 50 business risk reviews**, taking new products, new raw materials, and new applications through a comprehensive assessment of all risks associated with the new opportunity, and identifying and implementing appropriate risk management measures.

ADVANCING OUR SAFER MATERIALS ROADMAP

In 2021, we began building the enterprise roadmap for Safer Materials that will include tools, portfolio assessments, corporate policies and organizational alignment for employees. In addition, we defined what a safer material means to our company. (See below.)

DEVELOPING SUSTAINABLE MATERIALS

In 2021, Dow received two prestigious R&D 100 Awards, including an award for **Multi-functional Sorbent Technology (MUST)**, a game-changing solution that removes heavy metals from aqueous and nonaqueous sources. Developed in collaboration with the National Energy Technology Laboratory (NETL) of the U.S. Department of Energy, the versatile chemisorbent technology makes it a highly effective sorbent to clean contaminated waterways and remove metals from electronic and pharmaceutical production processes.

Using Digital Solutions to Predict Product Safety



When innovating new products, Dow uses the power of data to bring product safety early into the design process. Dow is an industry leader in developing hazard assessment tools and demonstrating how they can be applied to make safety decisions on new molecules. Our Predictive Toxicology group applies computer modeling, cell-based (*in vitro*) systems, or exposure- and risk-based evaluations to advance predictive safety assessments and ensure new products are safe throughout their life cycles.

What Is a Safer Material?

We believe a safer material is one with a more favorable health and environmental profile over its intended life cycle(s) as compared to the incumbent solution. We believe that creating safer materials is a continuous journey and is possible through innovation, design and more predictive, enabling technologies. Our innovations must meet the needs of our customers and society, and we commit to continue to evolve our approach to safer materials in line with these expectations.



Dow 2025 Sustainability Goals

We are currently executing our 2025 Sustainability Goals that set the standard for the chemical industry by focusing on more sustainable ways to do business. These 10-year goals, called the Blueprint Goals, are helping us advance a circular economy, value nature, deliver breakthrough innovations, encourage collaboration, and support students and teachers in science, technology, engineering and math (STEM) education.

Our 2025 Sustainability Goals are aligned to the U.N. Sustainable Development Goals and support progress with our focus areas of Climate Protection, Circular Economy and Safer Materials. These goals continue to create tremendous value for the environment, our customers, for Dow and, increasingly, for our investors.

2025 Sustainability Goals

Dow's Thought Leadership and Actions

2015 Sustainability Goals

Product Solutions to World Challenges

2005 EH&S Goals

Journey to EH&S Excellence

Dow's Handprint

Products and services that help customers meet their challenges

Dow's Footprint and EH&S Culture

World-leading operations and supply chain performance

1995

2005

2015

2025

Additional information on our 2025 Sustainability Goals can be found here: <https://corporate.dow.com/en-us/science-and-sustainability/2025-goals.html>↗



2021 PROGRESS AGAINST THE 2025 SUSTAINABILITY GOALS



Leading the Blueprint

Dow leads in developing societal blueprints that integrate public policy solutions, science and technology and value chain innovation to facilitate the transition to a sustainable planet and society.

- Launched Collaborative Action Toolkit with the Keystone Policy Center
- Completed two new blueprints on Product Safety and Valuing Nature



Delivering Breakthrough Innovations

Dow delivers breakthrough sustainable chemistry innovations that advance the well-being of humanity.

- Aligned >85% of innovation portfolio to sustainability outcomes
- Earned six 2021 Edison Awards for breakthrough technologies



Advancing a Circular Economy

Dow advances a circular economy by delivering solutions to close the resource loops in key markets.

- Commercialized a global line of **mechanically recycled plastic resins** branded REVOLOOP™
- Five Dow production sites **received International Sustainability & Carbon Certification (ICSS)** and recognition for compliance with rigorous tracking of sustainable feedstocks use – further expanding capabilities for circular products using advanced recycling and bio-based feedstocks



Valuing Nature

Dow applies a business decision process that values nature, which will deliver business value and natural capital value through projects that are good for business and better for ecosystems.

- Realized a net present value of **\$106MM** from projects that enhance nature, bringing the total to **\$637MM** since goal launch
- **100% of capital projects** screened for carbon emissions and other environmental impacts



Safe Materials for a Sustainable Planet

We envision a future where every material we bring to market is sustainable for our people and our planet.

- Selected ECOGROUND™ Binder as **Dow's third sustainable alternative**, providing an improved and higher-performing alternative to solvent-based systems for rubberized running surfaces, playgrounds, and athletic and recreational facilities
- Collaborated with People for the Ethical Treatment of Animals (PETA) on a scientific publication – ["Animal metrics: Tracking contributions of new approach methods to reduce animal use"](#)



Engaging for Impact

We believe, whether through the dedication of time, talent or expertise, that volunteering promotes a positive employee experience, further supports our global citizenship priorities and investments and ultimately, advances Dow's ambition.

- **7,485 volunteers** participated in #PullingOurWeight cleanups
- Launched **global Volunteer and ERG Participation Policy** to support giving back to communities



World-Leading Operations Performance

Dow maintains world-leading operations performance in natural resource efficiency, environment, health and safety.

- **Achieved strong transportation stewardship performance** driven by low transportation incidents, **including zero serious events**, and risk reduction
- **Reduced Total Worker Health®** risk and avoided unplanned events in excess of 2021 targets, and are trending ahead of 2025 targets



Health & Safety





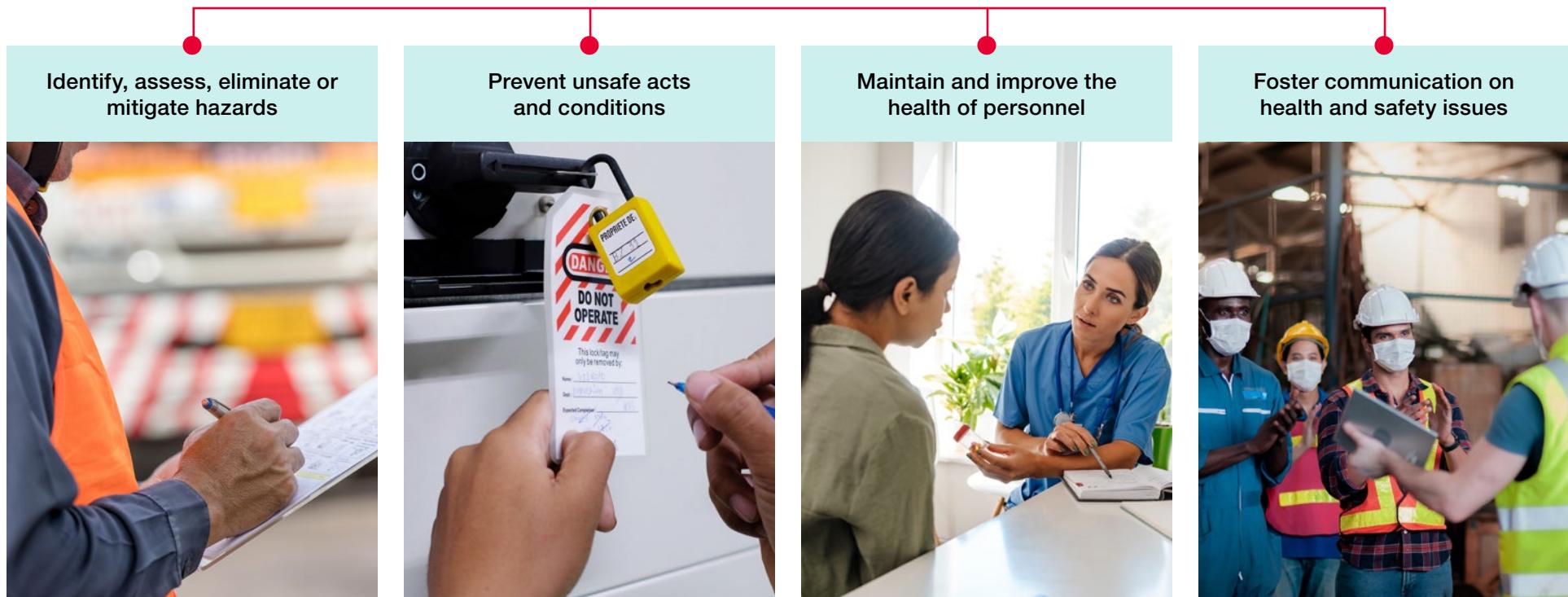
OUR APPROACH

Advancing a Culture of Safety, Employee Health and Well-Being

The safety and well-being of our people are our first and highest priority, with the expectation that everyone will return home unharmed each day. This message is reinforced by leadership at every level of the company.

To ensure worker safety, Dow uses a comprehensive, integrated operating discipline management system that includes policies, requirements, processes, best practices and procedures related to our Environment, Health & Safety (EH&S), Quality and Operations standards, and related external standards. Through this system, we lay the foundational expectations of hazard assessment and risk mitigation, aligned to Responsible Care®. Dow's programs also include a robust occupational health (OH) system that supports company sites, functions and businesses around the world with health information, resources and consultation on health-related opportunities and issues.

Dow requires each function to implement and use health and safety programs to:





OUR ACTIONS

2021 – A YEAR OF ACCOMPLISHMENTS IN SAFETY

Despite 2021 being the largest maintenance turnaround year in company history, we were able to achieve some of our best-ever safety performance in several categories that we monitor.



ZERO FATALITIES IN 2021

We accomplished the one-year fatality-free milestone on March 30, 2021, and remained fatality-free for the rest of the year.



BEST-EVER OVERALL SEVERE INJURY PERFORMANCE IN 2021

We went 281 days severe injury-free in 2021. We recorded one severe injury in 2021, compared to six incidents in 2020 and 34 in 2015, when we initially launched our 2025 Sustainability Goals.



CONTRACTORS ACHIEVED A SEVERE INJURY-FREE STREAK

Our contractors were free of severe injuries for 526 days, as of December 31, 2021. The North America Contractor Safety Task Force helped sustain this notable streak, which is the longest in company history.



A MULTI-YEAR, ZERO-INJURY STREAK FOR MOTOR VEHICLE ACCIDENTS (MVAs) CONTINUED IN 2021

Zero severe MVAs occurred at a Dow site in 2021. This is our longest and best streak, with the most recent severe MVA recorded more than two years ago.



Safe in Sound

We hosted a Safe in Sound webcast in 2021 to highlight the importance of reducing exposure to noise and introduced resources offered by Dow to help successfully implement noise reduction projects. The audience included EHS&S colleagues, engineers, technicians and leaders aligned to facilities with noise reduction opportunities targeted to achieve by 2025. The Safe in Sound panel discussed a variety of topics, from the identification and prioritization of noise sources to how to scope and implement noise exposure reduction solutions. These sessions were key to driving awareness and leveraging proven solutions, which will help us achieve our Total Worker Health® 2025 target of reducing high-priority noise risks.





Total Worker Health® – An Overview

Dow set a goal in 2015 to achieve 100% on our Total Worker Health® (TWH®) index by 2025, an equally weighted composite score based on three elements: **Healthy Workplace, Healthy People** and **Healthy Culture**. As of 2021, we achieved an index score of 74.5%, which has put us on a path to achieve this target one year earlier than anticipated. Below are examples of how we are advancing a Healthy Workplace, Healthy People and Healthy Culture.

HEALTHY WORKPLACE: HEALTH RISK REDUCTION EFFORTS

We routinely evaluate our workplaces in search of high-priority health risks (P1s), which include ergonomic stressors and exposure to chemicals and high noise levels. We made great progress in our efforts to reduce these risks in 2021. For example:

- Dow Performance Materials and Coatings improved its tote cleaning process and is leveraging a new cleaning system across five sites. The new system reduced ergonomic stress, noise exposure and heat stress for workers.
- Our polyols plant in San Lorenzo, Argentina, implemented a state-of-the-art pipeline inspection gauge (PIG), which eliminated worker exposure risks to propylene oxide. This technology was leveraged from a sister plant in Cartagena, Colombia.
- Our polyols plant in Guarujá, Brazil, collaborated with a third-party logistics

company to improve butadiene sampling systems operated by Dow workers. This effort reduced potential exposure to butadiene and resulted in two P1 eliminations.

- Dow Consumer Solutions implemented a significant noise control project at a site in Kendallville, Indiana. This effort has eliminated six P1 health risks for more than 70 employees so far.

Overall, our P1 elimination work has reduced occupational health risks for nearly 600 Dow employees globally.

HEALTHY PEOPLE: RECLAIM YOUR HEALTH CAMPAIGN TAKES A HOLISTIC APPROACH

Our OH group launched the Reclaim Your Health campaign in 2021 to remind employees about the importance of self-care and to share resources for employees to maintain their health. To gauge the mental health of employees, OH also launched screening questions as part of their engagement with our medical

clinic staff. As a result of the screening implementation, Dow's medical staff was able to identify employees in need of support and resources.

Additionally, all 10 of our ERGs explored elements of mental and physical well-being through webcasts. These virtual engagements especially highlighted psychological safety, which is fundamental to creating joint ownership for advancing the employee experience, addressing stressors, and maintaining or improving mental health.

HEALTHY CULTURE: TRACKING OUR PROGRESS

Sites annually self-assess their efforts to maintain or improve the health of employees through a healthy culture survey. In 2021, six additional Dow locations received a platinum rating, bringing the total number of sites recognized to 96.



Health & Safety Spotlight

American Heart Association (AHA) Recognizes Dow's Healthy Workplace and Culture

We were presented gold-level recognition by the AHA in 2021 for the significant steps we took to build a culture of health and well-being for our global workforce. This honor is one of the highlighted accomplishments aligned with our TWH® efforts, part of the World-Leading Operations 2025 Sustainability Goal.



A Focus on Continuous Improvement in Safety

Promoting worker and environmental safety is core to our business and sustainability strategy, and we continually strive to make improvements. The following are examples of how Team Dow was involved in our efforts in 2021.

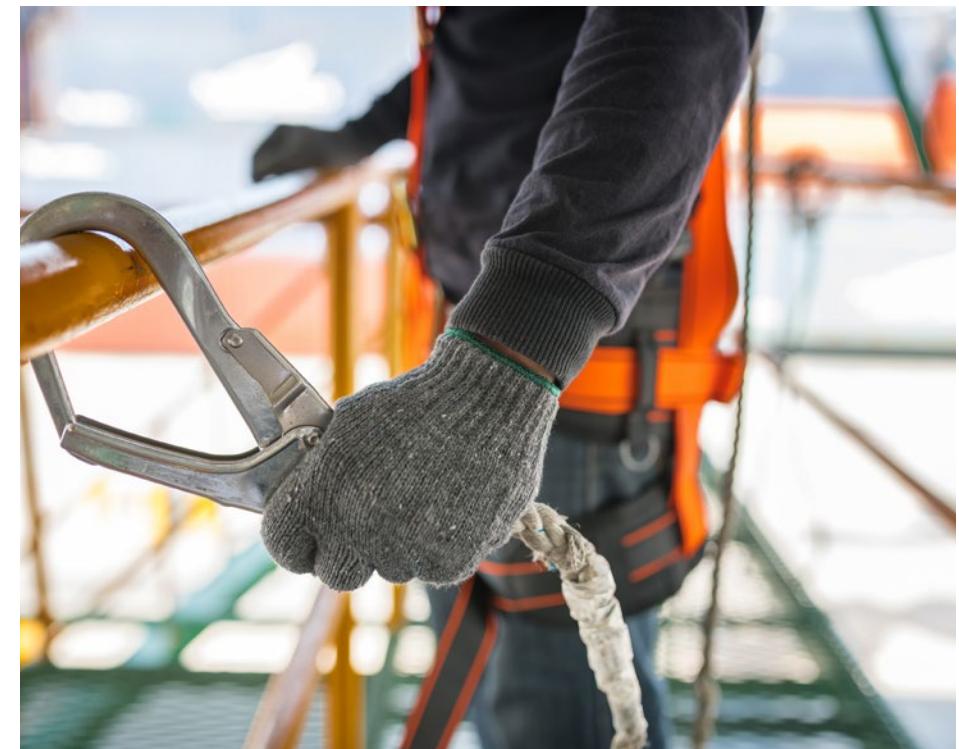
WHAT'S THE WORST THAT COULD HAPPEN?

To continue to improve on our cultural journey in personal safety during 2021, EHS&S hosted four interactive and innovative global sessions titled “What’s the Worst That Could Happen?” The objective of these sessions was to share best practices among all functions, businesses and regions regarding critical safety topics, with a focus on fall prevention, heavy equipment, process safety and containment, and contractor safety. Several employees shared their personal workplace incident stories, which reminded us that injuries are not just a metric but can also be a life-altering experience for those impacted.

ELIMINATING ELEVATED WORK

Audit and near-miss data from 2016-2020 identified an opportunity to eliminate or reduce fall risks. As a result, we:

- Formed a **Routine Elevated Work Solutions project team** that created a toolkit to help identify fall risks at a site and evaluate ways to make a task safer through engineering controls. One of the new techniques to eliminate elevated work included the use of drones for inspections.
- Conducted a **Fall Prevention Blitz** to help prevent fall-related incidents, with a “lifeguard” approach – employees and contractors looking out for one another to ensure safety and immediately address potentially hazardous behaviors.



In 2020, we had five severe injuries among contractors in North America. In 2021, we recorded zero – globally. This is due to the widespread impact of the North America Contractor Safety Task Force, whose strategy was then successfully leveraged across multiple regions.

Learn more on p. 40.



The Contractor Safety Task Force

Contractors play a vital role in our operations and, like their Dow counterparts, contractors also engage in potentially high-risk tasks while on the job.

The Contractor Safety Task Force was chartered in 2021, with an initial focus on North America and a goal to understand best practices and reinforce positive behaviors that were driving optimal safety performance among contractors.

This work led to identifying seven key items for best-in-class contractor safety performance:

- Foreperson capability, development and engagement
- Observation and intervention programs
- Joint Dow/contractor onboarding programs
- Strong relationship between Dow and contractor senior leaders
- Dow management system reviews of policies, processes, procedures and programs
- Forums and opportunities to exchange ideas
- Contractor inclusion programs

The Task Force's efforts subsequently led to the development of a Contractor Safety Culture Index and recognition program for top-performing sites, both to be released in 2022.



NEW PERSONAL SAFETY STANDARDS

Our continual review of incident trends and near-miss data displayed an opportunity to educate employees and contractors, which led to the creation of the two new standards for safe use.

- Dow's Personal Safety Expertise Center drafted a **Hand-Held Portable Tools Standard** that included tool design requirements and user guides to help combat incidents associated with equipment such as drills and angle grinders. The standard was tested across six sites and the success of the pilots proved the value of thorough standard development. This standard will be rolled out to all employees and contractors in 15 languages in early 2022.

“

Because of the physical and mental demands of the work environment at our manufacturing sites, fatigue is a real risk. The Fatigue Risk Management Program is about finding a solution to this hidden hazard and driving employee safety to the next level.

Kevin Martin, senior operations leader in Freeport, Texas



Continuing Our Response to COVID-19

Our response to the COVID-19 pandemic continued with a disciplined management approach to support employees, customers and the community. While 2021 did not bring us relief from the pandemic, we consistently communicated with employees, provided educational seminars and advocated for vaccinations in alignment with the best medical science. All sites encouraged the practices of safe behaviors, both internally and in our communities.

During the latter half of 2021, we recognized the need to update the [COVID-19 Workplace Playbook](#)³ to shape guidelines in a more risk-based manner. The updated playbook uses public health data to determine the risk of infection to employees at each site and has helped us make a safe return to the workplace as we continue to minimize workplace transmission while maintaining business continuity. As we did with the company's first playbook from April 2020, this revised playbook was shared with our external stakeholders.



THE PATH FORWARD | COVID-19 WORKPLACE PLAYBOOK

FOR EXTERNAL USE



LORI PAVLISH received the prestigious American Chemistry Council (ACC) Responsible Care® Employee of the Year Award for 2021. Throughout her career, Lori has been involved in transportation safety. She has been a key member of trade association teams and committees, pioneering unique programs and driving improvements to make transportation safety a way of life for Dow and logistics service providers. She has also been involved in the development of ACC's Responsible Care Partner Program for many years, personally sponsoring at least 22 companies globally. Lori has worked to develop and share Dow's Transportation Stewardship approach with all ACC members, leveraging many of our programs.



Inclusion, Diversity & Equity





Advancing with an Intentional Focus on Inclusion, Diversity & Equity (ID&E)

OUR APPROACH

Our business succeeds when our employees thrive. Our commitment to ID&E has allowed us to navigate through challenging times with increased employee engagement and enhanced innovation. In 2021, Team Dow delivered a record-breaking year of financial performance for our company, fueled by our commitment to advance inclusion, diversity and equity for all.

2021 Progress

Through intentional focus and actions, we delivered meaningful and visible results in 2021.

IMPROVED REPRESENTATION AND EXCEEDED ANNUAL REPRESENTATION GOALS

26% U.S. ethnic minorities

28.9% Women globally

35.3% Women in people leadership globally



EXPANDED ACCOUNTABILITY

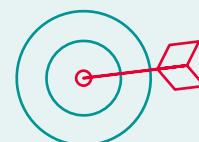
Linked **inclusion & diversity (I&D) metrics to the annual performance award program** for all People Leaders and senior directors and above (~2,800 leaders), where legally permissible



CERTIFIED DIVERSE SUPPLIER SPEND

Surpassed target and achieved

~\$220MM



REDEFINED BEST-IN-CLASS EMPLOYEE RESOURCE GROUP (ERG) PARTICIPATION

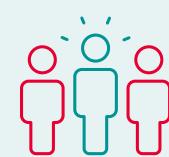
52.4% of our employees

participate in at least one of our **10** ERGs globally



OVERALL EMPLOYEE SATISFACTION

71% favorability



DIVERSE SUPPLIERS

Retained 81% of diverse suppliers and generated nearly **\$9MM positive EBIT** impact to our bottom line



RECOGNIZED EXTERNALLY

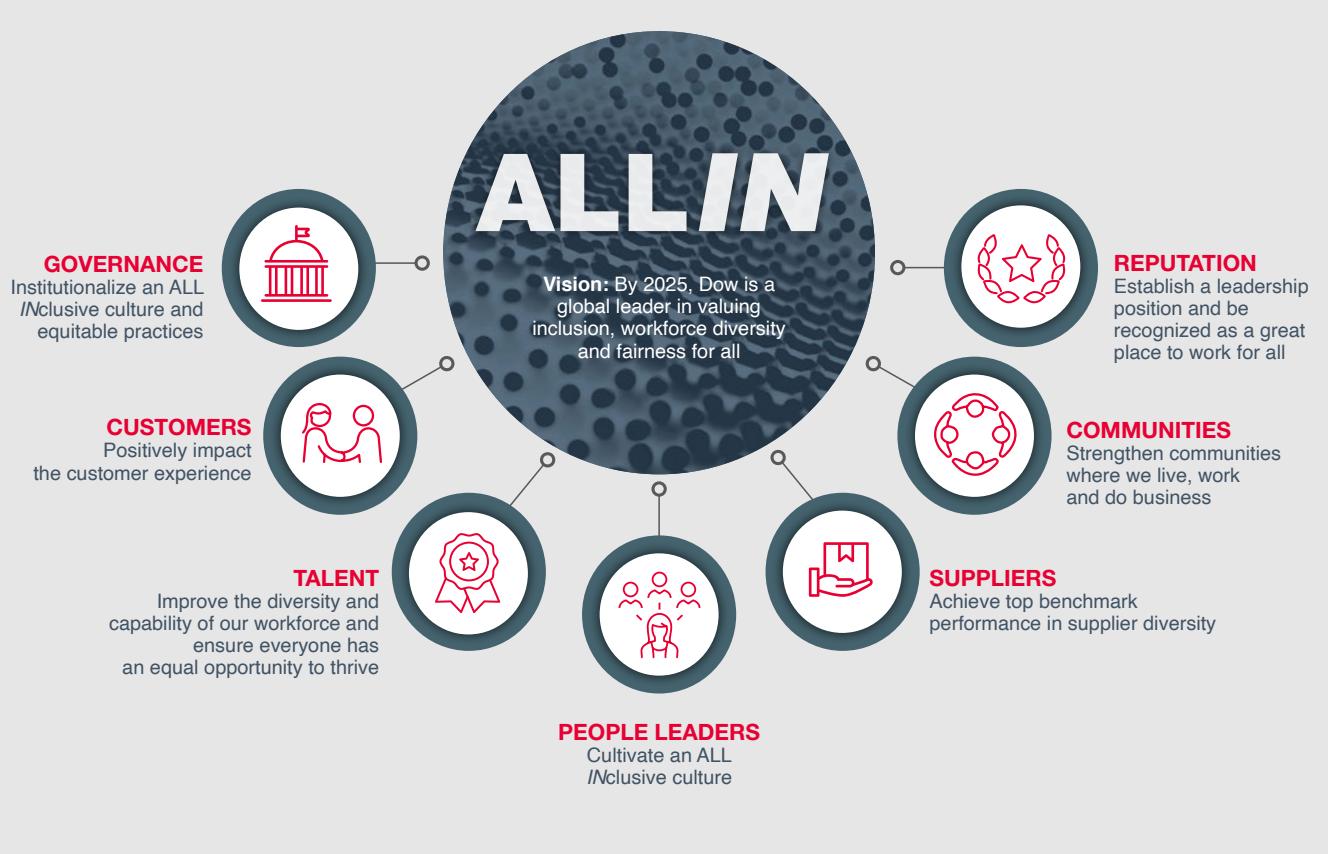
as a **leader in ID&E**





ALL IN 2025

In 2021, we updated Dow's ID&E strategy – ALL IN 2025 – which focuses on leading with inclusion, elevating our focus on diversity, and embedding equity into our practices, policies and processes. And we outlined bold new actions to deliver breakthrough results by 2025, while amplifying transparency and accountability.



Top-Down Commitment

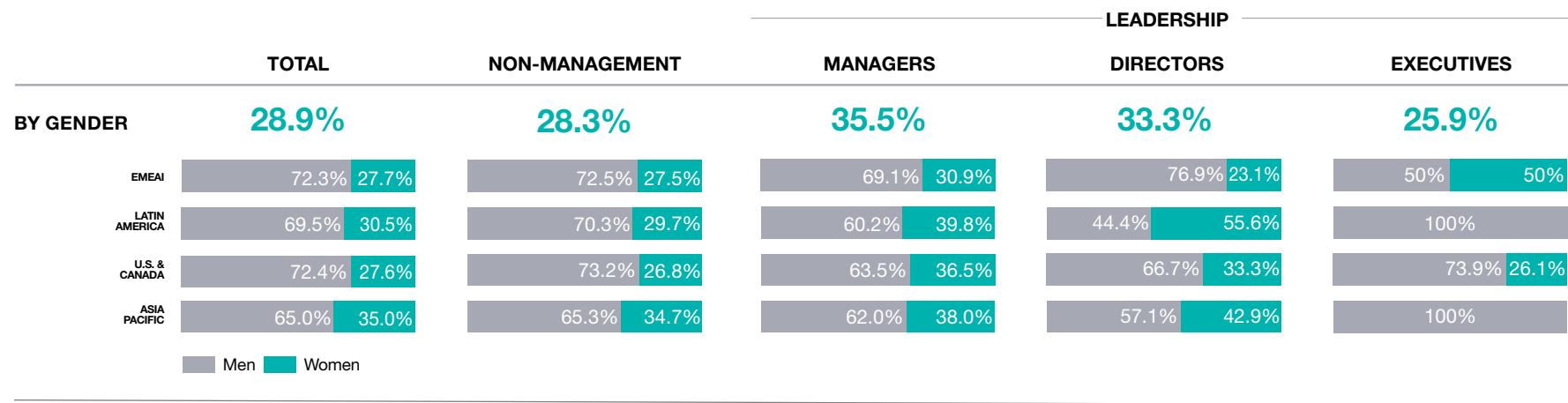
- ▼ Board and Leadership Team Oversight
- ▼ Chief Inclusion Officer
- ▼ Inclusion Councils: President's Inclusion Council, Senior Leaders' Inclusion Council, Joint Inclusion Council
- ▼ The ESG Network
- ▼ Dow Company Foundation Board

Bottom-Up Alignment and Action

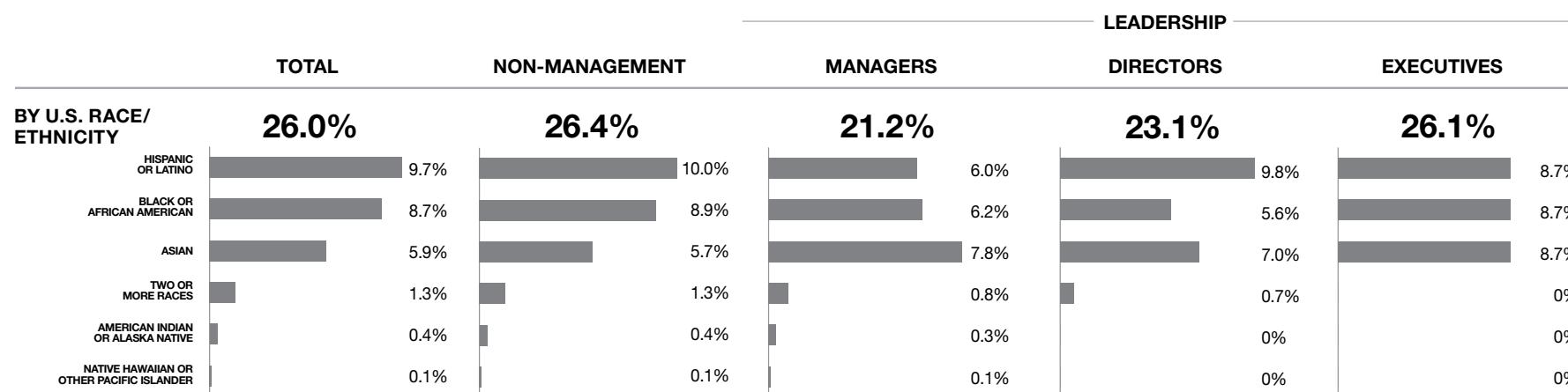
- ▲ Inclusion metrics included in 2021 Performance Award program for all ~2,800 People Leaders
- ▲ Annual employee survey includes ID&E questions to track and drive progress
- ▲ Volunteer-based Employee Resource Groups
- ▲ Team Dow engaged and empowered to advance inclusion around the Dow world



Global Workforce Demographics¹



U.S. Workforce Demographics¹



U.S. WORKFORCE SELF-IDENTIFICATION

ACTIVE/VETERAN MILITARY **5.5%**
PEOPLE WITH DISABILITIES **4.9%**

For more information on Dow's workforce diversity data, click [here](#).

¹ As of December 31, 2021



INCLUSION IN ACTION

Dow's 10 ERGs continued to be a valuable resource for employees and the company by cultivating positive employee experiences and providing a platform for business growth.

10 ERGs

52% global ERG participation
(Best-in-class)

600+ Chapters

97% of People Leaders participate in ERGs

>18,300 Employees

#3 DiversityInc®
Top Companies for Employee Resource Groups Specialty List

Our Employee Resource Groups: Driving Action

ERG EXECUTIVE SPONSORS

The commitment of Dow leadership to our ERGs speaks to their importance to our company. Executive-level leaders serve as active sponsors and strong allies who are engaged in advancing ERG goals.



A.N. Sreeram
Chief Technology Officer,
Senior Vice President
Research & Development



Founded: 2000



Diego Donoso
President,
Packaging & Specialty Plastics



Founded: 2019



John Sampson
Senior Vice President,
Operations, Manufacturing
and Engineering



Founded: 2015



Melanie Kalmar
Corporate Vice President,
Chief Information Officer
and Chief Digital Officer



Founded: 2018



Jim Fitterling
Chairman and
Chief Executive Officer



Founded: 1999



Rebecca Bentley
Vice President of
Global Public Affairs



Founded: 2018



Amy Wilson
General Counsel
and Corporate Secretary



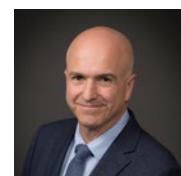
Founded: 2000



Jane Palmieri
President, Industrial
Intermediates & Infrastructure;
Asia Pacific oversight



Founded: 2015



Mauro Gregorio
President, Performance Materials & Coatings;
Latin America oversight



Founded: 2000



Howard Ungerleider
President and
Chief Financial Officer



Founded: 1989



Asian Diversity Network (ADN)



ADDRESSING ANTI-ASIAN SENTIMENT

During times of racial injustice, open conversations are some of the most powerful tools that bring people together. That's why ADN hosted a "**A Day of Understanding**" in alignment with CEO Action for Diversity & Inclusion's approach to creating a more inclusive and equitable workplace. The session provided an opportunity for ongoing dialogue around the topic of anti-Asian sentiment. Nearly 750 ERG participants, including Dow leaders, took part in the conversation, which covered topics such as intersectionality, bias, microaggressions and ways to become an effective advocate.



Disability Employee Network (DEN)

RECYCLING SHOES WHILE HELPING STUDENTS LEARN NEW SKILLS

The [Singapore Permanent Shoes Waste Recycling Ecosystem project](#) collects school and athletic shoes to be recycled and made into sports infrastructure such as jogging tracks and playgrounds. Leveraging this project, DEN recently raised S\$34,200 (\$25,000 USD) for the **Autism Association Singapore** to partner with a local school serving autistic students and a tailor-instructor, who teaches graduates how to sew the casings for pads and mats that are made from the recycled shoes. These pads and mats are then used to enhance safety at the school. This partnership helps the students learn a new skillset and prepare for future job opportunities.

A Day of Understanding

Courageous conversations about anti-Asian Sentiment



ADN CHAMPIONS FOR CHANGE

The ADN development team launched **Champions for Change**, a sponsorship program designed to advance the careers of Dow Asian talent. This 18-month, U.S. pilot pairs 18 participants (spesees) with senior-level leaders (champions) to provide coaching and guidance to overcome systemic and personal barriers, and to foster skills for advancement into future leadership roles. The intent is to offer the program in all geographies in the future.

DEN MALAYSIA LAUNCHES "THANK YOU" PROJECT

Aligned with World Mental Health Day, Dow Malaysia's DEN team partnered with Dow's Occupational Health and Employee Experience teams to send **care packages with a thank-you message** to recognize colleagues in the region for their contributions.





Global African Affinity Network (GAAN)

ADVOCACY

In June, GAAN, the Women's Inclusion Network (WIN), the Dow Consumer Solutions business and Dow Government Affairs partnered to support legislative actions to pass the C.R.O.W.N. Act, which stands for **Creating a Respectful and Open World for Natural Hair** and prohibits race-based hair discrimination in employment and educational opportunities.

COLLABORATION

In 2021, Dow also announced a collaboration with **THE MOST™**, a start-up company specializing in textured hair care solutions, to better understand and address the needs of the underserved multicultural textured hair care market.



GLAD

AUSTIN DILLON AND NASCAR PRIDE

As part of Dow's 2021 Pride Month, Dow and GLAD partnered with Richard Childress Racing and General Motors to sponsor **NASCAR driver Austin Dillon's racecar** in Pride-themed paint to bring awareness and drive toward a more diverse, inclusive and equal workplace and world.

A MESSAGE SHIPPED AROUND THE WORLD

In 2021, GLAD, Dow Purchasing and the Coating Materials business worked with shipping company Maersk to paint a cargo container with rainbow colors in support of the LGBTQ+ community. The container traveled the globe and was a highlight of pride and source of further discussion on inclusion and diversity.

BUSINESS OPPORTUNITY

Leveraging consumer insights of GAAN members, Dow launched a **Textured Hair Care Kit**, showcasing six uniquely formulated products that have been tested and tailored to meet the needs of consumers.



DOW SWITZERLAND JOINS THE MARRIAGE FOR ALL COALITION

In 2021, Dow Switzerland joined the **Marriage for All Coalition** to advocate that all should be treated equally and enjoy equal rights at work and in society – including the right to marry.



Hispanic & Latin Network

Hispanic & Latin Network (HLN)



Middle East North Africa Intercultural Network (MENA)



MENA CELEBRATES AND SUPPORTS THE ARAB AMERICAN COMMUNITY

Team Dow co-sponsored the **Arab American National Museum Gala** in Dearborn, Michigan. The gala helped to raise funds for the museum, which provides free and accessible online educational and cultural programming to keep the Arab American community engaged, connected and safe.

INITIATIVE ZOMERZAK

The Benelux HLN chapter in Terneuzen partnered with NGO Stitching Present to support 20 immigrant families with supplies, food and toys for children.



HLN RECOGNIZED AS OUTSTANDING ERG

HLN was named Hispanic ERG of the Year in 2021 by the Society of Hispanic Professional Engineers (SHPE). This award recognizes an organization's outstanding Hispanic Employee Resource Group (ERG), specifically its effectiveness in the areas of culture, career and community, as well as the ERG's dedication to and success in attaining impactful results that foster a diverse and inclusive environment in their workplace. For over 20 years, HLN's mission has been to promote an inclusive culture and provide development, mentoring, networking and community engagement opportunities for its members and allies.

ZomerZak (Summer bag)

HLN chapter in Terneuzen partnered with NGO "Stitching Present" to support 20 families in the community during the summer time.



MENA AND HLN HOSTED “COSTUMBRES AT WORK” AT TEXAS OPERATIONS

ERG participants at our Texas Operations co-hosted a virtual event called **“Costumbres at Work.”** Panelists from MENA and HLN shared their experiences while working overseas and compared the stark differences and surprising similarities within the workplace. Presenters also discussed their workplace customs in the Middle East, Latin America and Spain, to help participants gain a greater cross-cultural understanding.



PR!ME

EMPLOYEE DEVELOPMENT VIDEO SERIES

PRIME produced a **video series with executive leaders** to help coach employees on how to have meaningful career conversations with their leaders and to make the most of their career regardless of age, level or life situation.

EQUALLY UNIQUE

The Equally Unique series featured an event titled: "**The Future of Work – Harnessing the Longevity Dividend in a Changing World.**" The session was hosted by Marco ten Bruggencate, commercial vice president, Packaging and Specialty Plastics, and included panelists from five different companies who discussed emerging transition and employment models, challenging attendees to think differently about flexibility, retirement and career reinvention.



RISE

GROWING WITH RISE

RISE created several opportunities to connect Dow's newest employees to influential leaders and helpful resources. RISE hosted a global fireside chat with Executive Sponsor and Vice President of Global Public Affairs Rebecca Bentley and President and Chief Financial Officer Howard Ungerleider to learn more about the company's 2021 financial strategy. Ungerleider provided insight on how RISE participants can contribute to Dow's success and financial performance, as well as shared his reading recommendations for increasing personal business and financial acumen.

BUDDY PROGRAM HELPS GIVE NEW EMPLOYEES A GREAT START

In collaboration with ADN, HLN and PR!ME, RISE launched a next-generation **Buddy Program** globally. The program helps familiarize new employees with Dow and equip them with the resources they need to get a great start, and assists incoming expats with the challenges that involve joining a new culture.



Buddy Program Advancements

Enhancing the welcome experience ...

32 chapters around the world

with 500+ participants globally

Buddy programs across the globe ...

13 chapters with 272 buddies in EMEA

7 chapters with 80 buddies and 100 new hires in LAA

12 chapters with 58 buddies in NA

2022 Buddy program implementation in APAC





Veterans Network (VetNet)



Women's Inclusion Network (WIN)

TEAM RUBICON AND TEAM DOW SERVE COMMUNITIES IN NEED

Team Rubicon serves communities by mobilizing military veterans to continue their service, leveraging their skills and experiences to help people prepare, respond and recover from disasters and humanitarian crises.

Eight Dow employees from **Team Rubicon** were deployed in 2021, with participants coming from Texas, Michigan and Louisiana in the United States, and from Alberta, Canada. Team members helped [Little Warriors](#)[↗], a nonprofit camp near Fort Saskatchewan, supporting children who were victims of sexual assault. They also supported the Louisiana communities of Hammond, Houma and La Place following Hurricane Ida. Team Dow contributed more than 400 volunteer hours to Team Rubicon's efforts in 2021.

VetNet welcomed Dow Canada to Team Rubicon for the first time. Twelve Dow Canada employees were trained and are now ready to deploy and volunteer.

WOMEN IN MANUFACTURING WEBINAR

WIN placed a particular emphasis on increasing representation of women in manufacturing. The **Women in Manufacturing webinar**, MFG Day 21, featured Dow women operations leaders at a Creators Wanted event presented by the Manufacturing Institute and the National Association of Manufacturers. These leaders shared their experiences and celebrated the achievements of women in the industry.

WIN also hosted a global internal webcast that featured a fireside chat between Teresa Keating, global director, Environmental, Health, Safety & Sustainability, and John Sampson, senior vice president, Operations, Manufacturing and Engineering. They discussed the results of a survey of global women operations leaders on how to address barriers to increasing the number of women in manufacturing.

AFGHANISTAN ... LET'S TALK ABOUT IT

Recognizing the impact of the events surrounding the U.S. military's departure from Afghanistan, VetNet elevated Employee Assistance Program (EAP) resources and supported veterans and their families during this dynamic time.



DOW LAUNCHES THE CAREGIVER TASK FORCE AND A NEW PARTNERSHIP WITH THE CHILD MIND INSTITUTE

In 2021, Dow launched a **Caregiver Task Force** to help address the continued and changing needs of employees who are also providing care for their children, parents and others. The group focuses on how sharing, learning and coping with the support of colleagues and experts can help at home and in the workplace. Dow introduced a new partnership with the Child Mind Institute, which provides employees access to topic-based webinars, helpful online tools and a caregiver support line.





Attracting Diverse Talent

To continue to advance Dow's ambition, we must develop tomorrow's talented workforce today. A focus of our 2025 ID&E strategy is improving representation across multiple dimensions of diversity, especially in areas where we have measurable gaps such as women globally and U.S. ethnic minorities.

GLOBAL INCLUSIVE HIRING STANDARD

External data and our own data prove that equity and inclusion in our hiring process led to more diverse outcomes. We also introduced a structured interview process to ensure a consistent candidate experience and to mitigate bias. In 2020, we implemented a new inclusive hiring standard as outlined below.

GLOBAL INCLUSIVE HIRING STANDARDS TO DELIVER DIVERSE OUTCOMES

Equitable Practices
✓ Post open roles
✓ Implement a diverse candidate slate for open roles
✓ Ensure a diverse interview panel for hiring
✓ Follow a structured interview process

By institutionalizing inclusive hiring standards, Dow realized an increase in diverse hiring outcomes. In 2021, **31% of U.S. external hires** were U.S. ethnic minorities and **35% were women** globally. Overall **hiring increased 15%** from 2020 to 2021.

EARLY-CAREER RECRUITING

To reflect our continued commitment to diversifying our talent pipeline, Team Dow again hosted two signature internal recruiting events.

Diamond Symposium is intended for top U.S. ethnic minority undergraduate students from universities across the United States. In 2021, Dow hosted **53 students** and extended **25 internship and full-time offers** with **15 acceptances** – increasing the offer acceptance rate from 2020 by **36%**.

BEST Symposium is primarily intended to introduce Black, Hispanic and Native American U.S. doctoral and postdoctoral scientists to the wide range of rewarding careers in industrial research and the many opportunities at Dow. Twenty-eight candidates attended the 2021 BEST Symposium, and Dow extended **16 full-time offers** with **13 acceptances**, the highest absolute number of BEST hires in a single season.



Dow policy prohibits hiring, firing or promoting on account of an individual's race, gender, disability status, religion, age, sexual orientation or any other protected status.



MILITARY DEGREE EQUIVALENCY (MDE) PROGRAM

Veterans acquire outstanding skills during their years of service – skills that bring tremendous value to a business. Understanding the opportunity to bring these veterans' broad scope of training and experience into a successful career at Dow, the MDE program recognizes relevant military experience of E6 ranking or greater (OR6 for Canada) as equivalent to a bachelor's degree for U.S. and Canadian job postings. The E6 ranking translates to 8-12 years of experience and has generally equivalent responsibilities across all branches of the military.

EXPANDING CAREER OPPORTUNITIES FOR VETERANS

David Badour served three deployments in the Navy and held an E6 ranking before coming to Dow. He was working as lead technologist for Dow's robotics group when he saw a job listing for what would later be his new role. He was interested but didn't have a bachelor's degree. Because of the MDE program, he was able to qualify for the role of lead R&D engineering specialist and was promoted to this role in 2021.



INCREASING INTERN DIVERSITY THROUGH DOW BRAZIL'S JUMP TO THE FUTURE

In 2021, Dow Brazil introduced the **Jump to the Future** initiative with the goal of increasing diversity among interns. To broaden the talent pool, the program was strategically redesigned, making the English fluency requirement optional. Interns were offered an English course called the "Trampolin Program" and also learned other skills relevant for future job opportunities.

The impact of the program resulted in improved diversity of the 2021 intern class, with **66.7% of African descent, 63% women, 18.5% LGBT+ and 3.7% persons with disabilities**.

SUPPORTING WORKFORCE RE-ENTRY THROUGH THE REACTION PROGRAM

Dow's **ReAction Program**, launched in 2021, provides a path back to work for those who left the workforce to care for family, have taken an extended medical leave, serve in the U.S. military or for educational reasons. Those hired into the program receive assistance and support to improve their job skills through interacting, engaging and being mentored by experienced Dow business and functional leaders to aid in their return to work.

“

“ReAction allows a path for talent to re-enter the workforce and provides an advantage for Dow in hiring proven, highly skilled professionals.”

Gretchen Luper, senior analytical director, Lake Jackson, Texas



Developing Diverse Talent

Developing and retaining a diverse workforce is imperative to deliver the best results at Dow. That is why one of our top priorities is developing diverse talent and equipping leaders and employees with the tools they need to succeed. To do so, we employ a range of leadership development approaches, including on-the-job learning, classroom training, online learning, development through ERG participation, and formal mentorship and sponsorship programs. We know that investing in diverse talent will make a difference for our people and for our business.



AiA
Advocacy in Action

AiA Cohort 1 and 2 Results

~50% of participants received promotions and/or role changes²

~90% protege retention

~85% of participants believe AiA meaningfully addressed barriers to advancement and inclusion of Black employees

² as of March 2022

ADVOCACY-IN-ACTION (AiA) SPONSORSHIP PROGRAM

The second cohort of the Advocacy-in-Action Sponsorship Program began in 2021. AiA strategically pairs Black protégés with senior leader advocates to share real-world experiences and speak openly and constructively about barriers to career progression. The program takes place over a 15-month period, during which participants receive personalized coaching and development and engage in structured networking. AiA provides intentional exposure and improved visibility for protégés, with the goals of advancing and developing protégés for the next level of career opportunities. Advocates learn to recognize and actively address barriers and biases, serve as sponsors, and set the tone for other leaders to create real change.





CONNECTOR PROGRAMS

Our connector programs help employees expand their networks, foster diverse connections and inspire professional growth.

PEER ALLIES

The Peer Allies program is designed to build cross-functional and cross-business relationships through networking. Participants are randomly assigned a new peer ally connection each month and are encouraged to meet for a 30-minute one-on-one introductory conversation. The program has more than 1,400 participants at all job levels across North America.

BUILDING CAREER CONNECTIONS THROUGH ERGS

PRISE Connections, a program structured by RISE and PR!ME, was launched in 2021 to foster integration and meaningful discussions among employees from both ERGs. Approximately 120 new connections were made.

The WIN+5 networking program seeks to increase interaction between female talent and leadership and create a safe environment for participants to develop their skills and build broader professional networks. In 2021, the program helped connect 86 female employees.

WAZOBIA PEER-TO-PEER MENTORING PROGRAM

In 2021, the Wazobia Program launched as a peer-to-peer mentoring and coaching initiative that pairs African-heritage participants with mentors across the Europe, Middle East, Africa and India (EMEA) region. The goal is to build relationships, strengthen trust and collaboration, deliver robust and innovative solutions, and enable career growth. The 2021 program included sessions focused on employee development, networking and Dow strategy.

AFRICA LEADERSHIP PROGRAM

The Africa Leadership Program (ALP) just completed its first cohort in 2021. Participants engaged in training and business growth projects with the aim of accelerating the development of African leaders to support growth on the continent. The program's success has inspired the team to extend its impact beyond Africa and develop an IMEAT (India, Middle East, Africa and Turkey) program, which will launch next year.



“

“One of the greatest gifts we can give and receive is time, and I always look forward to spending time getting to know someone I may not interact with daily. Peer Allies has enabled me to purposefully refocus and re-energize by learning about another Dow colleague outside my organization, which helps me pay it forward in my current responsibilities at work and outside of work.”

Shannon Hemmelgarn, senior Supply Chain director



Supporting a Diverse Workforce

Every member of Team Dow is at the heart of our success and plays a role in helping us achieve our goals. We strive to be flexible, agile and inclusive to meet the needs and preferences of our diverse workforce. We have continued to make several enhancements to existing programs and policies to cultivate a positive employee experience for all.



ENERGIZE

In 2021, Dow CEO Jim Fitterling and Michael C. Bush, CEO, Great Place to Work, held a virtual program called Energize, designed to spark real discussions and action under the theme **“Control What You Can Control.”** Their discussion focused on employee well-being and connecting purpose with work.

SHIFT INCLUSION CHAMPIONS (SIC)

In 2021, Dow Latin America implemented SIC to **generate more participation of shift employees** in ID&E programs. More than 100 SICs across all Latin American sites received onboarding training to help them be successful. Thanks to these efforts, ERG participation in the region grew by 11.3% from the previous year.

At the Dow Aratu site in Brazil, the inclusion campaign was promoted during a maintenance turnaround to engage employees, reinforce Dow values among contractors, and set clear expectations to service providers coming in and out of the site throughout the shutdown. Over 1,700 people engaged, as well as contractors from 40 different companies.

DESIGN YOUR DAY

In alignment with employee sentiment, we implemented Design Your Day, our new approach to workplace flexibility.

Design Your Day encourages employees and leaders to collaborate on an **individual workplace plan**, and enables each employee to maximize their productivity and balance personal needs, while continuing to meet their job expectations.



TOTAL REWARDS

We reward the contributions of Team Dow by investing in them through Dow Total Rewards, a combination of pay, benefits and other company-sponsored programs. In 2021, we reviewed the rewards offered to ensure they are competitive and continue to meet the needs of a diverse workforce. After researching best practices, listening to feedback from colleagues through an employee survey and considering Dow's long-term vision and goals, we modernized our rewards and reinforced our commitment to offer equitable and market-competitive programs.

PARENTAL LEAVE POLICY

Dow's new **global parental leave policy** was expanded in 2021 to provide 16 weeks of paid time-off to **ALL** parents – birthing, non-birthing and adoptive, regardless of gender. Designed with inclusion in mind, this policy provides all parents equal time away from work to bond with their child.

FAMILY CAREGIVER LEAVE POLICY

The family caregiver leave policy provides employees with up to **three weeks of paid time-off to care for family members who are sick or injured**. Family caregiver leave can be used for activities such as accompanying a family member to a scheduled medical appointment, visiting an ill family member in the hospital or hospice, and/or providing care as they receive treatment for and/or recover from an injury or illness.

VOLUNTEER AND ERG TIME-OFF

Every member of Team Dow – whether they work at a manufacturing site, in an office or in the field – is encouraged to make a positive difference by volunteering and getting involved in one of Dow's ERGs. As part of the company's comprehensive enhancements to Total Rewards and aligned to our 2025 [Engaging for Impact sustainability goal](#), we launched a **Global Volunteer and ERG Participation Policy**. The policy allows our employees 12 hours of paid-time-off to volunteer and engage in ERG activities.

HEALTH CARE ASSISTANCE

Dow offers financial assistance with the cost of health care for U.S. employees who qualify, based on annual pay. Financial assistance is offered in the form of a reduction in premium or an employer Health Savings Account (HSA) contribution.



Driving Inclusive Family Policies in Asia Pacific

After broadening its definition of family with the inclusion of domestic partnerships, Dow Asia Pacific has worked with its insurance partners to extend coverage to these families. Employees who do not have a marriage certificate, such as LGBTQ+ couples and heterosexual couples who are allowed by law to marry but choose not to do so, now have the option to include their domestic partners in applicable insurance packages offered by Dow.





Dow ACTs – 2021 Progress and Actions

TAKING ACTION TO ADVANCE RACIAL EQUITY AND JUSTICE THROUGH DOW ACTS

Dow ACTs is our strategic framework designed to address systemic racism and inequality, backed by a \$13 million pledge over five years to help accelerate change. ACT is an acronym for three action areas: Advocacy, Community engagement and our own Talent pipeline.

Since the launch of Dow ACTs in 2020, progress highlights include:



ADVOCACY

- Supported the **Congressional Black Caucus Foundation's** inaugural **National Racial Equity Initiative Summit** to produce equitable access, opportunities, treatment and outcomes for Blacks.
- Karen S. Carter, chief Human Resources officer and chief inclusion officer, serves on Michigan Governor Gretchen Whitmer's **Black Leadership Advisory Council**. The council aims to develop, review and recommend policies and actions designed to eradicate and prevent discrimination and racial inequity in Michigan.



COMMUNITY

- Expanded the U.S. Gulf Coast **Dow Leadership Academy** to include Dow communities in Louisiana and Texas and launched the [Dow Treasure Academy](#) in the Great Lakes Bay Region.
- **Dow Promise:** Committed [\\$600,000 over six years](#), resulting in **26** organizations and their respective programs receiving financial support.
- **Coalition to Back Black Businesses:** Efforts led to **45** small, Black-owned businesses in Dow communities receiving financial support, mentorship, training and resources.



TALENT

- **Historically Black Colleges and Universities (HBCUs):** Continued engagement for program support, including investment to retain and develop Black students in STEM and build the Ph.D. talent pipeline.
- Invested in the **Future of STEM Scholars Initiative (FOSSI)**, a national program that seeks to increase the number of underrepresented professionals in the chemical industry by providing scholarships to students pursuing STEM degrees at HBCUs. Dow is underwriting the education of 10 students per year in addition to providing mentoring opportunities and internship placements.
- Joined **OneTen**, a coalition of businesses that are coming together to upskill, hire and advance **1 million** Black individuals in America over the next 10 years into family-sustaining jobs with opportunities for advancement.
- Hosted **5th year** of the **Diamond Symposium** and **15th year** of the **BEST Symposium**, resulting in an increased number of U.S. ethnic minority hires.
- Continued **our AiA Sponsorship Program** with Cohort 2 to drive advancement and retention of Black talent.
- Implemented **Advanced Inclusion Training** for U.S.-based People Leaders and Human Resource (HR) partners which included racial equity topics.





IMPROVING REPRESENTATION AND CLOSING THE ECONOMIC OPPORTUNITY GAP



Dow joined OneTen, a coalition of businesses that are coming together to upskill, hire and advance 1 million Black individuals in America over the next 10 years into family-sustaining jobs with opportunities for advancement.

"This partnership reflects the fact that we are doubling down on our commitment to attract a diverse talent pipeline – not just to help close the economic opportunity gap for Black talent in America, but also to access and integrate diverse talent within our function," said John Sampson, senior vice president, Operations, Manufacturing and Engineering. "Operations makes up 57% of Dow and is a complex organization that thrives with diverse talent. We have hiring opportunities with competitive pay and benefits that help us attract diverse talent and foster a more creative, innovative and successful Dow."

"Dow joining forces with OneTen will help remove the barriers while continuing to build relationships with community partners whose objectives mirror ours," said Undrea Kennedy, Global HR partner.

DOW COMMITS TO RACIAL EQUITY AUDIT

In March 2022, Dow announced the commissioning of a racial equity audit (REA) that will be conducted by Covington & Burling LLP, a law firm supported by both organizations that has experience working with other leading companies on civil rights and equity audits. The REA, which is in collaboration with Investor Advocates for Social Justice (IASJ), will assess how Dow's U.S. operations, products, policies and services support racial equity and the company's ID&E strategy. It is expected the REA will build upon the other comprehensive efforts Dow has taken to lead in all aspects of ID&E both at Dow and in the communities in which we live and work, including to address issues of systemic racism. The results are expected to be published in 2023.

Dow ACTs Brazil

In Dow Brazil, we leveraged the Dow ACTs framework to advance our racial inclusion plans. In one year, we have made important advances.

- **90%** of leadership completed the "Inclusion Has All Colors" workshop, which addresses perspectives of slavery in Brazil and systemic racism. It aims to help employees understand the use of appropriate language and the importance of allyship.
- New development programs were designed to retain and develop diverse talent.
 - **Seek to the Future** assists in developing the skills necessary for manufacturing employees to achieve positions of interest. As a result, **44%** of participants were promoted in its first edition.
 - **Afro Journey** is focused on building capabilities to advance the careers of potential future leaders of color through coaching, Myers-Briggs Type Indicator assessments, mentoring and building communication skills.
- Partnerships with universities encouraged inclusion in the labor market and fostered scientific development. More than **R\$300,000 (\$62,300 USD)** was invested through **30** scholarships.
- Alvorecer Bahia and Santos Dumont – two NGOs from Brazil that focus on promoting economic growth and sustainable social development among youth and women – received Dow Promise grants for their projects. In addition to a **R\$25,000 (\$5,400 USD)** contribution for each NGO Dow volunteers also engage.



SOAR: Accelerating ID&E

After a one-year hiatus, Dow hosted SOAR – an immersive inclusive leadership event that has become a highlight of the Ladies Professional Golf Association's Dow Great Lakes Bay Invitational in Midland, MI. The goal of SOAR is to bring together Dow leaders, customers, suppliers, community members and guests to develop concrete actions to advance inclusion in their own organizations and communities. Karen S. Carter, chief Human Resources officer and chief Inclusion officer, stated in her opening remarks: "Admission to SOAR is free – but it does come with a price. And the price you pay is the willingness to look inside yourself. The willingness to unpack your own biases and engage. The willingness to commit to action when you exit these doors."

Speakers challenged participants by highlighting their experiences and lessons learned across a range of fields including professional sports, government and the for-profit and nonprofit sectors.



~200
customers,
suppliers,
community
members, guests

40
students from
Midnight Golf
Mentorship
Program

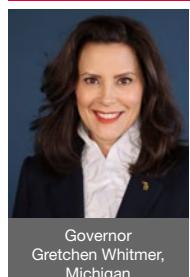
5 corporate sponsors

Deloitte. **PALMER HOLLAND** **EY** **ROCKET Mortgage** **McKinsey & Company**

\$25,000
donated to the Boys and
Girls Club of the Great Lakes
Bay Region



SOAR Speakers



Governor
Gretchen Whitmer,
Michigan



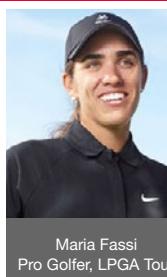
Cynt Marshall
CEO, Dallas Mavericks



Secretary of State
Jocelyn Benson,
Michigan



Jonathan Beane
Chief Diversity and
Inclusion Officer, NFL



Maria Fassi
Pro Golfer, LPGA Tour



Lorraine Hariton
President and CEO,
Catalyst



Mollie Marcoux Samaan
Incoming Commissioner,
LPGA



Peter Quigley
President and CEO,
Kelly®



Trina Scott
Chief Diversity Officer,
Rocket Companies



Jenny Boucek
Assistant Coach, NBA



SUPPLIER DIVERSITY: DELIVERING IMPACT TO COMMUNITIES AND OUR BOTTOM LINE

Our Supplier Diversity program continued to make strides in becoming an industry leader. To expand our reach and elevate this business imperative, we created the role of global purchasing director for sustainability, supplier diversity and ESG. In 2021, we surpassed our target and achieved approximately **\$220 million globally** in diverse supplier spend while retaining **81% of our diverse suppliers** and contributing approximately \$9 million in EBIT to our bottom line.

We maintained a strong focus on expanding the reach of our supplier diversity program and increased our partnerships around the globe, with the American Chamber of Commerce in Asia Pacific, Integrare and Cámara in Latin America, and the Asian Chamber of Commerce in North America.

For more information on our management approach to supplier diversity, please see [GRI disclosure 414-103](#).



Strategic partnerships and accomplishments

Dow won the China Women's Empowerment Principles' Award in the Gender-Inclusive Workplace category

Dow became a "Cascading Customer" with L'Oreal in Supplier Diversity

Dow co-founded the **MSDUK Accelerator Program**

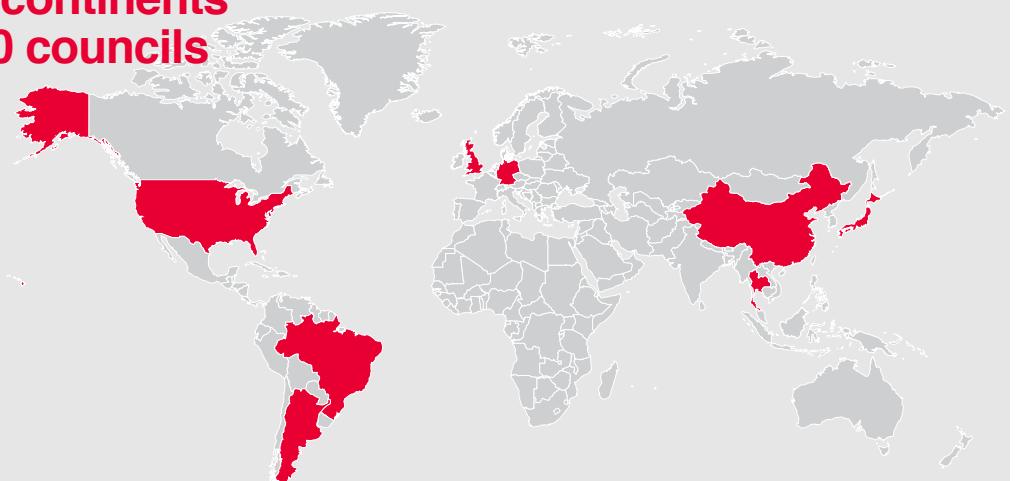
Dow signed Unilever's Supplier Equity, Diversity and Inclusion Promise

Active corporate participant in Capacity Zurich

WBENC Chemical Industry Group co-chair

International Presence

**10 countries
4 continents
10 councils**



2,100+

small and diverse suppliers
107 New Vendors



UNILEVER'S SUPPLIER EQUITY, DIVERSITY AND INCLUSION PROMISE

In partnership with Unilever, a Dow customer, we signed the **Supplier Equity, Diversity and Inclusion Promise** to drive inclusion and diversity in the supply chain and to support living wage efforts across the globe. This pledge commits Dow to setting and communicating goals on organizational diversity and gender equity, growing diverse spend through inclusive procurement policies and engaging with Unilever's future reporting of diverse spend.

BENELUX SUPPLIER DIVERSITY EVENT

In May 2021, Dow partnered with WEConnect International, IBM, Maersk, SPIE, Global Business Academy and Engie to host the virtual **Benelux Supplier Diversity Event**. Attendees represented industry peers, diverse suppliers and Dow colleagues in manufacturing, purchasing and commercial. Together, attendees discussed new ways to collaborate and advance supplier diversity in the region.

Executive Summary | Dow Supplier Diversity Strategy

Positively **impact communities** and society by **supporting underrepresented and minority businesses** in a **meaningful and sustainable way** through our global supplier diversity program.

Strategic Pillars



UNLOCK GROWTH

Grow diverse spending in North America and achieve top benchmark performance and further expand program in Europe, Middle East, Africa and India, Asia Pacific and Latin America



SHARED ACCOUNTABILITY

Drive accountability across all functions and businesses at Dow – Supplier Diversity becomes a corporate-wide program – and across our entire value chain



ADVOCACY & OUTREACH

Increase support for diverse suppliers and influence top spend (non-diverse) suppliers to promote workforce ID&E and inclusive procurement

MINORITY SUPPLIER DEVELOPMENT UK (MSDUK) ACCELERATOR PROGRAM

We co-founded and are participating in the **MSDUK Accelerator program**. The program will run for the next three years, supporting 300 ethnic minority businesses in the United Kingdom. This initiative will provide a platform for ethnic minority founders to gain access to the expertise of MSDUK, the U.K.'s leading supplier diversity organization, and its corporate partners via one-on-one mentoring sessions, group workshops, support packages and more.

WBENC CHEMICALS INDUSTRY GROUP

We are the co-founder and co-chair of the Women's Business Enterprise National Council (WBENC) Chemicals Industry Group. The purpose of this group is to identify gaps and create benchmarking to help women-owned businesses and corporations remove barriers, and to provide valuable insights and mentorship opportunities to maximize the inclusion of WBEs in the chemical industry.



Community





Investing in Our Communities

OUR APPROACH

Dow is not only in communities, but we are part of our communities. Across the Dow world, we embrace our opportunity to play an active role in strengthening communities where we live and work. Our global citizenship strategy directs our investments to accelerate social change and create a more sustainable and equitable future. Together with our community partners, **we create social impact through the following five strategic priorities:**

Global Citizenship Priority Areas



Advancing **SUSTAINABLE** Solutions

Using Dow products, technology and expertise for social good



Building **INCLUSIVE** Communities

Partnering to address systemic challenges and barriers



Developing Tomorrow's **INNOVATORS**

Equipping a future STEM pipeline for the jobs of tomorrow



Collaborating with **COMMUNITIES**

Taking action to help our communities in need



ENGAGING EMPLOYEES for Impact

Promoting a positive employee experience and creating meaningful impact through service and volunteerism

CONTRIBUTING TO A BETTER SOCIETY

We do this through philanthropic contributions aligned to our global citizenship priorities, engaging employees for impact and partnering with global and local community organizations to make positive social change. Established in 1979, the Dow Company Foundation strives to build resilient communities and create meaningful impact by connecting Team Dow and resources with community challenges.

2021 Social Impact Highlights



\$32.4MM

Corporate + foundation +
in-kind invested



50%

of Dow employees
volunteered¹



888

grants delivered to
653 partner organizations

¹Represents percentage of 2021 Voice respondents



MEASURING OUR IMPACT

Dow's measurement approach is grounded in grantees working with True Impact, Dow's third-party vendor, to report their respective outcomes using standardized logic models and indicators. True Impact uses a claim calculation to determine the portion of those impacts attributed to Dow.

The following outcomes, aligned to the global citizenship strategy, represent Dow's claim.

- **Achieve Academic Success** is a composite outcome of students who either improve their academic performance, succeed in school, improve their productivity and effectiveness, earn a post-secondary degree/credential, successfully graduate high school or access post-secondary education.
- **Experience Health Improvements** is a composite outcome of people who protect or improve their health or people who experience improved well-being.
- **CO₂ Emissions Avoided** represents the total metric tons of carbon dioxide (CO₂) or other greenhouse gas emissions (expressed in CO₂ equivalence, or CO₂e) avoided.
- **Economic Empowerment** is a composite outcome from people who gain financial strength, or attain, retain or improve employment.

2021 Nonprofit Organization Outcomes

4,203 students achieved academic success

29,729 people experienced health improvements

31,500 MT of CO₂ emissions were avoided

372 people experienced economic empowerment

Community Spotlight

Comprehensive Social Impacts 2016-2021

- Dow improved the physical, social and emotional well-being of 558,638 individuals.¹
- Dow supported the academic achievement of 1,007,424 students.¹

¹ Measured impacts are based on 34% of Dow's total philanthropic investments since 2016 and include best available data. As measurement coverage increases, accuracy and comprehensiveness will increase.



Advancing Sustainable Solutions

We are seeking new, innovative ways to apply Dow products and technology for social good. Investments in this strategic pillar support Dow's sustainability goals and prioritize funding aimed at creating circular economy solutions, such as informal and formal waste collection, and addressing climate change by targeting mitigation of climate change-related risks.



BUSINESS IMPACT FUND

The Business Impact Fund unlocks Dow business opportunities by solving social challenges. Since the program was launched, the fund has supported 42 projects totaling \$7.7 million in investments. These projects are opportunities for Dow to explore new, innovative ways to expand our markets and address important social problems. They also provide valuable leadership opportunities for our employees.

In total, Business Impact Fund projects span 21 countries and are expected to deliver up to \$72 million in revenue for Dow in future years. In 2021, the Business Impact Fund awarded eight new projects totaling \$2 million.



OLIVER'S VILLAGE

We teamed with AECL Plant Health, a strategic customer in Africa and major agricultural solution provider, to empower Oliver's Village, a nonprofit organization in South Africa, with gardens to support self-sustainable agriculture. Launched in 2021, the Business Impact Fund project is projected to benefit 200,000 people per year by providing food security to the community and creating different local jobs to empower women.

PROJECT REUSE

The Business Impact Fund awarded \$200,000 to Project Reuse to partner with the nonprofit Instituto Akatu, the City of Hortolândia, Brazil, and recyclers to improve mattress recycling efforts. In 2021, this project addressed the issue in three ways: environmental education, improving recycling stations to increase collection of bulky items and recycling the collected items. The project reached 47 professors and more than 1,100 students with educational efforts and resulted in the recycling of 12.3 tons of polyurethane foams. Due to this initiative, Dow was able to engage the main polyurethanes customer from the market segment to share learnings about reverse logistics, mattress dismantling and recycling business models.

Business Impact Fund Outcomes (2018-2021)



590 jobs created



3,280 MT materials recycled



33,700 MT CO₂ emissions avoided



45,000 acres of land protected



1.66MM people positively impacted



Building Inclusive Communities

Dow is building inclusive communities by engaging Dow Employee Resource Groups (ERGs), supporting educational programs to help build the STEM (science, technology, engineering and math) talent pipeline for Blacks, and engaging in strategic partnerships to help address systemic racism and inequity in Dow communities. To date, we have committed \$13 million through Dow ACTs to address systemic racism.



Volunteers come together after collecting waste to support the Reciclatón program.

Assisting Children in Need in Mexico

Fundación Teletón México is an organization that assists children with disabilities and their families. As part of their actions to raise awareness and promote inclusion and sustainability, they created the Reciclatón program. Thanks to volunteers from Dow's Disability Employee Network (DEN), manufacturing sites, offices in Mexico and companies aligned to the cause, the 2021 campaign collected more than 200 tons of solid waste. By valuing the collected waste, Fundación Teletón México helps its beneficiaries continue their specialized medical treatment.





Building Inclusive Communities

ALL /N ERG FUND

The ALL /N ERG Fund aims to help Dow become the most inclusive materials science company in the world by harnessing the passion, perspective and expertise of our 10 ERGs. The competitive grant program allows our ERGs to work with local organizations to champion inclusion, diversity and equity projects in Dow communities. Since the fund launched in 2019, we have committed \$800,000 to support **37** projects in **20** countries worldwide.

TEACHING YOUTH TO AVOID CONFLICT AND VIOLENCE



Don Bosco Ganshoren Children's House member participates in an interactive STEM event led by Dow's GAAN ERG in Belgium in June 2021.

Three of our ERGs (GAAN, RISE and WIN) helped students in Belgium engage in interactive science experiments, career sessions and workshops to learn important life skills, such as non-violent communication skills and solving challenging situations. The ALL /N ERG Fund project supported 80 diverse youth from challenging situations at **Don Bosco Ganshoren Children's House**.

"I was extremely fortunate to work with our GAAN, RISE and WIN ERG members on this project. They volunteered with students from ages 6 to 25 on interactive science experiments, resume and career sessions, and workshops on inclusion and communication," said Isabelle Dethy, ALL /N ERG Fund project lead and office administrator in Seneffe, Belgium. "We believe this project helped students understand the importance of listening to their emotions, naming their feelings and explaining their needs to avoid conflict and violence."

HELPING WOMEN ENTER SKILLED TRADES



Iryne Go, Women Building Futures Journeywoman Start program graduate.

The **Women Building Futures: Developing Diversity in Trades** project in Canada helps unemployed and underemployed women explore careers that pay above a living wage. This ALL /N ERG Fund project was a collaboration between WIN and Canada's Indigenous Employee Committee.

For this project, six women participated in the Journeywoman Start program and connected to career options where women have been historically underrepresented, such as skilled-trades jobs. During the 17-week program, Dow supported living expenses and emergency costs, enabling participants to focus on training. After getting hands-on training in welding, carpentry, plumbing, electrical and mechanics, the graduates are equipped to enter the workforce in their field of expertise.

"My experience working as a pipefitter apprentice has been excellent. I'm working toward my goal of getting certified in my trade," said Iryne Go, Women Building Futures graduate. "My work can be physically demanding, but I am determined to keep going. If you put your mind to it and follow through, anything is possible."



To date, ALL /N ERG Fund projects have achieved the following outcomes:

2,999 people reached

3,084 Dow volunteer hours

20 businesses/nonprofit organizations created or strengthened

409 people improved social and emotional well-being

997 people succeeded in school

360 people gained or sustained jobs



Developing Tomorrow's Innovators

Dow embraces the importance and value of investing in STEM education. We help prepare and energize a diverse and robust future workforce by cultivating interest in STEM subjects, inspiring students to pursue STEM careers and accelerating their readiness. We do this by:

- **Preparing and inspiring the next diverse generation of skilled trades professionals, manufacturers, engineers and chemists** to support students and teachers in Dow communities with access to best-in-class programs and curriculums.
- **Reaching under-represented students** to explore STEM fields and gain interest in real-world STEM careers.
- **Cultivating the curiosity and innovative mindsets** in our next-generation workforce to gainfully fill the jobs of tomorrow.

ROBOTS THAT BUILD THE NEXT GENERATION



Since 2014, Dow has supported FIRST®, an international robotics community that prepares young people for the future and advances STEM education worldwide. The organization helps build a proven talent pipeline, with 89% of FIRST alumni declaring a major in STEM. In 2021, Dow partnered with FIRST to strengthen and expand program offerings across **18 countries**, supporting local competitions and teacher workshops that impacted more than 11,000 students and improved the academic performance of more than 1,700 students. Dow grants directly to FIRST teams, of which 95% are mentored or coached by Dow employees.



Honoka Ito, a process automation engineer at Dow, helped inspire 80 female high school students from Iwate, Miyagi and Fukushima, Japan, as part of the **TOMODACHI Initiative**. The purpose of the TOMODACHI Initiative is to develop a future generation of Japanese and American leaders in STEM, sustainability and women's empowerment. The Initiative has impacted more than 9,700 participants, and through Dow's partnership, more than 50 female STEM undergraduates received internship opportunities, and 23 others pursued post-secondary degrees in STEM.

"For high school girls, a career in science, much less as a maintenance engineer in a factory, is probably the furthest thing from their minds. I hope that my experience will give them some encouragement," Ito said.

In 2021, our work with FIRST contributed to:

11,950 students reached globally

2,001 students directly supported through 116 Dow team grants

1,768 students improved their academic performance

1,451 students/alumni attained, retained or improved employment

633 students/alumni earned post-secondary degrees

FIRST global reach:





Engaging Employees for Impact

Whether through the dedication of time, talent or expertise, volunteering promotes a positive employee experience, further supports Dow's global citizenship priorities and investments, and ultimately, advances our ambition. In recent years, volunteerism as we know it has experienced seismic shifts due to COVID-19 – with physical gathering limitations, the curation of virtual opportunities and requirements for facial coverings and social distancing. In 2021, **50% of employees reported volunteering**. We have found a strong correlation between employees who volunteered and/or participated in ERGs and those who reported a positive employee experience.

ENCOURAGING VOLUNTEERING BY LEVELING THE PLAYING FIELD

Every member of Team Dow – whether they work at a manufacturing site, in an office or in the field – is encouraged to make a positive difference by volunteering and getting involved in one of Dow's ERGs. As part of the company's comprehensive enhancements to Total Rewards and in alignment to our [2025 Engaging for Impact Goal](#), we launched Dow's first-ever **global Volunteer and ERG Participation policy** in September 2021. The policy allows our employees 12 hours of paid time-off to volunteer and engage in ERG activities.

As 57% of Dow's global workforce works in manufacturing, this policy demonstrates our commitment to volunteerism, inclusion and employee equity, by allowing all employees – regardless of job type and level – the ability to take time away from work to volunteer and participate in ERG activities.

ADDRESSING GLOBAL CHALLENGES THROUGH EMPLOYEE ENGAGEMENT

Through purpose-driven employee engagement programs, Team Dow continues to roll up their sleeves to address some of society's biggest challenges and advance our communities.

2022 was the second year Dow honored **Dr. Martin Luther King, Jr. Day** as a paid U.S. holiday for employees. The holiday was an opportunity for colleagues to learn and engage in conversations about racial equity and give back to their communities. More than 1,000 colleagues across 16 countries participated in a variety of company-offered virtual and in-person volunteer activities.

Our **#PullingOurWeight** program continues to raise awareness around responsible waste management with employees, communities, customers and key stakeholders.

In 2021, Dow hosted **195 community cleanups in 32 countries**. Our **7,485 participants** helped remove **387,513 pounds of waste** from the environment, of which **11.27% was recycled**.



Education & behavior change

Address local issues
195 cleanups conducted in 32 countries

Remove waste from the environment
387,513 pounds collected

Enable a second life
11.27% of waste recycled

Engaging for Impact around the world
7,485 volunteers engaged



Collaborating with Communities

Dow is committed to building resilient communities to address unmet needs while keeping our employees and communities safe.

UNDERSTANDING COMMUNITY STAKEHOLDERS' NEEDS

We know that by listening and collaborating with nonprofit partners, we can prioritize and allocate resources to achieve the greatest impact.

Some examples of how we learn about and respond to specific community needs include:



- In 2021, we launched a **Community Opinion and Needs Assessment** to provide data-based and objective insights into the needs of strategic Dow communities (defined as cities near large Dow manufacturing facilities).
- In Michigan's Great Lakes Bay Region, we worked with the nonprofit Hidden Harvest to address the 138% increase in food insecurity due to the pandemic. As a result, Hidden Harvest was able to secure a refrigerated truck, enabling them to **rescue 2.5 million pounds of food and deliver more than 2 million meals** to those in need.
- In Zhangjiagang, China, we applied our resources to impact **234 students with disabilities** by creating opportunities to build greater confidence, social resilience and career readiness skills.
- In Turkey, Dow and local NGO partner ÖRAV initiated the **Environmental Literacy program** to deliver comprehensive sustainability training to primary school teachers and students.
- In India, we engaged with **Mann Deshi** to equip rural women in Chiplun, near Dow's Lote plant, with long-term career and entrepreneurial skills.

More than 85% of Dow sites globally implement local community engagement programs, which may include employee volunteerism, donations, serving on community boards, participation in community or municipality committees, as well as hosting community advisory committees (CACs).

CACs are active at key Dow sites to obtain community perceptions about Dow, share Dow product and technology information, and understand how Dow can improve collaboration with community partners to address community needs. These committees operate across the Dow world and help shape Dow's global citizenship programming, resource allocation and charitable contribution decisions. All large Dow U.S. manufacturing sites participate in CACs. Outside of the United States, similar committees also meet to understand needs.

Dow's Government Affairs organization also develops and fosters relationships with key elected leaders at all levels of government to advance advocacy priorities. Additionally, we proactively engage with key policymakers, regulators and trade associations to position Dow as a thought leader on priority issues.



Collaborating with Communities

DISASTER RELIEF

The impact of natural disasters in 2021 on Dow communities around the world – including Hurricane Ida in Louisiana, Super Typhoon Rai in the Philippines, widespread flooding in Malaysia, India and China, and a historic freeze in Texas – led Team Dow to rise to the challenge and provide a hand to employees, stakeholders and communities in need.

- In 2021, Dow invested in and launched a global **Employee Relief Fund**, strengthening our response capabilities. This fund, managed by E4E Relief LLC, provides short-term monetary assistance to employees experiencing significant financial hardship following a catastrophic disaster. It is supported through company and individual donations. The fund supported 417 colleagues affected by Hurricane Ida, Hurricane Nicholas and flooding in India with a total of \$479,029.
- In February 2021, winter storm Uri devastated infrastructure across Texas. Dow and other industry leaders [replaced approximately 42,000 feet of metal pipe](#) with leak-and-corrosion-resistant high-density polyethylene (HDPE) pipe in three Texas towns to aid residents who were left without drinking water. The new pipes, produced by Pipeline Plastics with [Dow CONTINUUM™ Bimodal Polyethylene Resins](#), will help the towns avoid an estimated 3.5 million gallons of annual freshwater loss over the next five years. This project won the 2021 Municipal Leadership Award from the Alliance for PE Pipe.

PANDEMIC RELIEF

As the **COVID-19 crisis** evolved in 2021, we continued to work with communities and partners to lend support.

- In India, Dow funded a High-Resolution Computed Tomography (HRCT) machine for the Navi Mumbai Municipal Corporation, a civic body that uses the machine for better visualization of the lungs in COVID-19 patients.
- In partnership with the Child Mind Institute and supported by WIN, we provided employees, families and educators with evidence-based mental health resources and tools to help improve the quality of life for children and families.
- We invested in 2-1-1 support in Michigan, Texas, Louisiana, Pennsylvania, Kentucky, West Virginia and Canada. Through 2-1-1, community members have access to expert help, including the essential mental health and human services they need, 24 hours a day, seven days a week.
- We partnered with United Way in Brazil and Argentina, including the Born Learning Program in Brazil, where socially vulnerable children will receive holistic support through nutrition, parenting resources and mental health support, and the Supporting Caregivers Project in Argentina, where caregivers of school-aged children will be supported with resources promoting mental health, self-care and healthy practices aimed at strengthening ties with children.

In 2022, as events unfolded in Ukraine and the escalating refugee crisis across the region, the safety of our colleagues remained our top priority. Dow committed support to address immediate humanitarian needs for the people of Ukraine and to work with our partners to aid those suffering as a result of the violence in Ukraine.

Supporting Communities Impacted by Hurricane Ida

Hurricane Ida, a destructive Category 4 hurricane, was the second-most damaging and intense hurricane to make landfall in Louisiana. In response, the Dow Company Foundation committed \$2 million to support immediate relief and long-term recovery efforts in the wake of the storm.

National organizations received immediate support, including the American Red Cross, Team Rubicon and Good360, along with regional partners such as affected parishes, local United Ways and food banks. Employees joined with these partners and volunteered to unload, transport and distribute donated items, cook hot meals and assist in cleanup efforts.





Collaborating with Communities

PREPARED FOR EMERGENCIES

Dow's Emergency Preparedness Standard applies to all sites, facilities and buildings and improves emergency response readiness to prevent harm to the community, environment and workers; minimize loss; and preserve critical business continuity.

Dow's comprehensive standard includes:

- Applying process safety risk management studies to develop emergency response pre-plans for training purposes.
- Using onsite and offsite air monitoring to recommend protective actions.
- Establishing onsite incident management teams, along with primary and back-up Emergency Operations Centers with trained personnel.
- Conducting emergency communications on and off site, including to those with disabilities.
- Providing medical emergency support, including trained emergency responders fit for task with appropriate PPE.
- Conducting drills, scenario planning, self-assessments, audits and security risk assessments that are reviewed and updated annually – for all shifts and with local emergency response agencies aligned to community standards.

COMMUNITY AWARENESS AND OUTREACH

Dow sites have a documented Community Outreach program which details site operations, products, applications and distribution to protect the community's safety, health and the environment.

Stakeholder mapping identifies the following as key audiences in community awareness programs: employees, residents and community representatives, local and state authorities, law enforcement agencies, local emergency planning organizations, CACs, educational institutions, media, customers, suppliers and IPark tenants. Dialogue with stakeholders is maintained to educate and improve community confidence in the safe use of chemical technology.

"The preservation of life and the protection of our communities and the environment are the highest priorities of Dow's integrated, companywide crisis management system," said Scott Whelchel, chief security officer and global director of Emergency Services and Security. "Through timely intelligence, best-in-class standards and technology and a highly trained and effective team, we stand ready to protect the enterprise, Dow people and communities 24/7."

Helping Communities Respond

Dow has a long-standing commitment to **Transportation Community Awareness and Emergency Response (TRANSCAER®)**, an industry-wide initiative co-founded by Dow in 1986 to help communities prepare for and respond to hazardous material transportation incidents.

Dow has continuous representation on the National TRANSCAER Task Group (NTTG) and supports state and national TRANSCAER activities. While the global pandemic has impacted in-person programming, Dow, in conjunction with TRANSCAER, partners SMS Railways and Conrail, held live training events in the northeastern United States with 129 first responders using the Dow Safety Train in 2021.





Corporate Governance





Accountability in Action

For 125 years, Dow has built an invaluable asset: our reputation for operating with the highest ethical standards. Dow's values of **Respect for People, Integrity and Protecting Our Planet** are fundamental to how we work and all that we do. Adhering to these values helps us create and maintain a culture that supports sustainable business growth and serves as the foundation of our corporate governance.

At Dow, we take pride in our strong corporate governance structure and firmly believe it creates long-term value for our stockholders, strengthens accountability and builds trust in our company.

OUR APPROACH



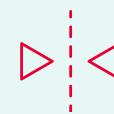
Independent Board oversight of strategy, risks and opportunities.



Maintaining a Board with diverse backgrounds and relevant skills and experiences.



Engaging regularly and receiving feedback from a wide variety of stakeholders, including stockholders, customers, suppliers and employees.



Aligning ESG approach and goals with the company's largest areas of enterprise risk and opportunity.



Designing compensation programs to support our business and ESG priorities.



Ensuring a culture of integrity through an effective code of conduct and ethics program.

RECENT ACTIONS

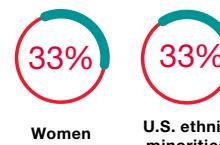
Dow continually evaluates enhancements to our corporate governance, ESG and executive compensation practices through our engagement with key stakeholders – including our stockholders.



5 new members of Dow's Board in the last 3 years are women or U.S. ethnic minorities

Strengthened the link between **ESG progress and compensation** through annual employee compensation programs

Continued to outpace S&P 500 for board diversity with



Comprehensive ESG disclosures aligned to **GRI, GHG Protocol, TCFD, SASB and WEF**

Reinforced **ESG oversight and accountability** in the responsibilities of our Board committees

Improved **Climate Risk Disclosures** and GHG intensity metrics for better comparison to peers



Driving Performance with Strong Leadership and Governance

BOARD OVERSIGHT

At Dow, leading corporate governance begins with a strong, independent Board with the right skills and experiences, clearly defined committee roles and responsibilities, active engagement with company leadership, and oversight of the company's corporate policies, strategy and overall performance. Among other duties, the Board appoints the company's officers, assigns to them responsibility for management of the company's operations and reviews their performance. [See disclosure GRI 102-26.](#)

BOARD COMMITTEES

The Board actively oversees and engages with management in stewardship of the company's strategy, ESG leadership, risk management and overall performance. All Board committees are composed of independent directors and have clearly defined oversight responsibilities. The Board currently has four committees: Audit Committee; Compensation and Leadership Development Committee; Corporate Governance Committee; and Environment, Health, Safety & Technology (EHS&T) Committee.

In 2021, the Board and its committees improved ESG transparency and accountability, building on our nearly 20 years of annual sustainability reporting with the first integrated ESG report and clear alignment of ESG oversight responsibilities that were outlined in the committee charters adopted in February 2022. Each committee reports to the full Board on topics discussed and actions taken in connection with regular Board and committee meetings.

For more information, see [Board Committees page on Dow.com](#) and the [proxy](#).

OVERSEEING THE ESG AGENDA

The Board and its committees actively oversee and regularly engage with senior leaders with respect to progress against corporate and business plans, short- and long-term strategic priorities, and ESG priorities. These ESG priorities include sustainability targets and ID&E initiatives. Each committee is responsible for oversight of specific strategic and ESG areas relevant to their respective charters as summarized below:

Committee	Area(s) of Strategic and ESG Responsibility
Audit Committee	External reporting, risk management, internal controls, compliance with legal and regulatory requirements and ESG reporting frameworks
Compensation and Leadership Development Committee	ID&E, work environment and culture, remuneration and incentives to drive accountability and progress on the company's financial and ESG performance
Corporate Governance Committee	Corporate governance framework, board composition and performance, governance best practices, compliance with legal and regulatory requirements and ESG reporting frameworks
Environment, Health, Safety & Technology Committee	Environmental performance, health, safety, community, corporate citizenship, social responsibility, public policy, sustainability, climate, science and technology



Accelerating Performance Through a Diverse and Independent Board

The strong connection between companies with diverse boards and strong financial and ESG performance is clear. Dow continues to lead the way in this area, bringing not just a diverse Board to the table, but also one with a broad spectrum of expertise and experience. Our Board brings a valuable range of outlooks, opinions and experiences to governing and problem-solving for Dow. [See disclosure GRI 102-22](#).

**Jim Fitterling**

Chairman and Chief Executive Officer, Dow Inc.

White/Man/LGBTQ+

**Richard K. Davis**

Lead Director, Dow President and Chief Executive Officer, Make-A-Wish America

White/Man ● ●

**Samuel R. Allen**

Former Chairman and Chief Executive Officer, Deere & Company

White/Man ● ●

**Gaurdie Banister Jr.**

Former President and Chief Executive Officer, Aera Energy LLC

Black/Man ● ●

**Wesley G. Bush**

Former Chairman and Chief Executive Officer, Northrop Grumman Corporation

White/Man ● ● ●

**Debra L. Dial**

Senior Vice President and Controller, AT&T Inc.

White/Woman ● ● ●

**Jerri DeVard**

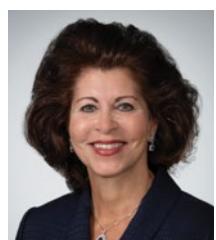
Former Executive Vice President and Chief Customer Officer for Office Depot, Inc.

Black/Woman ● ●

**Jeff M. Fettig**

Former Chairman and Chief Executive Officer, Whirlpool Corporation

White/Man ● ●

**Jacqueline C. Hinman**

Former Chairman, President and Chief Executive Officer, CH2M HILL

White/Woman ● ● ●

**Luis Alberto Moreno**

Managing Director, Allen & Co LLC

Latino/Man ● ●

**Jill S. Wyant**

President and Chief Executive Officer, Madison Indoor Air Quality

White/Woman ● ●

**Daniel W. Yohannes**

Former U.S. Ambassador to the Organisation for Economic Co-operation and Development

Black/Man ● ●

**Board Committees**

- Audit
- Corporate Governance
- Compensation and Leadership Development
- Environment, Health, Safety & Technology



Learn more about our corporate governance framework, best practices, initiatives and framework.

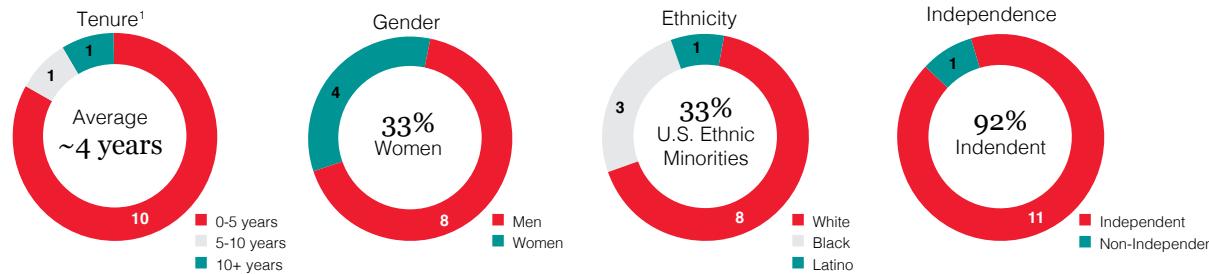
[2022 Proxy Statement](#) ↗

[Board of Directors](#) ↗

[Board Committees](#) ↗



Among our 12 Board members, four self-identify as women, four self-identify as representatives of U.S. ethnic minority communities, and one identifies as LGBTQ+. In 2021, we added new expertise and additional diverse experience to the Board by electing two new directors, Debra L. Dial, senior vice president and controller, AT&T Inc.; and Luis Alberto Moreno, former president of the Inter-American Development Bank Group. In April 2022, our stockholders elected an additional new director, Jerri DeVard, former executive vice president and chief customer officer of Office Depot, Inc.



¹ Reflects cumulative years served as a Dow director, a TDCC-designated director serving as a DowDuPont Inc. director, a member of the DowDuPont Inc. Materials Advisory Committee, or a TDCC director as applicable as of April 14, 2022.

AN EXPERIENCED AND BALANCED BOARD

Collectively, our Board brings a balance of relevant skills, professional experience and diversity of backgrounds to effectively oversee Dow's business risks and strategies. All 12 of our directors have significant expertise, including risk management, along with critical qualifications that align with the current needs of the company as summarized below:

8/12

Public company executive/CEO experience

Directors who have held executive leadership positions in a public company possess an understanding of public company regulations, strategy and risk management.

7/12

Manufacturing and industry experience

Directors who have experience in the industry and markets served by the company offer valuable perspective for operations.

8/12

Technology and science expertise

Directors who have expertise in the science or technology fields, including digital, e-commerce and cybersecurity, are particularly important given the company's focus on digitalization, research and innovation.

6/12

Environmental experience

Directors with environmental, sustainability or climate-related experience strengthen the Board's oversight of environmental policies, ESG initiatives and reporting.

7/12

Public policy experience

Directors with public policy and government experience have key insight into the role of regulatory issues and government affairs affecting the company.

9/12

Financial and accounting expertise

Directors with an advanced understanding of finance and accounting provide strong oversight of the company's preparation of financial statements and risk management.

10/12

Corporate governance experience

Directors with public company board experience enhance the Board's corporate governance practices.

7/12

Social experience

Directors with social experience strengthen the Board's oversight of ID&E, corporate citizenship, social responsibility, ESG initiatives and reporting.

Meet Our Newest Directors

Jerri DeVard is former executive vice president and chief customer officer for Office Depot, Inc. She has more than 30 years of marketing and leadership experience at large global brands, including the strategic, operational aspects of integrated and online marketing such as brand management and customer engagement. She also has extensive governance experience in consumer products, e-commerce, social impact and digital transformation.

Director since April 2022

Debra L. Dial is the senior vice president and controller of AT&T Inc. She has more than 25 years of experience in financial reporting, accounting policy and capital allocation with a Fortune 10 global telecommunications and media company. She has experience in driving merger integration and overseeing SEC reporting financial policy and governance, cost transformation and enterprise risk management.

Director since April 2021

Luis Alberto Moreno serves as managing director at Allen & Company LLC, a private investment bank, and is former president and chairman of the Board of Executive Directors of Inter-American Development Bank Group (IDB), the leading and principal source of long-term financing for Latin America and the Caribbean. He brings significant expertise in the areas of finance, public policy, and social, economic and institutional development.

Director since April 2021



RICHARD K. DAVIS
Lead Director, Dow
President and Chief Executive Officer,
Make-A-Wish America

MEET OUR INDEPENDENT LEAD DIRECTOR

We also committed to Board independent leadership and have a strong independent lead director with clearly defined responsibilities.

This structure provides effective leadership, management accountability and alignment with long-term interests of stockholders.

In 2021, Richard K. Davis was appointed lead director of Dow's Board. Davis brings a deep familiarity of Dow, its Board and its committee structure to the role, along with a strong rapport with other Board members. He also brings global business and leadership experiences as a former chairman and chief executive officer of a public company, U.S. Bancorp, and is particularly knowledgeable about industries subject to extensive regulation, including risk management. In addition, he has extensive experience and knowledge of international business operations, financial services and capital allocation, which is particularly important given the global presence and financial aspects of Dow. Davis is currently president and chief executive officer of Make-A-Wish America. In addition to his tenure with Dow's Board, Davis has served on the boards of multiple public companies and brings significant experience and expertise in corporate governance, compensation, finance and board leadership.

Q&A With Richard Davis

We talked with our lead director to learn Richard's perspectives about how strong governance helps drive value today and tomorrow for Dow and its stakeholders.

Q: From your perspective as lead director, what qualifications and skills are crucial for an effective board?

RD: First, a most effective board is one of diverse thought and diverse backgrounds, and the Dow Board represents that perfectly. We also continually review and assess the talent on the Board to ensure we have the critical experience we need represented. As a result, we regularly bring on new directors, adding fresh viewpoints and important skill sets, like expertise in large capital projects, risk management, ESG matters and global finance. Each director brings unique experiences to the table and gives us an outside-in view of the organization and insights into the different perspectives of our stakeholders.

Q: As chair of the Audit Committee, in your view, what elements are essential to effective and strong corporate governance?

RD: The primary role of the Audit Committee is to oversee the quality of the performance of the organization and then the quality of reporting about that performance. Our reporting needs to be clear and transparent to our stakeholders so they can understand not just what we're doing, but also how we're doing it. We need to make certain our stakeholders have confidence that we're properly managing risks, like climate change and cybersecurity, and that we have the right internal controls in place to ensure reliability

and integrity of our reporting and disclosures. We also continually evaluate and improve. For example, we recently enhanced our ESG reporting and disclosures through improved carbon emissions and circularity reporting, and improved climate risk disclosures and greenhouse gas intensity metrics.

Q: What is the role of the Board in ensuring Dow has the right business strategy in place to create long-term value for our stockholders?

RD: As a director at Dow, one of our more important responsibilities is to evaluate the performance of the company right now to ensure that we're doing all that we can to be the great company we promised to be. The other responsibility is strategic. We look ahead to ensure we're making the decisions and putting plans in place to be even stronger five or 10 years from now. Then we need to convey our strategy clearly to our stakeholders, including our stockholders, so they can be excited about not just the company they own today but the one that they will own in the future. For example, we recently shared our planned pathway to reducing carbon and greenhouse gas emissions while growing the company, which will continue creating strong value for all our stakeholders.



Q&A With Richard Davis, continued

Q: Why is strong corporate governance so important?

RD: At Dow, we know that strong corporate governance is critical to achieving our ambition to become the most innovative, customer-centric, inclusive and sustainable materials science company in the world. This begins with a strong, independent Board with the right skills and experiences, clearly defined committee roles and responsibilities, active engagement with company leadership, and oversight of the strategy and overall performance. As a Board, we execute these responsibilities and focus on Dow's strategic initiatives to continuing financial growth, ESG progress and driving long-term stockholder value.

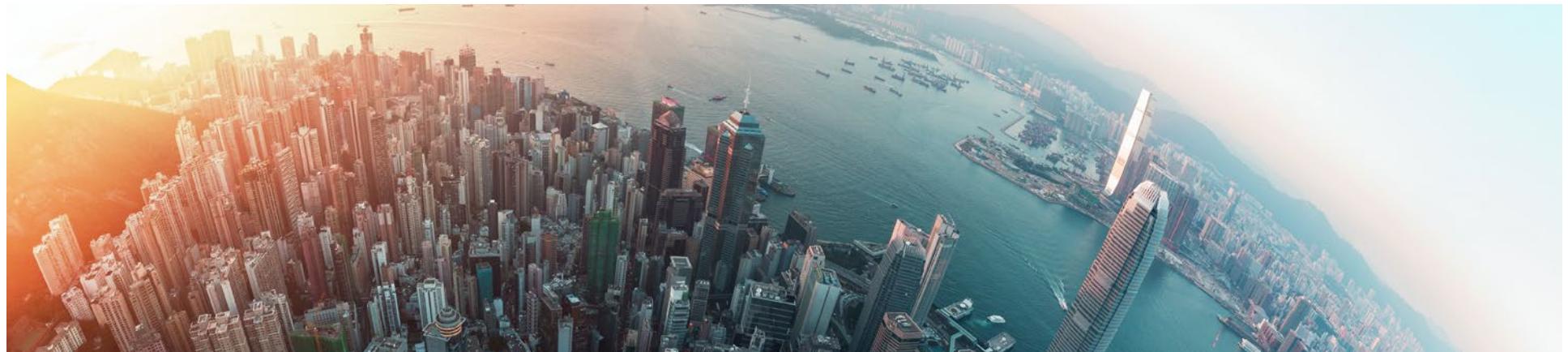
Q: Why does the Board engage directly with Dow's stakeholders?

RD: The only way we can achieve our ambition is by engaging with our stakeholders, including our stockholders, to fully understand their feedback and ensure we continue to serve their interests. As lead director, I enjoy the opportunity to meet with investors, stockholders and other stakeholders. I share their perspectives and viewpoints with the Board, and that enhances our decision-making and helps guide our oversight and input into a broad range of important topics, including Board and management team composition and effectiveness, business strategy development, company performance and risk management.

Q: How does the Board view Dow's ESG goals and performance?

RD: As a Board, in addition to financial excellence and integrity, we know that our progress in ESG matters. These topics - like advancing inclusion and equity, plastics circularity and a zero-carbon economy – are top of mind with our stockholders and, in fact, all our stakeholders. At Dow, we are in a leading position and recognized as one of the most progressive companies in this area. We are proud to share our progress with our stakeholders as well as our commitment to continuous improvement both now and in the future. For example, to create even greater accountability for ESG progress, we recently enhanced the link between ESG performance and our compensation programs. I am personally proud of being part of a mission to do well by doing right.





Engaging Our Global Stakeholders

Engaging our global stakeholders regularly and establishing collaborative partnerships enables us to build a clear understanding of complex global challenges and risks where we operate and do business. We continually evaluate enhancements to our corporate governance, ESG and compensation practices by engaging key stakeholders – including stockholders, customers, non-governmental organizations and regulators – for their feedback.

The fundamental principles of Dow's ongoing engagement strategy are:

- Information sharing and disclosure
- Participating in active dialogue
- Collaborating on issues of mutual interest
- Acting on input provided from stakeholders

We have taken the following recent actions:

- **Continued our focus on Board succession planning**, reinforcing our commitment to a diverse and highly qualified Board.
- **Added expertise and experience** by electing two new directors in 2021 and an additional new director in 2022.
- **Reinforced ESG oversight and accountability** in the responsibilities of our Board committees.
- **Strengthened the link between our ESG progress and compensation** through annual employee compensation programs.
- **Progressed in our commitment to continuous improvement of ESG reporting and disclosures**, with comprehensive disclosures aligned to the independent standards and metrics of GRI, TCFD, SASB and WEF.
- **Increased clarity of our ESG reporting and disclosures** through improved carbon emissions and circularity reporting, climate risk disclosures and GHG intensity metrics for better comparison to peers.

See our disclosures section for further information on external initiatives, stakeholder engagement and association memberships.
See disclosures [102-42](#), [102-43](#), [102-44](#).



Balancing Impacts, Risks and Opportunities

Risk management is considered a strategic priority within Dow, and our ability to manage risks creates opportunities as well, such as climate-related efforts like reducing carbon emissions. Corporate-level identification and management of risk is systematically accomplished using an integrated enterprise risk management approach. Responsibility for managing risks rests with executive management. The Board and its committees provide oversight.

See our disclosures section for further information on risk factors that are material to Dow and related to ESG. See disclosures [102-29](#), [102-30](#).

A complete statement of risk factors can be found on page 21 of the 2021 Form 10-K, filed with the SEC on February 4, 2022, and subsequent reports on Form 10-Q and Form 8-K.

BOARD'S ROLE IN THE OVERSIGHT OF RISK MANAGEMENT

Committee	Area(s) of Risk Management Oversight Responsibility
Audit Committee	Risk management process; management and effectiveness of accounting, auditing, external reporting, compliance and internal controls and cybersecurity
Compensation and Leadership Development Committee	Executive compensation and benefits policies, practices and disclosures, succession planning, work environment and culture
Corporate Governance Committee	Director independence, refreshment and succession planning, overall Board effectiveness, potential conflicts of interest and other governance, reporting and compliance matters
Environment, Health, Safety & Technology Committee	Environment, health and safety policies and operations, emerging regulatory developments, reporting and compliance matters

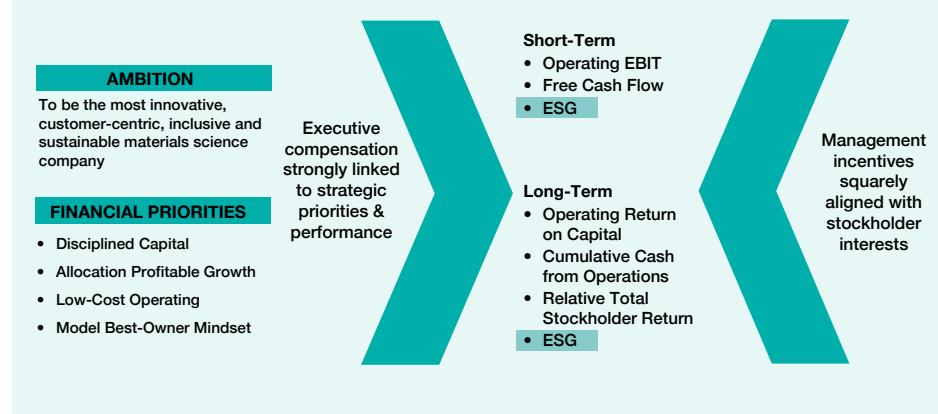


Compensation Practices That Support Our Enterprise Strategy

Our compensation programs are intended to motivate and retain our employees while generating strong operating results and creating alignment with the long-term interests of our stockholders. Executives participate in the same programs and benefits as all employees. Pay and company performance, including ESG performance, are closely linked.

Dow's pay-for-performance offering – including base pay, the annual Performance Award and long-term incentives – are linked strongly to our company ambition, as well as to financial and operational performance. The annual performance award program is designed to reward employees for achieving the company's most critical financial and operational goals. The annual performance award program includes ESG metrics that support Dow's aim to foster economic, environmental and social well-being through operations. The long-term incentive programs are designed to motivate and reward leaders and key employees to deliver against the company's performance goals, support retention and create ownership alignment with stockholders. The addition of ESG metrics for long-term incentives in 2022 supports our commitment to achieving our ambition and drives performance on their stated sustainability targets, including the company's carbon and greenhouse gas emissions reduction targets and climate goals.

Leadership Compensation Metrics



KEY EXECUTIVE COMPENSATION PRACTICES

The following summarizes key governance characteristics of our executive compensation programs, including those for named executive officers (NEOs):

- ✓ Strong pay-for-performance alignment among executive compensation outcomes, individual performance and company financial and ESG performance
- ✓ Stockholder engagement and feedback considered in executive compensation design
- ✓ Compensation program structure designed to discourage excessive risk-taking
- ✓ No change-in-control agreements
- ✓ No excise tax gross-ups
- ✓ Modest perquisites
- ✓ Carefully considered compensation peer group with regular Compensation and Leadership Development Committee review
- ✓ Each component of target pay benchmarked to median of either the compensation peer group or similarly situated companies from the general market, as applicable
- ✓ Stock ownership requirements of six times base salary for the CEO and four times base salary for the other NEOs
- ✓ Clawback policy
- ✓ Anti-hedging/anti-pledging policies applicable to directors and executive officers
- ✓ Stock incentive plans prohibit option repricing, reloads, exchanges and options granted below market value without stockholder approval
- ✓ 100% independent Compensation and Leadership Development Committee
- ✓ Independent compensation consultant reporting to the Compensation and Leadership Development Committee
- ✓ Regular review of the Compensation and Leadership Development Committee charter to ensure best practices and priorities



Prioritizing Ethics and Compliance

Integrity is one of Dow's core values, alongside Respect for People and Protecting Our Planet. These values reflect who we are as a company and how we conduct business. Our people hold themselves and each other responsible for operating ethically and honestly, no exceptions. Our governance practices reflect our commitment to serve all stakeholders, cultivate a culture of trust and accountability, and to create a business environment that ensures the long-term viability and vitality of our business. See disclosure [GRI 102-16](#).

DOW CODE OF CONDUCT

As the global economy expands and the business environment increases in complexity, the Dow Code of Conduct, adopted by the Board, provides a framework to educate our employees about our values and ensures they abide by the law and are highly principled and socially responsible in all our business practices. The Code of Conduct guides behavior and sets expectations for ethical conduct on matters ranging from health and safety in the workplace, to conflicts of interest, bribery and corruption, to sustainability and citizenship.

All directors, officers and employees, including all subsidiaries as well as joint ventures that adopt the Code of Conduct, are expected to understand and comply with it, as well as all company policies and any applicable laws. As part of this expectation, Dow provides the Code of Conduct in 16 languages and trains all employees, including part-time employees, annually to ensure they understand and abide by its requirements. In addition, in-depth training is provided to employees, based on job profile, to provide more comprehensive knowledge of potential risks related to their individual

job responsibilities. We also expect each staffing agency to ensure its employees understand Dow's policies and applicable laws. See disclosure [GRI 102-16](#).

The Board has also adopted a Code of Financial Ethics applicable to the principal executive officer, principal financial officer, principal accounting officer and controller. The full text of these codes, our position on human rights and our commitment to responsible sourcing are available on the company's website at [investors.dow.com](#)¹. We also continue to engage suppliers, including contractors globally,

and communicate our expectation that all suppliers are compliant with regulations and Dow's values through the Code for Business Conduct for Suppliers. The requirements of the Code of Business Conduct for Suppliers are built into all new and existing supplier contracts, to ensure they are contractually enforceable. More information about supplier expectations can be found on [Dow's corporate internet site](#)¹. See disclosure [GRI 102-25](#).

OFFICE OF ETHICS AND COMPLIANCE

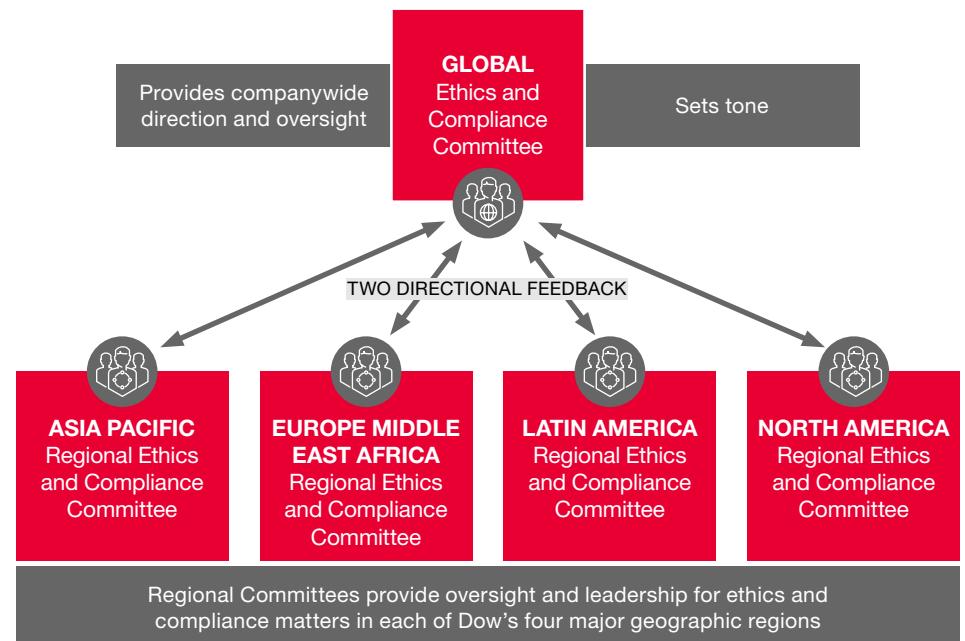
Established in 1998, the Dow Office of Ethics and Compliance (OEC) is responsible for administration of the Code and Dow's ethics and compliance programs, with oversight by the Audit Committee and the Corporate Governance and Leadership Development Committee. The OEC communicates the company's standards, provides guidance on issues related to ethical conduct and has oversight over mechanisms for action. This includes promoting lawful activity everywhere we do business, as well as helping the company to manage risk and maintain a positive reputation.

While all of us at Dow are held accountable to the highest standards of ethical conduct, setting the tone so that every decision and action is taken with integrity starts at the top of our enterprise. Our governance structure for ethics and compliance is designed to advance accountability, consistency, transparency and integrity throughout our enterprise.

Dow's Global Ethics and Compliance Committee provides companywide direction and oversight to ensure that all Dow employees exhibit behavior consistent with our core values and Code of Conduct.

Four Regional Ethics and Compliance Committees provide oversight and leadership for ethics and compliance matters in each of Dow's major geographic regions. The Regional Committees are accountable to the Global Committee and provide regular feedback to ensure transparency and effective oversight over all ethics and compliance matters.

Each committee meets quarterly to review substantiated cases, ensure adequacy and consistency of employee discipline, review statistics to evaluate trends, take action in response to changing risk environments, encourage confidential reporting of misconduct by employees, and protect reporters and witnesses.



The OEC maintains a confidential help line and website for those who wish to ask questions about Dow policy, seek guidance on specific situations, report violations of Dow's Code of Conduct or its Supplier Code of Conduct, or other unethical business practices. The Dow EthicsLine is a safe, reliable and convenient method to report ethical concerns. It is available globally, with multilingual capabilities, 24 hours a day, seven days a week. Dow respects those who raise concerns about potential misconduct and does not tolerate retaliation against whistleblowers or anyone who reports a potential violation in good faith, in alignment with the provision against retaliation outlined in the Code of Conduct. More information about the Dow EthicsLine can be found at www.dowethicsline.com¹.



Reporting & Disclosure





Reporting and Disclosure: Tracking Our Progress

OUR APPROACH

Dow leads the industry in reporting and transparency since our first sustainability report in 2003. We aim to provide transparent disclosures as a tool for engagement with our customers, stockholders, employees and community members.

2021 REPORTING AND DISCLOSURES

We continued to build on our foundation of reporting against the Global Reporting Initiative (GRI) Standards Comprehensive option in alignment to the Greenhouse Gas (GHG) Protocol. We have included disclosures on our climate-related performance and strategies in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In our 2021 report, we have met our 2017 commitment to fully implement the recommendations of TCFD. We continue to reference our disclosures to the Sustainability Accounting Standards Board (SASB) metrics for the chemical sector and the World Economic Forum's (WEF) Stakeholder Capitalism Metrics. The report also serves as Dow's communication on progress for its commitment to the United Nations Global Compact.

We prepared and presented our report in accordance with the GRI Standards Comprehensive option and the GHG information is presented in accordance with the GHG Protocol. The GHG Protocol is made up of multiple standards: A Corporate Accounting and Reporting Standard (Revised Edition) published by the World Resources Institute/World Business Council for Sustainable Development and the GHG Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by the World Resources Institute/World Business Council for Sustainable Development (together the "GHG Protocol"). We engaged Deloitte & Touche LLP to perform a review engagement on management's assertion related to both the ESG disclosures included in the GRI Content Index as of, and for the year ended December 31, 2021, and the greenhouse gas disclosures for Scope 1 and Scope 2 Emissions in the GHG Protocol Disclosure Report for the year ended December 31, 2021.

Information outside of the ESG disclosures referenced or included in the GRI Content Index and GHG Protocol, including linked information, was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information. Further, any information relating to periods prior to the year ended December 31, 2020, or information relating to forward-looking statements, targets, goals and progress against goals, was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information. See Deloitte's [GRI](#) and [GHG Protocol](#) reports as linked.



GRI Disclosure Report – GRI Content Index

Management of Dow is responsible for the completeness, accuracy and validity of the ESG disclosures referenced or included in the GRI Content Index as of, and for the year ended, December 31, 2021. Management is also responsible for the collection, quantification and presentation of the information included in the 2021 Environmental, Social and Governance (ESG) Report and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the ESG disclosures.

Management of Dow asserts that the ESG disclosures referenced or included in the GRI Content Index as of, and for the year ended December 31, 2021, are presented in accordance with the Global Reporting Initiative Sustainability Reporting Standards under its Comprehensive option.

Dow Disclosures – GRI Content Index

GRI 100: Universal Standards

GRI 102: General Disclosures 2016

102-1 Name of the organization

The information in this report is presented on behalf of Dow Inc. and its consolidated subsidiaries (collectively, “Dow”).

102-2 Activities, brands, products, and services

Dow conducts its worldwide operations through six global businesses, which are organized into the following operating segments: Packaging & Specialty Plastics, Industrial Intermediates & Infrastructure, and Performance Materials & Coatings.

For more information see Item 1, Business on pages 7-14 of the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

102-3 Location of headquarters

Dow's global headquarters is in Midland, Michigan, USA.

102-4 Location of operations

Dow operates 104 manufacturing sites in 31 countries. Major manufacturing operations are in Argentina, Brazil, Canada, China, Germany, the Netherlands, Spain, Thailand, the United Kingdom and the United States.

For more information, see Properties, Item 2 on page 26 of the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

102-5 Ownership and legal form

Dow Inc. was incorporated on August 30, 2018, under Delaware law, to serve as a holding company for The Dow Chemical Company and its consolidated subsidiaries (“TDCC” and together with Dow Inc., “Dow” or the “company”).

Dow Inc. operates all its businesses through TDCC, a wholly owned subsidiary, which was incorporated in 1947 under Delaware law and is the successor to a Michigan corporation, of the same name, organized in 1897.

Dow Inc. is an independent, publicly traded company and Dow Inc. common stock is listed on the New York Stock Exchange under the symbol “DOW.” Dow Inc. common stock began regular-way trading on April 2, 2019.

As of January 31, 2022, there were 71,615 stockholders of record.



Dow Disclosures – GRI Content Index

102-6 Markets served

Dow is a global company with product sales in four geographic regions that include:

- North America
- Europe, Middle East, Africa and India (EMEA)
- Asia Pacific
- Latin America

Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated, science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer applications.

Dow's portfolio includes these sectors/beneficiaries:

- Packaging & Specialty Plastics serves growing, high-value sectors using world-class technology, broad existing product lines and a rich product pipeline that creates competitive advantages for the entire packaging value chain. The business also serves mobility and transportation, consumer, wire and cable, and construction end markets.
- Industrial Intermediates & Infrastructure develops important intermediate chemicals that are essential to manufacturing processes, as well as downstream, customized materials and formulations that use advanced development technologies. These businesses primarily are aligned to market segments as diverse as appliances; coatings; electronics; surfactants for cleaning and sanitization; infrastructure; and oil and gas.
- Performance Materials & Coatings serves the needs of the architectural and industrial coatings; home care and personal care; consumer and electronics; mobility and transportation; industrial and chemical processing; and building and infrastructure end markets.

For more information, see Item 1. Business, on pages 7-14 of the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

102-7 Scale of the organization

Dow's organization includes:

Total number of employees	<p>On December 31, 2021, the company permanently employed approximately 35,700 people on a full-time basis.</p> <ul style="list-style-type: none">• 49% North America• 29% Europe, Middle East, Africa, and India• 14% Asia Pacific• 8% Latin America
Total number of operations	Dow operates 104 manufacturing sites in 31 countries.
Net sales (in millions)	<p>Net sales were \$54,968 million with the following regional performance:</p> <ul style="list-style-type: none">• 36% North America• 36% Europe, Middle East, Africa, and India• 18% Asia Pacific and Latin America• 10% Latin America



Dow Disclosures – GRI Content Index

Total capitalization (in millions)	\$33,411 (Gross Debt = \$14,672, Total Equity = \$18,739)
Quantity of products or services provided (in millions)	<p>Product sales by operating segment are:</p> <ul style="list-style-type: none"> • 51% Packaging & Specialty Plastics • 31% Industrial Intermediates & Infrastructure • 17% Performance Materials & Coatings • 1% Corporate

For more information, see Item 1. Business, on pages 7-13 of the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

102-8 Information on employees and other workers

Employee Contract Type Definitions

- **Permanent employee:** A permanent employment contract is a contract with an employee, for full-time or part-time work, for an indeterminate period.
- **Temporary employee:** A temporary employee has an employment contract (can be written, verbal or implicit) that ends when a specific time period expires, or when a specific task that has a time estimate attached is completed. A temporary employment contract is of limited duration, and is terminated by a specific event, including the end of a project or work phase or return of replaced employees.

Total number of employees by employment contract (permanent and temporary), by gender[^]:

Employee Type	Men	Women	Total
Permanent	25,395	10,299	35,694
Temporary	710	352	1,062

Total number of employees by employment contract (permanent and temporary), by region:

Employee Type	Europe, Middle East, Africa, India	Latin America	North America	Asia Pacific	Total
Permanent	10,448	2,992	17,366	4,888	35,694
Temporary	551	171	337	3	1,062

Total number of employees by employment type (full-time and part-time), by gender[^]:

Employee Type	Men	Women	Total
Full-time	25,187	9,825	35,012
Part-time	208	474	682



Dow Disclosures – GRI Content Index

Dow utilizes non-employee contractors in select roles to (1) enable flexibility with scaling resources to meet short-term project staffing needs, (2) meet resource demands where fluctuations may occur more frequently, and/or (3) for work that is not core to Dow's areas of expertise.

There are no significant variations in employment due to tourism or agricultural industries; however, based on economic fluctuations, employment may decline or increase.

The workforce data is gathered through a centralized database containing all employee information. The employee data is updated by employees, Human Resources and managers when employee information changes occur. The data represents the global employee population as of December 31, 2021, and includes all permanent, full-time and part-time employees. Temporary employees, contractors and manual additions are excluded unless otherwise stated. Throughout this report, charts exclude employees whose gender or race is unknown or undeclared, and percentages may not always add up to 100% due to rounding.

102-9 Supply chain

Our supply chain extends to 150+ countries with a base of more than 31,000 vendors. Because of its global reach, we see supply chain sustainability as a key enabler of Dow's overall corporate sustainability strategy.

2021 suppliers by commercial area:

Commercial Area	Number of Suppliers	% Total Supply Base
Corporate Services	10,374	32.64%
External Manufacturing	222	0.70%
Hydrocarbons & Energy	884	2.78%
Logistics	1,821	5.73%
Maintenance, Repair & Operations (MRO) & Capital	15,364	48.35%
Packaging	910	2.86%
Raw Materials	2,204	6.94%
Grand Total	31,779	100%

2021 metrics for supply chain

- 1,300 transportation service providers globally
- 300 warehouses & terminals
- 4,500 shipments per day
- >45MM metric tons shipped per year
- >40,000 delivery sites
- 150 countries (origins and destinations)
- >31,000 vendors

Total vendors spend in 2021 was ~\$47 billion with spend by geographic area being: APAC (21%), EMEA (35%), LAA (15%) and U.S./CAN (29%)

102-10 Significant changes to the organization and its supply chain

There were no significant changes to the organization or its supply chain in 2021.

102-11 Precautionary principle

As a responsible corporate citizen, Dow uses a well-defined process for assessing and managing risks in the face of uncertainty. This process is science-based, ensuring decision-making includes an appropriate evaluation of risk and benefits. It applies to current products as well as those under development.

Dow supports a precautionary approach as set out in Principle 15 of the Rio Declaration on Environment and Development and views the precautionary principle as an application of the principles of risk assessment and risk management. Risk assessment includes hazard identification, hazard characterization, exposure assessment and, from these, an overall risk assessment. Risk management encompasses the identification, selection and implementation of alternative actions for addressing risk through the control of identified hazards and/or exposure. We believe the approach should be risk-based and cost-effective.

**Dow Disclosures – GRI Content Index**

102-12 External initiatives

External Initiative	Engagement Description
Responsible Care® Management System	Voluntary initiative of the global chemical industry, a requirement of membership in the American Chemistry Council (ACC).
United Nations Global Compact (UNG)C	Voluntary participant since 2007. Requires commitment to meet fundamental responsibilities and report progress in four areas: human rights, labor, environment and anti-corruption. Caring for Climate signatory.
Sustainable Packaging Coalition	Founding partner. Helped initiate a store drop-off program for hard-to-recycle plastics.
Task Force on Climate-related Financial Disclosures (TCFD)	Voluntary commitment in 2017 to report according to the TCFD recommendations by 2022. Member of the task force that established original recommendations in 2017 and continued participation in development of additional TCFD guidance.
Trash Free Seas® Alliance (TFSA)	Founding member of this voluntary, by-invitation alliance in 2012. TFSA unites industry, science and conservation leaders who share a common goal for a healthy ocean free of trash. TFSA provides a constructive forum focused on identifying opportunities for cross-sector solutions that drive action and foster innovation.
Keep America Beautiful (KAB)	Voluntary corporate partner. Dow leaders are on the Board.
Operation Clean Sweep® (OCS)	Pledged partner in this initiative of the ACC designed to prevent and help keep plastic out of the marine environment.
Alliance to End Plastic Waste	Founding member of organization with the goal to develop and scale solutions that manage plastic waste and promote circular economy for plastics.
Circulate Capital	Founding investor in effort to incubate and finance companies and infrastructure that prevents waste in oceans.
CEO Water Mandate	Voluntary participant since 2008. The CEO Water Mandate mobilizes a critical mass of business leaders to address global water challenges through corporate water stewardship, in partnership with the United Nations, governments, civil society organizations and other stakeholders.
Water Resilience Coalition	This coalition is part of CEO Water Mandate, an industry-led coalition to build a water-resilient future. We pledged to make the needed investments in our own operations, as well as work together through collective action, to accomplish three overarching commitments by 2050: net positive water impact, water-resilient value chain and global leadership.
Taskforce on Nature-related Financial Disclosures (TNFD)	Voluntary participant. Dow leaders engaged with the forum for consultation and pilot of the nature-related framework in development.
Together for Sustainability (TfS)	Engagement with suppliers in a streamlined and strategic way, leverage the work of our industry peers and contributing our own outlook to help improve the sustainability of supply chains.



Dow Disclosures – GRI Content Index

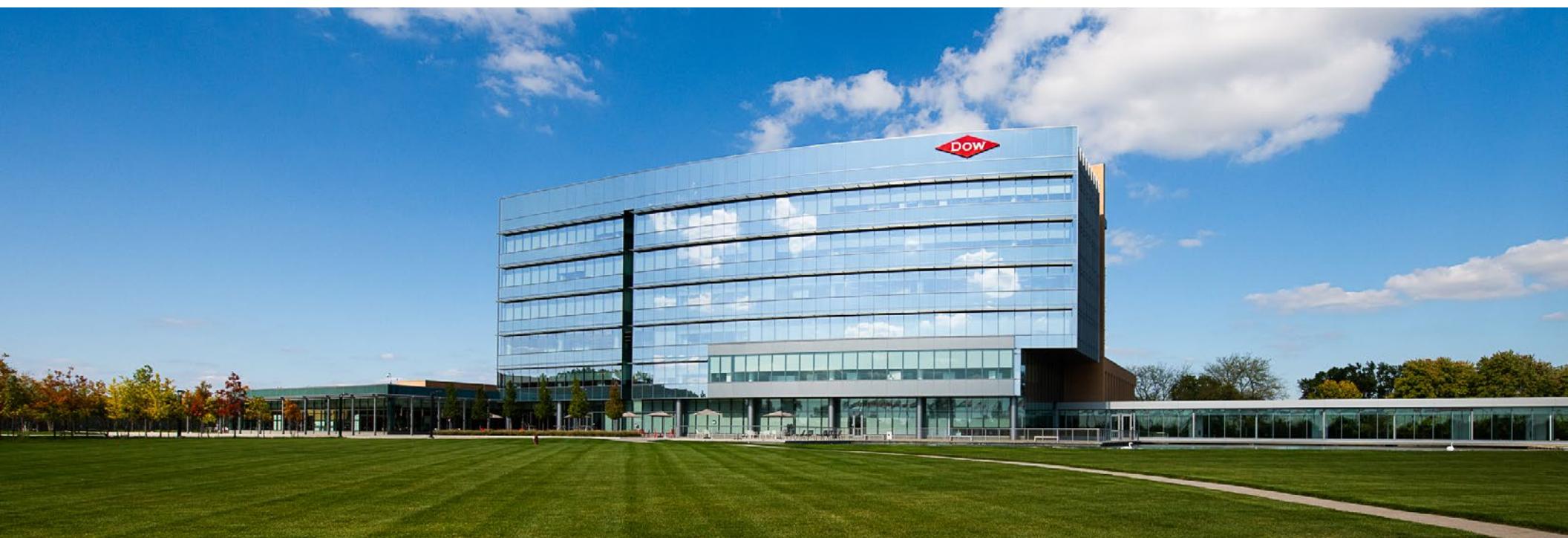
102-13 Membership of associations

American Institute for Packaging and the Environment (AMERIPEN)
American Center for Life Cycle Assessment (ACLCA)
American Chemistry Council (ACC)
American Coatings Association
American Fuel & Petrochemical Manufacturers
American Petroleum Institute
Business Roundtable
Center for Chemical Process Safety (CCPS)
European Chemistry Industry Council (CEFIC)
Corporate Eco Forum
Flexible Packaging Association
Green Chemistry & Commerce Council (GC3)
Global Silicones Council (GSC)

International Council on Chemical Associations (ICCA)
Louisiana Chemical Association
National Association of Manufacturers
National Safety Council
Plastics Europe
Texas Chemical Council
The Nature Conservancy (TNC)
U.S. Chamber of Commerce
World Business Council for Sustainable Development (WBCSD)
World Environment Center
World Economic Forum (WEF)
World Plastics Council (WPC)

102-14 Statement from senior decision maker

See topic "[Message from Our Chairman & CEO.](#)"





Dow Disclosures – GRI Content Index

102-15 Key impacts, risks and opportunities

CLIMATE CHANGE-RELATED RISKS	COVID-19 PANDEMIC-RELATED RISKS	MACROECONOMIC RISKS
<ul style="list-style-type: none">Climate change-related risks and uncertainties, legal or regulatory responses to climate change and failure to meet the company's climate change commitments could negatively impact the company's results of operations, financial condition, and/or reputation.For additional detail see TCFD Strategy Risks and Opportunity section	<ul style="list-style-type: none">A public health crisis or global outbreak of disease, including the pandemic caused by COVID-19 has had, and could continue to have, a negative effect on the company's manufacturing operations, supply chain and workforce, creating business disruptions that could continue to have a substantial negative impact on the company's results of operations, financial condition and cash flows.	<ul style="list-style-type: none">Financial Commitments and Credit Markets: Market conditions could reduce the company's flexibility to respond to changing business conditions or fund capital needs.Global Economic Considerations: The company operates in a global, competitive environment, which gives rise to operating and market risk exposure.Pension and Other Postretirement Benefits: Increased obligations and expenses related to the company's defined benefit pension plans and other postretirement benefit plans could negatively impact its financial condition and results of operations.Supply/Demand Balance: Earnings generated by the company's products vary based in part on the balance of supply relative to demand within the industry.
LEGAL AND REGULATORY RISKS	OPERATIONAL AND STRATEGIC RISKS	
<ul style="list-style-type: none">Environmental Compliance: The costs of complying with evolving regulatory requirements could negatively impact the company's financial results. Actual or alleged violations of environmental laws or permit requirements could result in restrictions or prohibitions on plant operations, substantial civil or criminal sanctions, as well as the assessment of strict liability and/or joint and several liability.Health and Safety: Increased concerns regarding the safe use of chemicals and plastics in commerce and their potential impact on the environment has resulted in more restrictive regulations and could lead to new regulations.Litigation: The company is party to a number of claims and lawsuits arising out of the normal course of business with respect to product liability, patent infringement, employment matters, governmental tax and regulation disputes, contract and commercial litigation, and other actions.Plastic Waste: Increased concerns regarding plastic waste in the environment, consumers selectively reducing their consumption of plastic products, a lack of plastic waste collection and recycling infrastructure, or new or more restrictive regulations and rules related to plastic waste could reduce demand for the company's plastic products and could negatively impact the company's financial results.	<ul style="list-style-type: none">Company Strategy: Implementing certain elements of the company's strategy could negatively impact its financial results.Cyber Threat: The risk of loss of the company's trade secrets, know-how or other sensitive business information or disruption of operations could negatively impact the company's financial results.Goodwill: An impairment of goodwill could negatively impact the company's financial results.Operational Event: A significant operational event could negatively impact the company's results of operations.Raw Materials: Availability of purchased feedstock and energy, and the volatility of these costs, impact Dow's operating costs and add variability to earnings.Separation from DowDuPont: Risks related to achieving the anticipated benefits of Dow's separation from DowDuPont.	

For additional information, see Risk Factors in the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022 (Item 1A, Page 21), and in the Quarterly Report on [Form 10-Q](#) for the quarter ending March 31, 2022, filed with the SEC on April 22, 2022 (Item 1A, Page 57). For additional information on opportunities, see [GRI 201-2 Financial implications and other risks and opportunities due to climate change](#).



Dow Disclosures – GRI Content Index

102-16 Values, principles, standards and norms of behavior

See Code of Conduct (Page 39) in the [2022 Proxy Statement⁷](#) filed with the SEC on March 4, 2022.

Dow Code of Conduct – [Dow Code of Conduct Policy | Public Policy | Dow Corporate⁷](#)

Accountability and transparency are core components of Dow's overall ethics and compliance program. The Office of Ethics and Compliance (OEC) regularly monitors Dow's compliance programs and uses these statistics to assess and continuously improve its processes and programs. In addition, the OEC regularly reviews its own performance on matters such as substantiation rates, cycle times, trainings and certifications and employee engagement and trust. The OEC holds itself to high standards of responsiveness and adherence to compliance policies. Relevant statistics are disclosed on a quarterly basis to the Global and Regional Ethics and Compliance Committees and the Audit Committee of Dow's Board.

102-17 Mechanisms for advice and concerns about ethics

Our employees are expected to behave in a way that protects our business interests, our reputation and each other. This includes taking action to promptly report any conduct inconsistent with our Code of Conduct, our values or the law. The OEC is responsible for communicating to all stakeholders the mechanisms in place to seek advice and report potential misconduct. Employees and other interested parties who have a question or desire to make a report regarding any ethics and compliance matters can use the following confidential options:

- EthicsLine (third party-managed service) – a safe, reliable and convenient method to report ethical concerns (by calling or via online form). It is available globally, with multilingual capabilities, 24 hours a day, seven days a week.
- Make a report via telephone.
- Make a report via online submission.
- Make a report of a concern to their supervisors or other leaders, Dow attorneys, human resources personnel, Global or Regional Ethics & Compliance Committee members or directly to the OEC.

We respect and protect any reporter and whistleblower who raises concerns about potential misconduct, and we do not tolerate retaliation against anyone who reports a potential violation in good faith. Reports about alleged violations of the Code or the law are provided at least quarterly to the Audit Committee of the Dow Board. To summarize 2021:

- 395 matters were reported to the OEC, of which 316 warranted an investigation.
- 344 matters were closed (31% substantiated; 14% unsubstantiated but other issues were uncovered, and 55% unsubstantiated or not related to policy violations).

Types of issues: Conflicts of interest, Environmental Health & Safety, Human Resources, Misuse of Assets and Others. All issues that require corrective action are appropriately addressed.



Dow Disclosures – GRI Content Index

102-18 Governance structure

Also see [TCFD Disclosures – Board Oversight](#)

The Board is responsible for overseeing the company's strategy development and planning process, including annual review of the corporate and business plan. The Board is also responsible for overseeing the ESG priorities of the company, including climate priorities, ensuring transparency and accountability. For specific details regarding the Board Committees and their responsibilities, see Corporate Governance Section (pages 21-25) and Board's Role in the Oversight of Strategy and ESG Priorities (page 33) in the [2022 Proxy Statement[†]](#) filed with the SEC on March 4, 2022.

Throughout the year and at every Board meeting, the Board receives information and updates from management and actively engages with senior leaders with respect to management's execution of the corporate and business plans as well as progress on ESG priorities including economic, environmental and social topics. The Board and management review the company's short- and long-term strategic priorities throughout the year and dedicate time at each Board meeting for appropriate discussion.

102-19 Delegating authority

The Board delegates the day-to-day management of the company, including setting the values and mission of the company and execution of its strategic and ESG priorities, to Dow's CEO and other senior leaders and provides guidance to and oversight of management. This authority includes decision-making on economic, environmental and social topics.

Dow employs a systematic delegation of authority structure from the Board to senior leaders and then through the company by role and responsibility in the organization, enabling business decisions while maintaining appropriate governance framework and controls.

102-20 Executive-level responsibility for economic, environmental and social topics

Responsibility for economic, environmental and social topics are held by the Dow Leadership Team and the Dow Operations Team, including the chairman and chief executive officer, president and chief financial officer, general counsel and corporate secretary, chief sustainability officer, chief human resource officer and chief inclusion officer, and vice president of Public Affairs.

The chief financial officer, chief sustainability officer, chief human resources officer and business presidents, chief inclusion officer, and general counsel and corporate secretary all report to the chief executive officer. The vice president of Public Affairs reports to the chief financial officer.

102-21 Consulting stakeholders on economic, environmental and social topics

Stakeholders may communicate with the full Board, the chairman, the independent directors as a group or individually by mail addressed to Dow Inc., c/o Office of the Corporate Secretary, 2211 H.H. Dow Way, Midland, Michigan 48674 as described in the company's Corporate Governance Guidelines.

An overview of Dow's engagement efforts and review by the Board and management team can be found on page 28 of the [2022 Proxy Statement[†]](#) filed with the SEC on March 4, 2022. See additional information in the Stakeholder Engagement disclosures [GRI 102-42 Identifying and selecting stakeholders](#), [102-43 Approach to stakeholder engagement](#) and [102-44 Key topics and concerns raised](#).



Dow Disclosures – GRI Content Index

102-22 Composition of the highest governance body and its committees

The diverse composition of the Board provides a balance of perspectives that contribute to the Board's effectiveness in overseeing the business and strategy of the company. Each of the directors possess skills and experiences that align with the current needs of the company. See Director Nominees Section (Page 22) in the [2022 Proxy Statement](#) filed with the SEC on March 4, 2022.

102-23 Chair of the highest governance body

Currently, the roles of chairman and CEO are combined with Jim Fitterling serving as chairman and CEO and Richard K. Davis serving as the independent lead director. Mr. Fitterling's 38-year tenure and multiple roles with the company and in the industry makes him uniquely suited to facilitate the Board's governance oversight of strategy and safe and effective business operation. Mr. Fitterling's familiarity with, and knowledge of, our business is unmatched. Furthermore, he has a long history of leadership in reporting transparency and sustainability disclosures. Mr. Fitterling also leads the company's extensive strategy and ESG priorities, which includes robust public policy development on a national and international level, such as launching the company's aggressive and ambitious targets to become carbon neutral by 2050 and to help eliminate plastic waste. Mr. Davis, the company's independent lead director, has significant experience in corporate governance and public company management as current and former CEO of large public companies and as a director on other public company boards.

The Board recognizes that the leadership structure and combination or separation of the CEO and chairman roles are driven by the needs of the company. As a result, no policy exists requiring combination or separation of leadership roles. This determination is made on an annual basis by the Board, which allows the Board the flexibility to make changes to Board leadership that are in the best interests of the company and its stockholders. As a part of that process, the Board reviews whether the existing leadership structure provides strong independent oversight while balancing the need for extensive knowledge of business operations, risks and strategy implementation, and accountability for company performance. Regardless of the specific Board leadership structure, the company has always incorporated a strong defined leadership role for an independent director.

The Board believes that its independence and effective oversight of management is enabled through the company's strong corporate governance practices and safeguards currently in place, including the election of a separate lead director with significant responsibilities, the use of executive sessions, the Board's robust Committee structure with each Committee composed of independent directors and chaired by an independent director, and annual review of the leadership structure.

For more information, see Board Leadership Structure on pages 28-30 of the [2022 Proxy Statement](#) filed with the SEC on March 4, 2022. Also see the Governance Chapter within this report.

102-24 Nominating and selecting the highest governance body

The Corporate Governance Committee has responsibility for reviewing and recommending director nominees for membership on the Board. The Corporate Governance Committee recommends to the Board guidelines to evaluate candidates for Board membership to provide for a diverse and highly qualified Board that, as a whole, reflects a broad range of viewpoints, experiences and expertise.

The Corporate Governance Committee requires including diverse candidates in its initial director search list based on self-identified factors such as age, race, gender or sexual identity, ethnicity, culture and nationality. Minimum qualifications for any director candidates include: strong values and discipline, high ethical standards, a commitment to full participation on the Board and its Committees, relevant career experience, and a commitment to inclusion and diversity. Candidates should possess individual skills, experience and demonstrated abilities that help meet the current needs of the Board, such as experience or expertise in some of the following areas: the specific industries in which the company operates, issues affecting global businesses, science and technology, finance and/or economics, corporate governance, public policy, government affairs and prior government service, environmental and/or social impact experience, and experience as chief executive officer, chief operating officer, chief financial officer or other senior leader of a major company. Other factors that are considered are independence of thought, willingness to comply with Director stock ownership guidelines, meeting applicable Director independence standards (where independence is desired) and absence of conflicts of interest. The slate of director nominees to be submitted for stockholder vote at the Annual Meeting of Stockholders and to fill any vacancies on the Board are to be determined in accordance with the Bylaws.



Dow Disclosures – GRI Content Index

The Corporate Governance Committee reviews the annual Board and committee self-evaluations to identify additional director qualifications, skills, experience, attributes and diversity that would enhance overall Board effectiveness. Age-based retirement practices also help the Board prepare for turnover and engage in succession planning.

102-25 Conflicts of interest

See Code of Conduct within [GRI 102-16 Values, principles, standards and norms of behavior](#). All Dow directors, officers and employees are expected to comply with the Dow Code of Conduct and to apply it in the daily performance of their responsibilities.

The Code of Financial Ethics ([Code of Financial Ethics | Public Policy | Dow Corporate](#))¹ is applicable to the principal executive officer, principal financial officer, principal accounting officer and controller.

The Corporate Governance Committee has responsibility for annually reviewing the relationships between directors, Dow and members of management and recommending to the Board whether each director qualifies as “independent” under the applicable rules of the New York Stock Exchange and the company’s Corporate Governance Guidelines.

All Dow directors, officers and employees are required to complete an annual ethics and compliance certification, which includes training on ethical standards and questions concerning potential conflicts of interest. All responses are reviewed by the Office of Ethics and Compliance. When an actual or apparent conflict is disclosed, action is taken to appropriately mitigate risk. In 2021, the certification process was rolled out to global employees during the second quarter. Conflicts of interest were reviewed on a case-by-case basis, and investigations were conducted into any alleged conflicts of interest that potentially violated the Code. Dow employees can report concerns about potential conflicts of interest directly to the Office of Ethics and Compliance or through the electronic Conflict of Interest Register for appropriate action. Dow discloses public company board memberships, supplier/purchaser relationships and related party disclosures in relevant SEC filings, including the Proxy Statement and the Forms 10-K and 10-Q, as appropriate.

102-26 Role of highest governance body in setting purpose, values and strategy

The Board is responsible for overseeing the company’s strategy development and planning process, including annual review of the corporate business plan. The Board is also responsible for overseeing the ESG priorities of the company, ensuring transparency and accountability. Each Committee is responsible for oversight of specific strategic and ESG areas relevant to their respective charters. Throughout the year and at every Board meeting, the Board receives information and updates from management and actively engages with senior leaders with respect to management’s execution of the corporate and business plans as well as progress on ESG priorities including sustainability targets and inclusion, diversity and equity (ID&E) initiatives. The Board and management review the company’s short- and long-term strategic priorities throughout the year and dedicate time at each Board meeting for appropriate discussion.

Although each Committee oversees the management of certain responsibilities as described above, the full Board is regularly updated by the Committees, management and senior leaders. This enables the Board and the Committees to coordinate oversight and the relationships among the various priorities of the company.

The Board delegates the day-to-day management of the company, including setting the values and mission of the company and execution of strategic and ESG priorities, to Dow’s CEO and other senior leaders and provides guidance to and oversight of management.

See [GRI 102-18 Governance Structure](#) for additional information.



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102-27 Collective knowledge of highest governance body

Directors are active and engaged, starting with onboarding. All new directors participate in a robust orientation to familiarize directors with the company's strategic priorities, corporate and business plans, significant financial, accounting and risk management issues, and governance policies and compliance processes, including the Code of Conduct. On an ongoing basis, directors receive materials or briefing sessions regarding the operations of the company, strategic priorities, ESG initiatives and risks. Each regularly scheduled Board meeting includes a spotlight session on key enterprise priorities where internal and/or external experts provide in-depth presentations to directors.

In 2021, presentations were made on the topics of: ESG performance and valuation creation outcomes, decarbonization, political trends, climate and carbon policy, and global competitiveness.

While some in-person activities have been paused during the COVID-19 pandemic, site and facility tours have resumed on a limited basis as health and safety guidelines permit. In 2021, directors were invited to tour the innovation lab in Midland, Michigan, and the manufacturing facility in Freeport, Texas.

Directors are encouraged to attend appropriate continuing education programs to help them stay current on corporate governance, Board best practices, financial and accounting practices, ethical issues for directors and management, and similar matters relating to service on a public company board.

102-28 Evaluating the highest governance body's performance

The self-evaluation process is an effective tool in ensuring sound corporate governance practices, which are important to the success of the company's business and in advancing stockholder interests. As provided in the Corporate Governance Guidelines, Board Committee Charters and the New York Stock Exchange listing standards, the Board and each of its Committees are required to conduct an annual self-evaluation of its performance with a particular focus on overall effectiveness. The self-evaluation process provides valuable insight regarding areas of effectiveness and opportunities for improvement.

For more details about the evaluation process and an example of action taken, see the Board and Committee Evaluation Process Section (Page 38) in the [2022 Proxy Statement](#)⁷ filed with the SEC on March 4, 2022.

102-29 Identifying and managing economic, environmental and social impacts

The Board is the highest governance body involved in risk management through Dow's Enterprise Risk Management (ERM) process. See [GRI 102-30 Effectiveness of risk management processes](#) for further description of this process and governing bodies involvement.

Dow's ERM process is responsible for identifying significant or major risks to the company and creating action plans to mitigate risks. On an annual basis, the ERM process screens risks from a broad range of inputs, both internal and external to Dow. Risks assessed as part of the annual ERM process include risks with economic, environmental and social impacts. All risks are reviewed and categorized based on potential impact and likelihood of a significant event occurring. Each risk is assigned to a member of Dow's Executive Leadership Team (ELT) and an internal subject matter expert for mitigation plan accountability, if needed.

The results of the annual ERM process are reviewed with Dow's ELT – a diverse, cross-functional team representing each of Dow's businesses, functions and geographic regions. Key risks that have specified mitigation actions are reviewed more regularly in leadership team meetings. In addition, risks can be re-evaluated based on several factors including changes in the external and macroeconomic environment, concerns identified by senior leaders or Dow's Board, or through detection in Dow's internal work processes. The Audit Committee of the Board has oversight of the ERM process, including an annual review of the ERM results as well as the policies and processes used to assess, monitor and control risks. Specific risks are also reviewed with the Environment, Health, Safety & Technology Committee, Compensation and Leadership Development Committee, Corporate Governance Committee and/or the full Board.



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Additionally, Dow's Sustainability External Advisory Council (SEAC) reviews critical issues regarding our sustainability objectives. The SEAC brings external insights such as views on biodiversity, environmental justice or changes in the sustainability landscape in China. Our ELT will use this information to inform our strategy.

We use several elements to identify and prioritize risks and opportunities, including a sustainability materiality assessment, a stakeholder engagement process (See [GRI 102-47 List of material topics](#)) and the ERM process. Risk management is a strategic activity within Dow, and our ability to manage risk creates opportunity as well.

102-30 Effectiveness of risk management processes

Risk management is considered a strategic priority within the company. The Board is responsible for overseeing overall risk management for the company, including review and approval of the ERM approach and process implemented by management to identify, assess, manage and mitigate risk. Each Committee is responsible for oversight of specific risk areas relevant to their respective charters. The risk management approach and process are reviewed at least annually with key risks regularly evaluated at meetings of the Committees and Board, including risks with economic, environmental and social impacts.

See Board's Role in the Oversight of Risk Management (Pages 33-34) in the [2022 Proxy Statement](#) filed with the SEC on March 4, 2022.

102-31 Review of economic, environmental, and social topics

Dow held six Board meetings and the Committees of the Board collectively held 27 meetings for a total of 33 meetings in 2021. The Audit Committee held 10 meetings in 2021. The Corporate Governance Committee and the Compensation and Leadership Development Committee each held six meetings in 2021. The Environment, Health, Safety & Leadership Committee held five meetings in 2021.

Also see [GRI 102-26 Role of highest governance body in setting purpose, values and strategy](#), [102-29 Identifying and managing economic, environmental and social impacts](#) and [102-33 Communicating critical concerns](#).

102-32 Highest governance body's role in sustainability reporting

The Board and Board Committees reviewed this report and, as applicable, approved topics in their respective areas of responsibility as set forth in the Committee Charters.

102-33 Communicating critical concerns

Throughout the year and at every Board meeting, the Board receives information and updates from management and actively engages with senior leaders with respect to management's execution of the corporate and business plans as well as progress on ESG priorities including economic, environmental and social topics. The Board and management review the company's short- and long-term strategic priorities throughout the year and dedicate time at each Board meeting for appropriate discussion.

ERM is considered a strategic priority within the company. Responsibility for managing risk rests with executive management and the ELT while the Audit Committee provides oversight. The ERM process is conducted and reviewed at least annually, with key risks that have specified mitigation actions reviewed more regularly in leadership team meetings and with the Committees and Board, including risks with economic, environmental and social impacts.

As needed, the Board receives timely updates from management and senior leaders on material matters of critical concern for the enterprise.



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102-34 Nature and total number of critical concerns

In 2021, no matters of critical concern to the enterprise were communicated to the Board or disclosed in securities filings.

In the event of a critical concern to the enterprise and in addition to discussions with management and senior leaders to address and resolve such critical concerns, directors may discuss any matters of critical concern to the enterprise during executive session. The independent directors meet in executive session in connection with each regularly scheduled meeting of the Board, and at other times as they may determine appropriate; the Committees regularly meet in executive session in connection with every Committee meeting.

102-35 Remuneration policies

A detailed review of Dow's remuneration policies and the process for determining remuneration can be found in the Compensation Discussion and Analysis section starting on page 57 of the [2022 Proxy Statement⁷](#) filed with the SEC on March 4, 2022. Key executive compensation practices can be found in [GRI 102-37 Stakeholders' involvement in remuneration](#).

102-36 Process for determining remuneration

See disclosure [GRI 102-35 Remunerations policies](#).

102-37 Stakeholders' involvement in remuneration

Annually, the company asks stockholders for an advisory vote on compensation for management. At the 2021 Annual Meeting of Stockholders, 94% of the votes cast by stockholders supported Dow's executive compensation programs. In the 2022 Annual Meeting of Stockholders, 91% of the votes cast by stockholders supported Dow's executive compensation programs. The Board and management team carefully consider the advisory vote, as well as engagement with stakeholders throughout the year, when reviewing business, corporate governance and executive compensation profiles. For example as a result of stakeholder engagement, we made the decision to enhance the link between ESG metrics and executive compensation by including performance metrics related to Dow's sustainability targets, including climate and carbon goals, in our Performance Share Unit program design.

For additional information, see Key Executive Compensation Practices (Page 66) in the [2022 Proxy Statement⁷](#) filed with the SEC on March 4, 2022.

102-38 Annual total compensation ratio

Based upon the calculation of compensation for both the CEO and the median employee, the ratio of CEO pay to median employee pay for 2021 was approximately 260:1.

OMISSION 102-38 Annual total compensation ratio

Confidentiality constraints. In the interest of confidentiality and competitiveness, Dow does not report ratios based on individual compensation at the country level.

102-39 Percentage increase in annual total compensation ratio

The target total direct compensation of Mr. Fitterling increased 5.9% over 2020 total direct compensation. Relative to 2020, Mr. Fitterling received a 2.9% increase to his short-term incentive target and an increase of 5.8% to his long-term incentive target, based upon the Compensation and Leadership Development Committee's review of comparable positions within the Compensation Peer Group.

See Base Salary Year over Year change (Page 69) in the [2022 Proxy Statement⁷](#) filed with the SEC on March 4, 2022.



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OMISSION 102-39 Highest paid individuals in each country of significant operations

Confidentiality constraints. In the interest of confidentiality and competitiveness, Dow does not report ratios based on individual compensation at the country level.

102-40 List of stakeholder groups

Engaging stakeholders and establishing collaborative partnerships is an essential element of our strategy and ESG priorities. Stakeholders include:

- Customers
- Suppliers
- Employees (and Prospective Employees)
- Trade Unions
- Community/Society
- Regulators
- Stockholders/Investors
- Non-Governmental Organizations (NGOs)

102-41 Collective bargaining agreements

Approximately 15% of Dow's workforce was covered by collective bargaining agreements in 2021.

102-42 Identifying and selecting stakeholders

Stakeholders for engagement are identified and selected in a manner to inform and advance our business and ESG strategies and in alignment with our ambition to be the most innovative, customer-centric, inclusive and sustainable material science company in the world. By engaging with a wide variety of stakeholders on a regular basis, we build a clearer understanding of complex global challenges and of the local conditions in the countries where we do business. We also bring in diverse perspectives and guidance through our external SEAC and Science and Technology Advisory Council (STAC).

102-43 Approach to stakeholder engagement

The fundamental principles of Dow's ongoing engagement strategy are:

- Information sharing and disclosure
- Participating in active dialogue
- Collaborating on issues of mutual interest
- Acting on input provided by stakeholders

Stakeholder engagement is a regular component of our strategic business and ESG activities and, as such, is not typically undertaken specifically as part of the report preparation process.



Dow Disclosures – GRI Content Index

Customer Engagement

Customers are engaged frequently throughout the year through events, meetings, emails, surveys and social media.

Dow uses Customer Experience surveys as a main source of soliciting insight annually from our customers and distributors. Surveys are sent to any direct customer or distributor contact who has interacted with us over the previous 12 months at any touchpoint along the customer journey. The contact is asked about their overall experience working with Dow during that time. This provides us with the Customer Experience Index (CXi). More interaction-specific questions related to the contact's specific role are also asked to gain further insights around their online and offline experiences with Dow. In addition to the Customer Experience surveys, Dow teams regularly engage with our customers directly. We reinforce accountability and transparency across the company by including a CXi component to our Executive Compensation and employee Performance Award programs, recognizing that customers are critical to Dow's success and every employee has an impact on customer loyalty.

Year-end performance on the CXi score was 72 points, a decline of 5 points from 2020. Factors that impacted these results include industry supply challenges due to significant weather events and the availability of both raw materials and logistics. Although our score declined year over year, the CXi results provide valuable insight that is enabling us to make necessary changes.

HOW WE ENGAGE:	WHO PARTICIPATES:	KEY ENGAGEMENT RESOURCES:	KEY TOPICS OF ENGAGEMENT:
<ul style="list-style-type: none">Dedicated sustainability one-to-one meetingsSupplier Relationship Management meetingsCollaboration via external forums (e.g., World Business Council for Sustainable Development)Written and electronic communicationsEcoVadis and similar third-party platformsOn-site ESG auditsCustomer events/webinarsConferences	<ul style="list-style-type: none">Account managersCorporate subject matter expertsBusiness sustainability leadersTechnical Service and DesignProduct StewardshipEnergy groupEmergency Services and SecurityHuman ResourcesLegalSite operationsIntegrated Supply ChainPurchasing	<ul style="list-style-type: none">Dow websiteEcoVadis portalCarbon Disclosure ProjectDow ESG ReportCustomer Information Group portalEnterprise-level, externally approved slide decksConflict minerals reporting template	<ul style="list-style-type: none">Overall strategy and goals, including on ESGCarbon footprint and life-cycle assessment requestsValue chain transparencyCustomer-specific questionnairesOn-site audits related to ESG topics (e.g., Sedex Members Ethical Trade Audit 4-pillar audits, Technical Expertise and Support audits)



Dow Disclosures – GRI Content Index

Supplier Engagement

Suppliers are engaged frequently throughout the year through calls, emails and surveys. Dow also has several methods of engagement with our suppliers to advance our strategy and ESG priorities:

- Several efforts are underway to embed ESG into supplier engagement activities. ESG criteria will be integrated into all requests for proposals, tenders, contracts and supplier relationship management strategies. A key foundation of this is to enable Dow's Purchasing team to access robust ESG data, placing sustainability as a meaningful metric in the decision-making matrix.
- Dow partnered with Carbon Disclosure Project (CDP) to collect climate data on 100+ key suppliers.
- Partnering with TfS, we engage with suppliers in a streamlined and strategic way, leveraging the work of our industry peers and contributing our own outlook on sustainability supply chains. Dow is also collaborating with groups like the World Business Council for Sustainable Development and World Economic Forum to develop robust methodologies for data sharing along supply chains, allowing Dow to access high-quality data from our suppliers and provide the same level of quality to our customers.
- Dow's Logistics Supplier Award Programs (S4TAR & DowGOL) are designed to encourage and recognize Dow's logistics partners for excellent performance in the areas of safety, sustainability, social responsibility and service. Dow's goal with logistics supplier awards is to drive operational and sustainability excellence by sharing and recognizing best practice with its supply chain partners.

Employee Engagement

Employees are engaged frequently throughout the year through surveys, emails, intranet postings, individual conversations, meetings, training and other mechanisms.

- At least twice a year, employees are invited to provide input through our annual Voice “all employee” survey, and through quarterly pulse surveys. Topics on these surveys are focused on employee satisfaction with company strategic direction, inclusion, wellness and safety, tools and technology, and leader effectiveness.
- An overall measure of Employee Experience – based on feelings of pride, inspiration and belonging – is tracked each quarter.
- Employees may provide input and comment on Dow Connect (internal online news portal), through townhalls and through Q&As and quarterly “all employee” updates (Dow World News).
- Numerous opportunities are provided for employees at all levels to provide input into ESG practices and strategy.

All leaders with direct reports, as well as influential leaders, are engaged on a regular basis through our annual LEAD programming. This program kicks off the year with a virtual conference covering company strategy and priorities, and in-depth discussions with internal and external experts on key topics such as Reliability, People and Culture, and Sustainability. During quarterly broadcasts for leaders, there is time for Q&As with the ELT. In addition, when there are timely topics, special forums are hosted for leaders to hear about the updates, ask questions and discuss.

During the past year, some topics that have been influenced by direct employee input and the above listening mechanisms include the company's work flexibility approach (Design your Day), updates to leave policies (parental, ERG and Volunteerism time-off), and wellness offerings.



Dow Disclosures – GRI Content Index

Employee Representation (Including Trade Unions & Works Councils)

- Dow strives to work cooperatively with duly chosen employee representatives in the common pursuit of the interests of our employees and the company's objectives.
- Where our employees are represented, we build those relationships to drive positive business results, employee experience and customer experience.
- We implement and adhere to our collective agreements with employee representation.
- Dow drives our employee representation relationships locally, meaning these relationships are generally fostered at a site or country level.
- Negotiations and general discussion are driven locally with company representatives and employee representation.
- Communications between the company and employee representation generally occur through meetings as well as phone calls/email exchanges.
- Dow has partnered with employee representation on critical priorities such as environmental, health and safety for many years.
- Common topics of discussion and/or negotiation between the company and employee representation include wages, benefits and working conditions.

Community/Society Engagement

We know that by listening and collaborating, we can discover the solutions for what's needed next. Whether partnering with Dow, working at Dow or experiencing Dow materials in your favorite brands, we are endlessly working to make the world and our communities a better place to live and work.

- Communities are engaged regularly through individual and group meetings, committees and other forms of communication. Wider communication with communities is through social media. Dow is committed to building resilient communities to address unmet needs while keeping our employees and communities safe. Across the Dow world, the majority of all Dow sites implement local community engagement programs.
- Dow employees work closely with nonprofit partners, including local United Way chapters, to understand the hardships of individuals and families that live in or near poverty, to identify and prioritize resources.
- In 2021, we launched a Community Opinion and Needs Assessment initiative, designed to inform Dow with data-based and objective insights into the needs of strategic Dow communities (defined as cities near important Dow manufacturing facilities). Twelve communities were surveyed in North America in the second half of 2021, with results available in first quarter of 2022. The assessment will be administered in Latin America and Europe in first quarter of 2022, with results available in second quarter of 2022.
- Community Advisory Committees (CACs) are active at key Dow sites to obtain community perceptions about Dow, share Dow product and technology information, and understand how Dow can improve collaboration with community partners to address community needs.

Regulator Engagement

Dow engages with regulators as part of normal operations through in-person and online meetings and public comments. These engagements range from standard sharing of information and reporting to more detailed conversations about specific regulatory issues of interest. Engagement with regulators globally throughout 2021 was done primarily via email and online meetings and, where there was a topic of broader interest across companies, some occurred with our trade associations or other coalitions. During 2021, many topics were covered in regulator interactions, including (but not limited to): operating permits; environmental remediation projects; trade and customs regulations; product registrations; safe shipment, labeling, handling and use of our products; tax; data privacy; labor and workforce matters.



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Stockholder/Investor Engagement

See Stockholder Engagement (page 27) in the [2022 Proxy Statement](#) filed with the SEC on March 4, 2022.

102-44 Key topics and concerns raised

Responding to stakeholders on key topics or concerns is described in [102-43 Approach to stakeholder engagement](#). The company continually evaluates enhancements to our corporate governance, ESG and executive compensation practices, and appreciates engaging key stakeholders – including our stockholders – in the evaluation of these enhancements. For examples of recent decisions, see topic Stockholder Engagement (page 27) in the [2022 Proxy Statement](#) filed with the SEC on March 4, 2022.

102-45 Entities included in the consolidated financial statements

Consolidated subsidiaries are listed in Exhibit 21 of the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

102-46 Defining report content and topic boundaries

In 2019, Dow conducted a comprehensive update to our materiality assessment to determine topics that are material for disclosure based on their impact on economies, the environment, society and our stakeholders. A team of subject matter experts who provided the voice of stakeholders was asked to describe each potential material topic as it relates to Dow's products and activities, including where the impacts occur. These topics and impacts are used to define the report content and topic boundaries for our disclosures consistent with the GRI Reporting Principles including Stakeholder Inclusiveness, Sustainability Context, Materiality and Completeness. Questions included:

- How do Dow's products and activities impact economies?
- How do Dow's products and activities impact the environment?
- How do Dow's products and activities impact society?
- How do Dow's products and activities impact the decisions of our stakeholders (Including suppliers, employees, customers, community/society, regulators, stockholders/investors)?

Team Representation	Expertise	Stakeholder Voice Represented
Sustainability Directors and Managers	Sustainability context, frequent external engagement on sustainability topics and the impact of Dow and the industry	Employees, customers, suppliers, community/society, regulators, stockholders/investors
VP of Investor Relations	ESG as a driver of investment decisions	Stockholders/investors
Energy and Climate Change Directors and Managers	Energy and climate policy, impact of Dow operations	Suppliers, customers, regulators, community/society
Corporate Reporting Manager	External disclosure requirements, corporate reputation	Regulators, stockholders/investors
Finance Directors	Financial impact of Dow's activities	Community/society, stockholders/investors
Enterprise Risk Management Manager	Integrated risk management process	Community, regulators, stockholders/investors
Commercial and Customer Experience Director	How sustainability topics relate to Dow's business unit decisions	Customers
Environmental Directors	Environmental regulations, impacts	Regulators, customers, community/society
2025 Sustainability Goal Team Leaders	Energy and climate policy, impact of Dow operations	Community/society, employees



Dow Disclosures – GRI Content Index

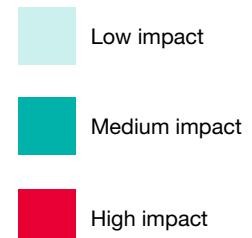
102-47 List of material topics

The chart below indicates the scale of impact of Dow's products and activities on economies, the environment and society and the scale of influence on the assessments and decisions of our stakeholders for each of our identified material topics.

Topic	Impact of Dow's products and activities on the economy, environment and society			Impact of Dow's products and activities on the assessments and decisions of our stakeholders					
	Economy	Environment	Society	Suppliers	Employees	Customers	Community/ Society	Regulators	Stockholders/ Investors
Safe chemistry	Low impact	Medium impact	Low impact	Low impact	Low impact	High impact	Medium impact	Medium impact	Low impact
Circular economy	Medium impact	High impact	High impact	Low impact	Low impact	Low impact	Medium impact	Low impact	Low impact
Plastic waste in the environment	Medium impact	High impact	High impact	Low impact	Medium impact	Low impact	Medium impact	Medium impact	Low impact
Economic performance	High impact	Low impact	Medium impact	Medium impact	Medium impact	Low impact	Medium impact	Low impact	High impact
Materials	Low impact	High impact	Medium impact	Medium impact	Low impact	Low impact	Low impact	Low impact	Low impact
Energy	Medium impact	High impact	Medium impact	Low impact	Medium impact	Low impact	Medium impact	Medium impact	Low impact
Water and effluents	Medium impact	High impact	Medium impact	Low impact	Low impact	Low impact	Medium impact	Low impact	Low impact
Biodiversity	Low impact	Medium impact	Low impact	Low impact	Low impact	Low impact	Medium impact	Low impact	Low impact
Emissions	Medium impact	High impact	High impact	Low impact	Medium impact	High impact	Medium impact	Medium impact	Low impact
Effluents and waste	Low impact	High impact	Medium impact	Low impact	Low impact	Low impact	Medium impact	Low impact	Low impact
Environmental compliance	Low impact	Medium impact	Low impact	Low impact	Low impact	Low impact	Medium impact	High impact	Low impact
Supplier environment assessment	Low impact	Medium impact	Low impact	Low impact	High impact	Low impact	Low impact	Low impact	Low impact
Employment	Medium impact	Low impact	Medium impact	Low impact	High impact	High impact	Low impact	Low impact	Low impact
Occupational health and safety	Low impact	Medium impact	Medium impact	Low impact	Medium impact	Low impact	Low impact	Low impact	Low impact
Training and education	Low impact	Low impact	Medium impact	Low impact	High impact	Low impact	Medium impact	Low impact	Low impact
Diversity and equal opportunity	Low impact	Low impact	High impact	Low impact	Medium impact	Low impact	Low impact	Low impact	Low impact
Local communities	Medium impact	Low impact	Medium impact	Low impact	Low impact	High impact	Medium impact	Medium impact	Low impact
Supplier social assessment	Low impact	Low impact	Medium impact	Low impact	High impact	Low impact	Low impact	Low impact	Low impact
Customer health and safety	Low impact	Low impact	Medium impact	Low impact	High impact	Low impact	Medium impact	Medium impact	Low impact

102-48 Restatements of information

There are no reported restatements of information from prior years' reporting. Any revisions of information from prior years' reporting and the reasons for them are included in the footnotes or narrative of the body of the report.





Dow Disclosures – GRI Content Index

102-49 Changes in reporting

We have selected to report on additional topics 207: Tax, 415: Public Policy and 418: Customer Privacy as topics of interest to specific stakeholders. These topics are not material for Dow as determined by our ESG materiality assessment.

There have not been any significant changes to the topic boundaries from the previous reporting period.

102-50 Reporting period

January 1, 2021 through December 31, 2021.

102-51 Date of most recent report

Dow's 2020 ESG Report, "INtersections," was published June 24, 2021.

102-52 Reporting cycle

Annual

102-53 Contact point for questions regarding this report

You may contact any of the following senior leaders with your comments or questions at FESGRPT@dow.com:

- Andre Argenton, chief sustainability officer and vice president, Environment, Health, Safety, and Sustainability
- Rebecca Bentley, vice president, Public Affairs
- Karen S. Carter, chief human resources and chief inclusion officer
- Amy Wilson, general counsel and corporate secretary

102-54 Claims of reporting in accordance with the GRI Standards

This report has been prepared in accordance with the GRI Standards: Comprehensive option.

102-55 GRI content index

This standalone document contains disclosures organized by GRI standard and serves as our GRI Content Index. Management of Dow is responsible for the completeness, accuracy and validity of the ESG disclosures referenced or included in the GRI Content Index as of, and for the year ended, December 31, 2021. Management is also responsible for the collection, quantification and presentation of the information included in the 2021 Environmental, Social and Governance Report (ESG) and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the ESG disclosures.

Management of Dow asserts that the ESG disclosures referenced or included in the GRI Content Index as of, and for the year ended December 31, 2021, are presented in accordance with the Global Reporting Initiative Sustainability Reporting Standards under its Comprehensive option.

102-56 External assurance

See [Independent Assurance Statement to Dow, Inc.](#)



Dow Disclosures – GRI Content Index

GRI 103 Management Approach 2016 (General)

Within each material topic you will find the specific 103 Management Approach. This disclosure covers the global approach and applies to all areas. Specific 103 Management approaches will enhance and elaborate based on the specific topic.

Dow's purpose is to deliver a sustainable future for the world through our materials science expertise and in collaboration with our partners. In this report, you'll see how our diverse, dedicated Team Dow is committed to advancing our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world by:

- Collaborating with a wide range of stakeholders to **advance environmental stewardship**.
- Cultivating a **culture of inclusion, advancing diversity in our workforce and embedding equity in our practices and processes**.
- Achieving results through **highly principled and socially responsible business practices**.
- Contributing to the **well-being of our communities**.

These commitments reflect our culture of operational excellence, high ethical standards, strict financial discipline and transparent risk management.

Management Approach Components	Description
Enterprise ESG Goals	<p>To accelerate our sustainability agenda, we set multi-decade targets in 2020 to put us on a path to achieve carbon neutrality and eliminate plastic waste. These goals are 10-year commitments aimed at magnifying our company's positive impact through collaboration with like-minded partners. Dow's 2025 Sustainability Goals (Dow 2025 Sustainability Goals Science & Sustainability Dow Corporate¹), baselined in the year 2015, include:</p> <ul style="list-style-type: none">• We will lead in developing a societal blueprint that integrates public policy solutions, science and technology and value chain innovation to facilitate the transition to a sustainable planet and society.• We will deliver breakthrough sustainable chemistry innovations that advance the well-being of humanity.• We will advance a circular economy by delivering solutions to close the resource loops in key markets.• We will apply a business decision process that values nature. We will deliver business value and natural capital value through projects that are good for business and better for ecosystems.• We envision a future where every material we bring to market is sustainable for our people and our planet.• We will, including our partners worldwide, apply their resources to help build sustainable and resilient communities.• We will maintain world-leading operations performance in natural resource efficiency, environment, health and safety.
	<p>In addition,</p> <ul style="list-style-type: none">• Protect the Climate: By 2030, Dow will reduce its net annual carbon emissions by 5 million metric tons versus our 2020 baseline (Scope 1 + 2 15% reduction). By 2050, Dow intends to be carbon neutral (Scope 1 + 2 + 3 plus product benefits).• Stop the Waste: By 2030, Dow will enable 1 million metric tons of plastic to be collected, reused or recycled on an annual run-rate basis by 2030 through its direct actions and partnerships.• Close the Loop: By 2035, Dow will enable 100% of Dow products sold into packaging application to be reusable or recyclable.



Dow Disclosures – GRI Content Index

Policies	Dow has four global policies that address environmental issues: <ul style="list-style-type: none">• Responsible Care® Initiative Global Public Policy Dow Corporate[†], a voluntary initiative of the global chemical industry to make continual progress toward our goal of no accidents, injuries or harm to human health and the environment from our products and operations and openly report our health, safety, environmental and security performance. These principles apply to Dow globally and are managed through the implementation and compliance with our internal Operating Discipline Management System (ODMS).• Chemical Management Policy Global Public Policy Dow Corporate[†], which includes a broad range of efforts and practices to ensure the safe and environmentally sound manufacturing, distribution, handling and disposal of chemical products including testing and identification of opportunities to manage risks to human health and the environment.• Sustainability Policy Global Public Policy Dow Corporate[†], which addresses our continued effort to apply our material sciences focusing on big challenges such as energy, climate change, water, food, housing and health to sustainability.• Environmental Health and Safety Policy Global Public Policy Dow Corporate[†], which defines the responsibility that each employee has in ensuring that our products and operations meet applicable government or Dow standards (whichever is more stringent). It also defines how we will report our progress and be responsive to the public.																
Responsibilities	ESG responsibility is linked to Dow's Annual Performance Award program to drive accountability across the organization. Dow's 2021 Annual Performance Award program was designed to move the company forward with our ambitions and reward employees for achieving Dow's most critical financial and operational goals. Our program design holds Team Dow accountable for delivering on our ESG goals by including targets on customer experience, sustainability, and inclusion and diversity (I&D). The I&D metrics (including Global ERG Participation, Global Representation of Women, and U.S. Ethnic Minority Representation) were directly aligned to the Annual Performance Award of ~3,000 People Leaders and senior leaders across the company globally. <table border="1"><thead><tr><th></th><th>Metric</th></tr></thead><tbody><tr><td>Financial</td><td>Operating EBIT</td></tr><tr><td>Financial</td><td>Free Cash Flow</td></tr><tr><td>ESG Index</td><td>Customer Experience – CXi</td></tr><tr><td>ESG Index</td><td>Sustainability – World-Leading Operations (WLO) Index</td></tr><tr><td>ESG Index</td><td>Inclusion & Diversity – Global ERG Participation</td></tr><tr><td>ESG Index</td><td>Global Representation of Women</td></tr><tr><td>ESG Index</td><td>U.S. Ethnic Minority Representation</td></tr></tbody></table> The sustainability metric is measured by our World-Leading Operations (RME Index) including four performance categories of Safety (Unplanned Events), Environmental Stewardship, Total Worker Health and Transportation Stewardship. Within the Environmental Stewardship category are components for emissions, water, waste, renewable power and raw material efficiency.		Metric	Financial	Operating EBIT	Financial	Free Cash Flow	ESG Index	Customer Experience – CXi	ESG Index	Sustainability – World-Leading Operations (WLO) Index	ESG Index	Inclusion & Diversity – Global ERG Participation	ESG Index	Global Representation of Women	ESG Index	U.S. Ethnic Minority Representation
	Metric																
Financial	Operating EBIT																
Financial	Free Cash Flow																
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ESG Index	Sustainability – World-Leading Operations (WLO) Index																
ESG Index	Inclusion & Diversity – Global ERG Participation																
ESG Index	Global Representation of Women																
ESG Index	U.S. Ethnic Minority Representation																
Grievance Mechanisms	All sites have grievance mechanisms or other escalation processes in place that employees can use to elevate concerns. Workers are expected and encouraged to identify, report and intervene when inappropriate activities are observed. Workers are protected from reprisal via our global Code of Conduct Policy – See GRI 102-16 Values, principles, standards, and norms of behavior and 102-17 Mechanisms for advice and concerns about ethics for additional information.																



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Specific Actions	<p>We have developed a Dow Sustainability and ESG Learning Center of Excellence (CoE) to provide all employees with learning and development content on the topics of sustainability and climate. The CoE's ambition is to bring purpose to every employee through the enhancement of skills and expertise to attain and sustain world-class performance and value and create a sustainable growth mindset. For additional examples taken throughout 2021 see actions under these chapters:</p> <ul style="list-style-type: none">• Environmental Performance• Health & Safety• Inclusion, Diversity and Equity• Community• Corporate Governance									
GRI 200: Economic Standards										
GRI 201: Economic Performance 2016										
201-103 Management approach										
Dow's economic performance management is fully described within the Dow Inc. Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 4, 2022.										
<table border="1"><thead><tr><th>Management Approach Components</th><th>Description</th></tr></thead><tbody><tr><td>Targets</td><td>By 2025, Dow will deliver \$1 billion in value through projects that are good for business and good for ecosystems.</td></tr><tr><td>Responsibilities</td><td>See disclosure GRI 102-18 Governance Structure to understand the responsibilities for managing our Economic Performance.</td></tr><tr><td rowspan="2">Specific Actions</td><td>Dow's economic performance management is fully described within the Dow Inc. Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 4, 2022.</td></tr><tr><td>Dow's community actions are described in the Community section (pages 18-20) of the 2022 Proxy Statement¹ filed with the SEC on March 4, 2022. 2021 highlights include:<ul style="list-style-type: none">• \$32.4MM in corporate, foundation and in-kind invested giving.• Named by Points of Light to "The Civic 50," which recognizes the most community-minded companies in the United States.• 195 community cleanups removing 388,000 pounds of waste from the environment.• ~50% of employees reported volunteering.• \$2MM to support eight new projects in 12 countries using Dow products and technology for social good.• Increased Dow ACTs commitment to \$13MM with >\$5MM continued commitment to enhance inclusion, diversity and equity through partnerships with historically Black colleges and universities (HBCUs) and programs that inspire underrepresented students to pursue science, technology, engineering and math (STEM) careers.• \$480,000 in relief funding provided to employees affected by hurricanes and flooding through a new global Employee Relief Fund.</td></tr></tbody></table>		Management Approach Components	Description	Targets	By 2025, Dow will deliver \$1 billion in value through projects that are good for business and good for ecosystems.	Responsibilities	See disclosure GRI 102-18 Governance Structure to understand the responsibilities for managing our Economic Performance.	Specific Actions	Dow's economic performance management is fully described within the Dow Inc. Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 4, 2022.	Dow's community actions are described in the Community section (pages 18-20) of the 2022 Proxy Statement ¹ filed with the SEC on March 4, 2022. 2021 highlights include: <ul style="list-style-type: none">• \$32.4MM in corporate, foundation and in-kind invested giving.• Named by Points of Light to "The Civic 50," which recognizes the most community-minded companies in the United States.• 195 community cleanups removing 388,000 pounds of waste from the environment.• ~50% of employees reported volunteering.• \$2MM to support eight new projects in 12 countries using Dow products and technology for social good.• Increased Dow ACTs commitment to \$13MM with >\$5MM continued commitment to enhance inclusion, diversity and equity through partnerships with historically Black colleges and universities (HBCUs) and programs that inspire underrepresented students to pursue science, technology, engineering and math (STEM) careers.• \$480,000 in relief funding provided to employees affected by hurricanes and flooding through a new global Employee Relief Fund.
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**Dow Disclosures – GRI Content Index**

201-1 Direct economic value generated and distributed

2021 Business Summary – Financial Highlights

Economic Value Generated, Distributed and Retained	2021 (\$MM)	2020 (\$MM)	2019³ (\$MM)
Net Sales	\$54,968	\$38,542	\$42,951
Pro Forma Net Sales			\$42,998
Operating EBIT ¹	\$9,533	\$2,715	
Pro Forma Operating EBIT ¹			\$4,352
Operating Costs	\$38,480	\$27,856	\$31,534
Wages/Benefits	\$6,150	\$5,637	\$5,322
Payments to Providers or Capital	\$2,863	\$2,962	\$3,098
Payments to Governments	\$1,207	\$1,009	\$1,386
Philanthropic/Community Investments ²	\$32	\$34	\$34
Economic Value Retained	\$6,236	\$1,044	\$1,577 ³
Total Debt	\$14,672	\$17,107	\$16,996
Total Equity	\$18,739	\$13,005	\$14,094
Total Capitalization	\$33,411	\$30,112	\$31,090

¹ For definitions and reconciliation to the most directly comparable U.S. GAAP measure, see [Non-GAAP financial measures](#).² Includes charitable cash and in-kind donations and represents only a portion of the total value of Dow community contributions, which also includes volunteer time as well as other forms of financial support.³ Updated due to an arithmetic error.**Payments to governments** – Dow's 2021 taxes (payments to government) totaled \$1,207MM with the breakdown by region shown here.

Area	Grand Total (\$MM)
Europe, Middle East, Africa and India	\$493
Asia Pacific	\$278
North America	\$271
Latin America	\$165



Dow Disclosures – GRI Content Index

201-2 Financial implications and other risks and opportunities due to climate change

See [GRI 102-29 Identifying and managing economic, environmental, and social impacts](#) and [102-30 Effectiveness of risk management processes](#). In addition, Dow is reporting climate risks and opportunities according to the Task Force on Climate related Financial Disclosures. See [TCFD Strategy – Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning](#).

The below table includes risks and opportunities posed by climate change and alignment of those risks to our climate protection actions.

			Elements of Dow's Climate Action Plans Addressing Risk/Opportunity								
Examples of Climate Risks and Opportunities and Related Potential Impacts			Risk/Opportunity Type	Description	Impacts/Opportunity	Optimizing Our Facilities and Processes	Increasing Renewable Energy	Investments in Carbon Capture	Innovating Low-Carbon Technologies	Engaging Suppliers to Reduce Value-Chain Emissions	Deploying Materials to Help Our Customers Reduce Their Emissions
Risks	Physical	Transition									
Opportunities	Physical	Acute & Chronic	More frequent incidents of severe weather, or long-term changes in precipitation patterns	<ul style="list-style-type: none"> Reduced revenue/decreased production (supply chain disruptions, etc.) Increased operating or capital costs 		●					
			Regulatory	Carbon pricing mechanisms	<ul style="list-style-type: none"> Increased costs to comply with changes in regulations 	●	●	●			
	Transition	Technology	Transition to lower-emissions technology	<ul style="list-style-type: none"> Increased expense/capital investment in technology and innovation Reduced exposure to carbon cost 			●	●	●		●
			Resource Efficiency	Use of more efficient production and distribution processes	<ul style="list-style-type: none"> Reduced operating costs through efficiency gains and cost reductions 	●			●	●	
	Products & Services		Dow products can enable the transition to a low-carbon economy	<ul style="list-style-type: none"> Increased revenue from carbon-advantaged products and technologies 					●	●	●



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When assessing the magnitude of impact, Dow evaluates elements such as changes to the cost of raw materials, impact on operating cost (e.g., energy costs, costs of complying with regulation), cost of investment in new technology to reduce emissions, impact to the price at which products can be sold, impact as a result of potential lost sales, or in the case of opportunities, market share gained, etc. In addition, there could be impacts that need to be considered that are not yet able to be quantified financially (for example, reputational impact of certain risks), but could still be important for discussion due to a variety of factors. The table below shows the assessment of those impacts and our timeline to address.

		Risk/Opportunity Type	Description	Value Chain Stage(s) Covered	Time Horizon (term)			Magnitude of Impact		
Risks	Physical	Acute & Chronic	More frequent incidents of severe weather, or long-term changes in precipitation patterns	<ul style="list-style-type: none"> • Direct operations • Upstream 	SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH
	Transition									
Opportunities	Regulatory	Carbon pricing mechanisms		<ul style="list-style-type: none"> • Direct operations 	SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH
	Technology				SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH
	Resource Efficiency	Transition to lower-emissions technology	Use of more efficient production and distribution processes	<ul style="list-style-type: none"> • Direct operations • Upstream • Downstream 	SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH
	Products & Services				SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH

The potential impacts of climate-related risks and opportunities are part of Dow's climate strategy and factored into Dow's business and financial planning. Dow is taking specific actions to mitigate identified climate-related physical and transition risks, while also advancing opportunities in several key areas.

201-3 Defined benefit plan obligations and other retirement plans

The company has both funded and unfunded defined benefit pension plans that cover employees in the United States and several other countries.

Description	2021 (\$MM)	2020 (\$MM)	2019 ⁷ (\$MM)
Company contribution to its continuing operations pension plans, including contributions to fund benefit payments for its non-qualified pension plans	\$1,219	\$299	\$261



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In the first quarter of 2021, the company elected to contribute \$1 billion to its U.S. tax-qualified pension plans, which is included in the 2021 contribution amount above. This contribution was based on the company's funding policy, which is to contribute to defined benefit pension plans when pension laws and/or economics either require or encourage funding.

On March 4, 2021, the company announced changes to the design of its U.S. tax-qualified and non-qualified pension plans (collectively, the "U.S. Plans") and, effective December 31, 2023, the company will freeze the pensionable compensation and credited service amounts used to calculate pension benefits for employees who participate in the U.S. plans. A similar change was announced in December 2021 regarding the company's Canadian pension plans. For additional information see page 128-135 NOTE 20 – PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS of the Dow Inc. Annual Report on [Form 10-K](#) for the year ended December 31, 2021, filed with the SEC on February 4, 2022.

OMISSION 201-3 Percentage of salaries contributed to plan

Confidentiality constraints. We have not disclosed the percentage of salaries contributed to plans or level of participation in retirement plans. We will assess additional disclosure on an annual basis.

201-4 Financial assistance received from government

The following table shows the financial assistance received from the government. The dollar figure listed is the value of direct government support for the total program. Several programs have multiple participants receiving assistance. These programs were active in 2021; however, many are multiyear.

Table References:

- DOD – Department of Defense
- DOE – Department of Energy
- NSF – National Science Foundation

Subsidized by	Program Title	Agency Contribution (\$MM)
Belgium National	Power-to-Olefins: Electrified Steam Cracking and Plasma Booster	3.41
Belgium National	Plastic WAste to CHemicals and fuels	2.95
Belgium National	Reactive amine scrubbing for CO ₂ conversion	0.72
Dutch National	WATER NEXUS – securing water supply in delta and floodplain areas worldwide	7.5
Dutch National	Steel to Chemicals – on the road to large-scale CO ₂ emission reduction in a circular economy	5.33
Dutch National	AquaConnect – Key technologies for safeguarding regional water provision in fresh water stressed deltas	4.68
Dutch National	Recovery and Circularity of Valuable Resources	4.12
Dutch National	e-missi0n	4.11



Dow Disclosures – GRI Content Index		
Subsidized by	Program Title	Agency Contribution (\$MM)
Dutch National	An Integrated Approach towards Recycling of Plastics	4.07
Dutch National	Steam and Condensate Quality Water Process Technology	1.1
Dutch National	FULL ScalE (FUSE) Industrial Heat Pump Using Natural Refrigerants	1.01
Dutch National	DEBottlenecking of Chromatographic Separations	0.94
Dutch National	COMpact modular Therm Acoustic heatpump	0.92
Dutch National	Constructed Wetland – Pilot Research Wetland - mild desalination	0.86
Dutch National	Pulsed Compression II; Ethylene production by compressive activation of methane	0.82
Dutch National	Valorization of post-consumer low density polyethylene into higher end circular packaging material	0.55
Dutch National	Development of heat storage for industrial steam	0.49
Dutch National	TKI HZ-UGent Wetland project	0.06
European Union	Compressed Natural Gas Transport System	13.2
European Union	Advancing Sustainability of Process Industries through Digital and Circular Water Use Innovations	12.16
European Union	Photoelectrocatalytic device for SUN-driven CO ₂ conversion into green CHEMicals (SunCoChem)	7.46
European Union	Development and demonstration of low CARBON technologies to transform CO ₂ streams from the steel industry inTO new VALUE chains (CARBON2VALUE)	7.00
European Union	Innovative approaches towards prevention, removal, and reuse of marine plastic litter	6.76
European Union	Lignin oxidation technology for versatile lignin dispersants	4.86
European Union	Training of a new generation of researchers in Innovative Electrochemical Oxidation processes for the removal and analysis of micro-pollutants in water streams	4.55
European Union	Circular Plastics Network for Training	4.37
European Union	Formulations & Computational Engineering	4.32
European Union	Alternative FRESH water resources for saline Coastal Areas	2.49



Dow Disclosures – GRI Content Index

Subsidized by	Program Title	Agency Contribution (\$MM) ¹
European Union	Alternative FRESH water resources for saline Coastal Areas	2.49
European Union	Impact of air pollutants on cutaneous responses in both healthy and compromised skin barrier, and innovative solutions to protect skin against urban pollution	0.91
US-DOD	SCRA2: Supply Chain Risk Alert for Wearables	6.00
US-DOD	Digital Twins for Process Manufacturing	0.9
US-DOD	Open Architecture Testbed Framework Development	0.15
US-DOE	Hydrocarbon Gas Foam Enhanced Oil Recovery and Gas Conformance Control in Bakken Formations	7.66
US-DOE	Responsible Innovation for Highly Recyclable Plastics	2.00
US-DOE	Multiscale Modeling Infrastructure	1.9
US-DOE	Efficient chemicals production via chemical looping	0.87
US-DOE	Energy-efficient separation of olefins and paraffins through a membrane	0.66
US-DOE	Optimization modeling for advanced syngas to olefin reactive systems	0.48
US-DOE	Non-equilibrium Molecular Simulations of Polymers under Flow: Saving Energy through Process Optimization	0.3
US-DOE	Predictive Modeling of Polyurethane Foam Processes to Optimize Thermal Performance and Reduce Waste	0.3
US-DOE	Imaging Model Ziegler Natta Catalysts with Single-Atom Sensitivity	0.27
US-DOE	An experimentally verified physical properties database for absorbent selection	0.15
US-NSF	CAREER: Optimization-Based Computational Discovery of Decision-Making Processes	0.41
US-NSF	Flow driven segregation at the particle level	0.4
US-NSF	Advancing Thermal Field-Flow Fractionation for Complex Polymers and Colloids with Colorado School of Mines	0.4
US-NSF	Population Balance Modeling – Fundamental Closures and Experimental Validation with University of Colorado	0.3

¹ The dollar figure listed is the value of the direct government support for the total program. Several programs have multiple participants receiving assistance. These programs were active in 2021; however, many are multiyear.



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GRI 207: Tax 2019

NOTE: Tax is not a material topic for Dow, as determined by our ESG materiality assessment. We are providing some perspective in this report for those stakeholders who have an interest in this topic.

207-103 Management approach

See [GRI 103 Management Approach \(General\)](#)

207-1 Approach to tax

We pay taxes globally, making significant contributions to the communities and countries in which we operate. With activity in over 60 countries, we take our obligations seriously and pay substantial income taxes, sales taxes, value added taxes, excise taxes, property taxes and other taxes and duties to local and national governments.

Dow's policy is to be lawful, ethical and socially responsible in all business practices, including our tax policy. Our obligations to stockholders, employees and the communities in which we operate are critical to our success and therefore we are guided by the following tax policy principles:

- **Economic Substance.** Dow's customers and related market demands determine where we operate, earn profits and therefore where we pay taxes. Proximity to customers and the global supply chain is critical to our ability to operate safely and profitably. Our transfer pricing policies are intended to reflect the economic substance of our global footprint and the activities being performed in each jurisdiction. We undertake transactions for commercial and business purposes, not for the sole purpose of reducing taxation. We interpret the tax laws and regulations with the understanding of the underlying policy and commercial transactions to which they are meant to apply.
- **Compliance and Reporting.** Dow is committed to the highest level of tax compliance and reporting. We file returns, financial statements and disclosures that accurately state our income, costs and other relevant items in all the countries and jurisdictions in which we operate. Compliance means paying the right amount of tax, in the right place, at the right time and involves disclosing all relevant facts and circumstances to the tax authorities and claiming relief and incentives where available. Dow discloses expanded information on revenue, income before taxes and taxes in footnotes to its financial statements. Ever-evolving tax reporting requirements have driven Dow's ongoing investment in technology enabling improved tax compliance and reporting.
- **Governance.** See [GRI 207-2 Tax governance, control and risk management](#).

Dow's Code of Conduct specifies each employee's expectations at Dow and our approach to tax aligns with these standards. Furthermore, Dow has a Code of Financial Ethics that applies to the principal executive officer, principal financial officer, principal accounting officer and controllers. Both codes are publicly available here:

- [Code of Conduct | Business | Legal | Dow Corporate[↗]](#)
- [Code of Financial Ethics | Dow Code of Conduct | Dow Corporate[↗]](#)

The overall tax strategy and policy are reviewed by Dow's Audit Committee at least annually.

The following information is publicly available on Dow.com:

- [Trade and Tax | Public Policy | Dow Corporate[↗]](#): Global policy.
- [UK Tax Strategy 2021 | Public Policy | Dow Corporate[↗]](#) This document was developed for the United Kingdom; however, it reflects the company's global strategy and principles.

207-2 Tax governance, control and risk management

At Dow, we have strong internal controls and procedures that govern our tax processes and lower our risk profile, and we have committed the necessary resources to ensure that we are adhering to the highest ethical standards and delivering value to Dow and its stockholders.



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Our global tax organization is led by our chief tax officer, and consists of approximately 190 experienced accountants, lawyers and other tax professionals across the globe. We also commit the resources to seek the advice and counsel of tax experts around the world when necessary.

Approach Toward Tax Planning

Tax planning is an important element of Dow's overall business strategy. Dow's Tax Planning team works closely with the businesses and functions to support reasoned and compliant structures that complement the way Dow operates in each jurisdiction. Our global tax organization provides critical jurisdictional perspective into all planning decisions, giving Dow a strategic advantage compared to a more centralized tax organization.

To support Dow in complying with its tax policy, advice from external service providers may be sought in relation to tax planning or complex circumstances. In cases where the tax guidance is unclear or Dow does not feel it has the necessary internal expert knowledge to assess the tax consequences adequately, external advice may be sought to support Dow's decision-making process.

Dow acts in accordance with the international guidelines (such as Organisation for Economic Co-operation and Development (OECD) guidelines) in its application of transfer pricing and aligns with the arm's length principle on intercompany transactions. We engage outside consultants to assist in determining appropriate intercompany rates and continually review local requirements to ensure ongoing compliance.

Level of Tax Risk Accepted

Given the size and complexity of our business and the volume of tax obligations, tax risk arises from time to time relative to the interpretation of tax laws and the nature of our compliance measures. Dow has strong internal controls and procedures in place to minimize risk in reporting, compliance and other areas of tax application. Dow analyzes the tax consequences of transactions and events. When appropriate, we consult with outside counsel and other advisors. The following are examples of areas analyzed frequently:

- Acquisitions, dispositions, joint ventures, restructurings and other transactions resulting in a gain or loss.
- Significant changes in transfer pricing practices or operating profile.
- Changes in tax accounting methods or policies.
- Audit adjustments or unfavorable decisions in tax administrative appeals or litigation.
- Other significant events that could negatively affect the reputation of Dow or its Board.

Dow employees can report concerns about potential unethical tax behavior by following our Dow Code of Conduct described in [GRI 102-16 Values, principles, standards, and norms of behavior](#) and [102-17 Mechanisms for advice and concerns about ethics](#).

207-3 Stakeholder engagement and management of concerns related to tax

Approach to Engagement with Tax Authorities

We engage tax authorities with honesty, integrity, respect and fairness, and in a spirit of cooperative compliance. Dow seeks to resolve any disputed matters through proactive and transparent discussion and negotiation but is prepared to litigate or exercise alternative rights to defend our position. Where we disagree with a ruling or decision of a tax authority, Dow's aim is to be professional, constructive and maintain transparent disclosure in our relationships with tax authorities, recognizing that early resolution of risks is in the best interests of Dow and tax authorities.

Dow makes its tax returns as clear as possible and we try to raise important issues proactively so that tax authorities can focus their resources effectively. From time to time, if it is unclear how a tax law should be applied, we may engage with tax authorities in advance of undertaking transactions to confirm the correct application of such tax law.

Tax laws are highly complex and, if our interpretation of the law differs from that of the tax authority, we seek to resolve the differences in a professional, timely manner or pursue dispute resolution, if appropriate.



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Approach to Public Policy and Advocacy

At Dow, we believe that good tax policy fosters economic stability and better lives for people around the world. We advocate for pro-growth tax policies that establish and maintain competitive tax rates with a focus toward simplifying and harmonizing tax laws around the world.

207-4 Country-by-country reporting

We advocate for tax policies and principles on our own behalf and through trade organizations. Our engagement with trade organizations and policy makers is based on the drive to sustainable tax policies that avoid disadvantaging certain taxpayers to the benefit of others. Our overriding goal is a level playing field for all taxpayers, no matter the jurisdiction or taxpayer size.

Regarding GRI 207-4, we do not disclose country-by-country information, rather aggregated numbers by region – See disclosure [GRI 201-1 Direct economic value generated and distributed](#). We will continue to assess additional disclosure on an annual basis.

GRI 300: Environmental Standards

GRI 301: Materials 2016

301-103 Materials management approach

See also: [GRI 103 Management Approach \(General\)](#) and [GRI 102-9 Supply Chain](#)

How Materials Are Managed and Evaluated

Dow is continuously striving to work more efficiently with the raw materials we purchase. Raw material efficiency (RME) is tracked as part of the suite of four metrics that comprise the Environmental Stewardship Index under our World-Leading Operations (WLO) Performance Goal. This includes improving process yield, improved tracking, better upstream quality control and waste minimization through all operations.

RME is a measurement that determines the conversion of raw materials to products for operating facilities. Raw material losses due to process inefficiencies, waste production or flaring are a significant cost to Dow, but are inherent in many technologies. We strive to ensure RME initiatives are optimized in each facility to maximize profitability and to minimize environmental impact.

To manage RME, sites implement an RME value creation program with a vision to improve the conversion of raw materials into finished products across Dow. This is accomplished by understanding the financial value of RME opportunities or gaps, using this information when technology centers set goals and assign resources, and tracking the improvements. This is more than a focus just on yield as has been done in the past, it also includes obtaining a broader understanding of the financial impact of raw material efficiency optimization.

Raw material losses can also occur due to many other factors such as quality events and supply chain management. RME initiatives should be optimized in each facility to maximize profitability. A small improvement in raw material efficiency has a very large impact on Dow's earnings, therefore RME is a potential opportunity for every business to reduce cost of sales and thereby expand margins.

The RME management system is evaluated at least annually to determine if RME improvement activities should be a focus area for that particular technology. This is completed as part of the Business Manufacturing Technology and/or Technology Leadership group meetings. Additionally, on a quarterly basis progress against annual RME goals is monitored as part of our WLO performance goal.

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Management Approach Components	Description
Commitments	We are committed to achieving at least a 1% year-over-year improvement in our RME index from a 2015 baseline every year until 2025. It is expected that most technologies will have defined activities and goals around RME, but it is understood that optimizing RME for some technologies may not be a critical profitability metric based on their current performance against theoretical best. The key is that each technology organization understands the opportunity and utilizes the information in annual goal planning.
Targets	Dow will improve its raw material efficiency utilization index by 10% relative to the 2015 baseline.
Responsibilities	Each Business Manufacturing Technology Leader is expected to ensure the following actions occur for their technology: <ul style="list-style-type: none">• An RME measurement system is developed that is meaningful to the particular technology.• An RME focal point (typically called Yield Focal Point) is assigned that can work with the plants to understand the potential RME opportunities.• The economics and financial value of RME opportunities or gaps are determined and value is tracked.• Each Envelope Leader approves the RME goals and plans set by the technology.• RME savings is tracked quarterly, aligned to Innovative Technology Strategy Operations element.
Specific Actions	<ul style="list-style-type: none">• Since 2015, Dow has enabled approximately \$300MM in raw materials savings through efficiency improvements. These savings are primarily attributed to effective catalyst management across several technologies, reliable operations leading to minimized flaring and reduced natural gas purchases.

301-1 Materials used by weight or volume**Renewable Materials**

In addition to fossil-based resources, Dow employs renewable raw materials based on wood, sugar cane, corn, grains and vegetable oils, among others, preferentially as byproducts from other industrial processes. In 2021, Dow purchased approximately 420KT* of renewable materials. These materials are used across a large portfolio of products across our businesses. The renewable raw materials are also used to directly substitute fossil-based resources using the mass balance approach, allowing us to allocate renewables in a wide variety of products. Dow works closely with our suppliers to ensure that our renewable raw materials are ethically sourced and do not come with negative effects such as deforestation, displacing local communities or harm to biodiversity, while expanding the positive gains such as – for example – reduction in greenhouse gas emissions.

* New methodology and data capture has been deployed providing 420KT as the minimum number of renewable materials identified in 2021.

OMISSION 301-1 Non-renewable volume is unavailable

Information not available. We will continue to annually assess mechanisms to be able to report this information in the future.



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301-2 Recycled input materials used

In 2021, our baseline year, Dow purchased approximately 10,000 metric tons of recycled input materials in the form of – among others – used mattresses, used oils and mechanically recycled plastics. It is our strategy to increase the number of recycled inputs significantly from the 2021 baseline. To achieve this, Dow is expanding our recycling efforts through internal innovation, partnerships and scaling of production. We work on new technologies; new value chain ecosystems and we improve the recyclability of the products we sell so that the value chain can more easily bring them back to us for another cycle.

At Dow we develop a broad variety of technologies to maximize the types of recyclable materials, quality of materials and resource efficiency of the recycling processes. This aligns with a key part of our Stop the Waste target, which is to enable 1 million metric tons of plastic to be collected, reused or recycled on an annual run-rate basis by 2030 through investing and/or collaborating in key technologies and infrastructure. In 2021, that value was approximately 23,000 metric tons.

OMISSION 301-2 Percentage of total input materials used

The information is not available as percent of total input. We will continue to annually assess mechanisms to be able to report this information in the future.

301-3 Reclaimed products and their packaging materials

To accelerate circularity progress, we are also committed to redesigning and promoting reusable or recyclable packaging applications, so that by 2035, we are enabling 100% of our products sold into packaging applications to be reusable or recyclable.

OMISSION 301-3 Reclaimed products and their packaging materials

Information not available. We do not measure the quantity of products and packaging materials reclaimed.

GRI 302: Energy 2016

302-103 Energy management approach 2016 & 305-103 Emissions management approach 2016

See also: [GRI 103 Management Approach \(General\)](#)

In the short- to medium-term timeframe (<10 years), energy and emissions are managed through a combination of technological, commercial and operational activities. Reducing energy consumption and increasing the proportion of alternative energy sources in our energy portfolio, such as renewable power, are examples of key elements of our strategy to manage energy and emissions.

As Dow operates mature, capital-intensive assets, energy and emissions are also evaluated and managed on long-term timelines (10+ years) involving multi-decade assessments of global energy consumption, fuel and electricity prices, regulatory drivers and technology trends. Long-term, Dow's management of energy and emissions at an asset level involves replacing end-of-life capacity with higher efficiency, lower-emission assets, as well as efforts to scale carbon-efficient economical technologies not yet available for widespread deployment today, such as e-cracking.

As all Dow employees play a role in energy and emissions management, the Annual Performance Awards for all Dow employees and executive compensation programs are based not only on financial performance, but also on progress toward our sustainability goals, including our energy, emissions and climate-related targets. An overview of Dow's 2021 Annual Performance Award Design and Metrics can be found on page 8 of the [2022 Proxy Statement](#) filed with the SEC on March 4, 2022.



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Scope 3 emissions are another critical component of Dow's climate impact, and thus are a key element of Dow's climate strategy. Dow has assessed Scope 3 emissions and developed a strategy to track and reduce known hotspots, or areas with higher GHG emissions, and to gain additional information on blind spots, or areas where data may be uncertain or challenging to collect. Through this approach, we can progress on the areas of most pressing concern while still working to better understand others. By collaborating directly with our suppliers as well as with industry groups and NGOs, we can advance Scope 3 decarbonization while also developing simplified and streamlined methodologies for data sharing.

Focus areas include:

- Purchased Goods & Services and Transportation – By relating the emissions values used in our Scope 3 accounting with the purchases from our suppliers, Dow can estimate which suppliers are most relevant to consider in Dow's climate strategy. These suppliers will be Dow's primary focal point for outreach to encourage climate goal setting, advance collaborative decarbonization projects and improve carbon accounting practices. See [GRI 308-103 Supplier Environmental Assessment](#) for additional detail.
- One key element of better understanding our suppliers' GHG emissions and progress toward reduction is the sharing of product carbon footprint data, or the emissions intensity of the goods or services these companies provide to Dow. Many companies are just beginning to build out their programs for calculating product carbon footprints, while smaller companies may lack the capacity altogether to collect and share this information. See [GRI 305-3 Other indirect \(Scope 3\) GHG emissions](#) for additional details.

Management Approach Components	Description
Commitments	<p>Dow supports the Paris Agreement and its goal to keep global temperature rise to well below 2°C and to pursue efforts to limit the increase to 1.5°C. Consistent with this commitment, we have set an ambitious target of being carbon neutral by 2050 (Scope 1+2+3 plus product benefits). We have also set a medium-term goal to reduce our net annual carbon emissions by 5 million metric tons by 2030 versus our 2020 baseline (15% reduction). This builds upon an already achieved 15% emissions reduction since 2005 (~30% total reduction by 2030 vs. 2005). Our emissions-reduction targets are scientifically-based and in alignment with, and ahead of, the International Energy Agency's 2050 Net Zero Emissions Scenario for the chemical industry. Our ability to meet these commitments, while enabling business growth, will require effective management of our energy consumption and the implementation of new technologies. In addition, we will need the appropriate infrastructure and policy developments to support emissions reductions; Dow is actively engaged in constructive advocacy to advance pragmatic policies to enable a successful path to zero.</p>
Targets	<ul style="list-style-type: none">• By 2030, Dow will reduce its net annual carbon emissions by 5 million metric tons versus our 2020 baseline (Scope 1+2 15% reduction).• By 2050, Dow intends to be carbon neutral (Scope 1+2+3 plus product benefits).• Dow will obtain 750 MW of its power demand from renewable sources by 2025.• Dow is committed to efficient operations that drive environmental benefits for our communities and the world. Dow will grow, but offset emissions of Priority Compounds, volatile organic compounds (VOCs) and nitrogen oxides (NOx).



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See [102-20 Executive-level responsibilities for economic, environmental and social topics](#). To manage the implementation of Dow's Climate Strategy, Dow has established a Climate Program Management Office (Climate PMO). The team is directed by the Climate Steering Team (CST), which sets strategy and oversees the activities related to assessing and managing climate-related risks and opportunities. The CST consists of executive business and functional leaders who report to either the CEO or CFO. The CST is facilitated by the global climate transition director, who also facilitates the Climate PMO.

The Climate PMO is composed of business and functional leaders from across the company. The Climate PMO has a series of sub-teams responsible for assessing and managing climate-related risks and opportunities, including reducing Scope 1, 2 and 3 emissions; improving metric tracking and reporting; developing products, technologies and business models to address customers' climate-related needs; and developing and executing actions to deliver committed targets. Each sub-team is sponsored by two or more members of the CST, who are accountable for the team's success.

The Climate PMO is tasked with setting goals and targets, prioritizing actions, monitoring progress of sub-teams and ensuring alignment of cross-team objectives. Both the CST and Climate PMO meet at least every six weeks and report to the Executive Leadership Team (ELT) at a minimum of once per quarter. Climate PMO sub-teams meet more frequently as required to drive actions and progress toward project targets.

Responsibilities

Additionally, our energy technology centers, commercial teams and manufacturing site teams are closely involved in the management of energy and emissions:

Our Technology Centers:

Develop long-term asset strategies and support the implementation of major capital investment projects.
Provide expertise on energy use and emissions reduction through the research and advancement of emerging technologies.

Our Commercial Teams:

Define the best integrated asset and commercial strategies for our major sites.
Manage fuel, steam and power purchases, including the addition of renewable power purchases to support our sites.

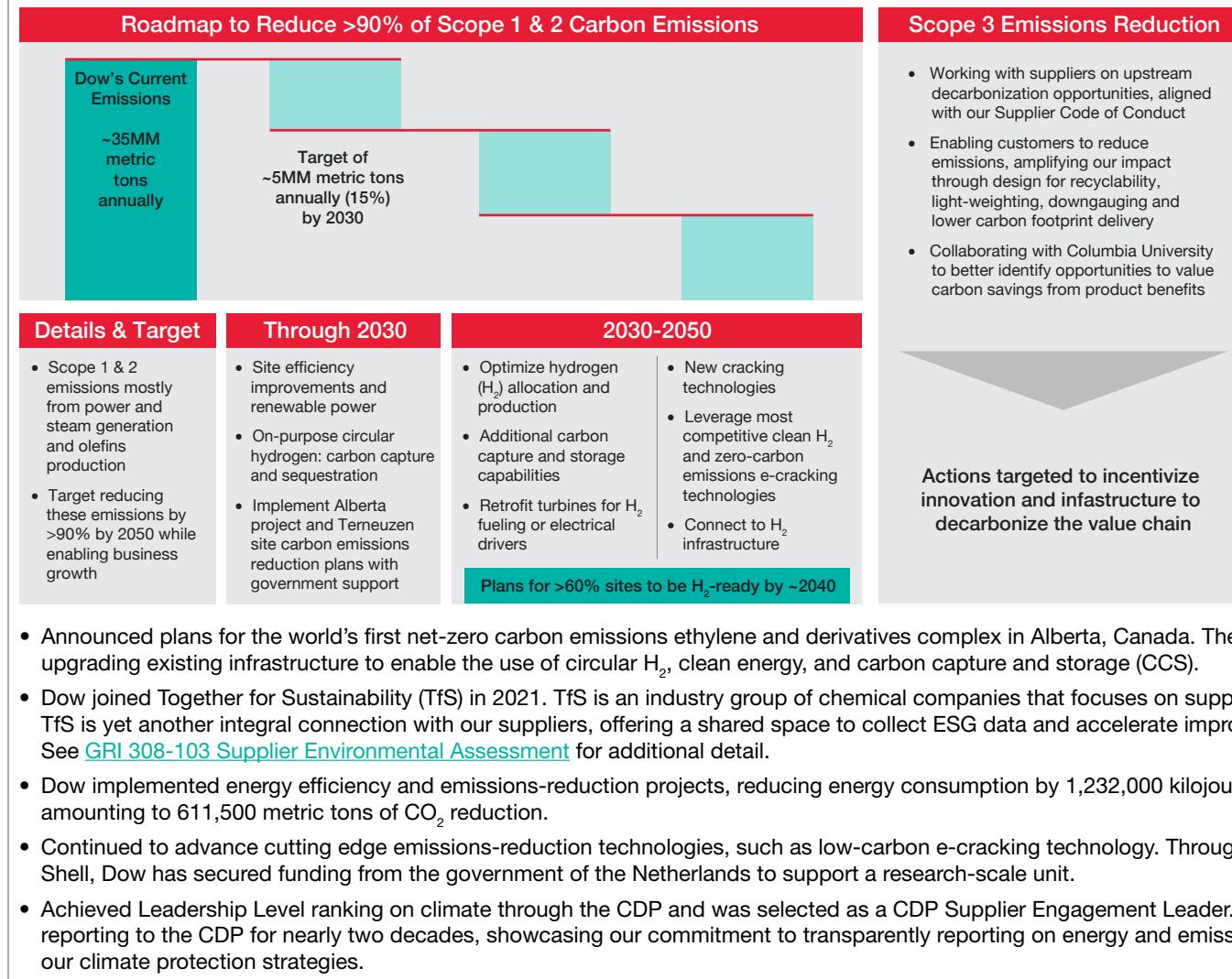
Our Manufacturing Sites:

Operate efficient combined heat and power (CHP) plants that provide reliable power and steam to a significant portion of our operations.
Seek out and implement opportunities to reduce the energy and emissions intensity of our operations.



Dow Disclosures – GRI Content Index

In 2021, Dow outlined a clear path to achieving our target to be carbon neutral by 2050 while continuing to drive growth (Roadmap shown here):





Dow Disclosures – GRI Content Index

302-1 Energy consumption within the organization

Energy Consumption

In 2021, the methodology used to calculate energy consumption was updated to align with industry best practices which includes: 1) adjusting the reported purchased fuels value to exclude fuels resold externally or used internally as feedstocks, and 2) using off-gas from feedstock to include non-cracker sources, and 3) calculating power and steam sold and purchased steam using the work potential method versus the energy content method used in prior years. For Purchased Fuels and off-gas from Feedstock the changes are being applied prospectively; prior year periods will not be revised. To enable comparisons to prior year data, the 2021 values have also been calculated and provided below using the historical method. See disclosures [302-4 Reduction of energy consumption](#) and [305-2 Energy indirect \(Scope 2\) GHG emissions](#) for actions to reduce energy consumption. Overall, total energy consumption for 2021 was flat when compared to 2020.

Description	2021 New Method (Million GJ)	2021 Old Method (Million GJ)	2020 (Million GJ)	2019 [†] (Million GJ)
Purchased Fuels	317.07 [‡]	392.71	394.42	372.50
Off-gas from Feedstock	262.67 [§]	250.93	241.35	260.77
Purchased Electricity	38.51	38.51	37.49	38.38
Purchased Steam [¶]	5.14	5.14	5.23	11.91
Power & Steam Sold [§]	-48.62	-48.62	-48.25	-28.98
Total Energy Consumption	574.77	638.67	630.24	654.58

[†] 2021 data excludes purchased fuels resold or used internally as feedstock; prior year values were not updated due to significant burden.

[‡] Off-gas from feedstock data includes non-cracker sources.

[§] In 2021, our purchased steam energy calculation was updated to use the work potential method. Previous reporting utilized the energy content method. Prior year values have been updated in this report to reflect the work potential method.

Purchased Electricity from Renewable Sources

Source	Capacity 2021 (MW)	Consumption 2021 (Million GJ)	Capacity 2020 (MW)	Consumption 2020 (Million GJ)	Capacity 2019 [†] (MW)	Consumption 2019 [†] (Million GJ)
Wind	535	4.48	375	4.40	375	4.36
Hydro	168	5.05	147	4.69	147	4.22
Biomass	2	0.07	0	0	17	0.13
Landfill Gas	3	0.05	3	0.05	3	0.045
Solar	193	1.02	319	0.32	1	0.002
Total	901	10.67	844	9.46	543	8.76

Purchased Steam from Renewable Sources

Source	Consumption 2021 (Million GJ)	Consumption 2020 (Million GJ)	Consumption 2019 [†] (Million GJ)
Biomass Total[‡]	0.52	0.51	0.45

[†] In 2021, our purchased steam energy calculation was updated to use the work potential method. Previous reporting utilized the energy content method. Prior year values have been updated in this report to reflect the work potential method.

Also see [305-2 Energy indirect \(Scope 2\) GHG emissions](#) for information on renewable energy improvements in 2021.



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302-2 Energy consumption outside of the organization

OMISSION 302-2 Energy consumption outside of the organization

Information not available. We will continue to evaluate standards, data sources, methodologies, and/or calculation tools that will facilitate future reporting.

302-3 Energy intensity

Energy intensity is calculated using total energy consumption (GRI 302-1) divided by production volume.

As noted in [302-1 Energy consumption within the organization](#) the methodology was updated for total energy consumption and changes are being applied prospectively; prior year periods will not be revised. In addition, we have evolved our production volume value in 2021 to total valued production which includes byproducts and coproducts. Therefore, our 2021 energy intensity value includes updated numerator (energy consumption) and denominator (total valued production) methodology. To enable comparisons to prior year data, the 2021 values have also been calculated and provided below using the historical methods. Overall, energy intensity for 2021 was flat when compared to 2020.

Description (GJ/Metric ton of production)	2021 ¹ (New Method)	2021 ² (Old Method)	2020 ¹	2019 ^{1,2}
Energy Intensity (Scope 1 & 2)	10.85	12.06	11.86	12.31

¹ Value for the total energy consumption (numerator) used new methodology as described in 302-1

² Value for the total energy consumption (numerator) used the historical methodology as described in 302-1

302-4 Reduction of energy consumption

Dow tracks overall energy intensity and consumption year over year as key metrics. The following table outlines a sampling of conservation and efficiency initiatives completed in 2021 that have had a material impact on Dow's energy consumption. The baseline year for all projects is 2020. Energy savings were determined by comparing plant operating conditions before projects were implemented to conditions after implementation.

Project Summary	Location	Type of Energy Reduced	Approximate Amount (Millions of KJ/Yr)
LA-2 flare gas reduction from cracker	Plaquemine, Louisiana, U.S.	Fuel	480,000
Implementation of new pressure controller to modulate steam turbine, controlling off-gas header pressure and reduce requirements for header pressure makeup with natural gas	Plaquemine, Louisiana, U.S.	Fuel	460,000
Implementation of tunable diode laser analyzers on cracker furnaces	Terneuzen, the Netherlands	Fuel	292,000
Project Impact			1,232,000

302-5 Reductions in energy requirements of products and services

OMISSION 302-5 Reductions in energy requirements of products and services

This indicator is not applicable since virtually all Dow products do not require energy in use.



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GRI 303: Water 2018

303-103 Water management approach 2016

See also: [GRI 103 Management Approach \(General\)](#)

Responsible water use includes the three characteristics of water: water availability (too much and too little), water quality, and access to safe drinking and sanitation services. Since 2014, we have held ourselves accountable to the principles defined by the Responsible Care® global charter that addresses ongoing stakeholder expectations and evolving challenges. These principles apply to Dow globally and are managed through the implementation and compliance with our internal Operating Discipline Management System (ODMS). In certain locations where Dow operates an iPark, the water withdrawal and consumption will account for both Dow's and third-party water requirements.

The process for setting water-related targets is an integral part of our water management approach put forth by recognizing the need of other water users within the basin and the local context of each area with water stress. This water stress methodology provides a path to help justify risk minimization and drive implementation of key mitigation measures. Dow's water stress methodology aims to:

- Evaluate water stress using a global tool such as Aqueduct published by the World Resource Institute (WRI) and translate into a business risk for Dow by looking at the site's overall water intake, virgin freshwater intake and production. The Aqueduct tool is also used to highlight future risk (timeframe of 2030 & 2040).
- Discern the nature of the water problem(s) (volume reliability, quality or both).
- Validate key problem/root cause in consultation with the sites.
- Establish a prioritized list of sites identified as key water-stressed sites (KWSS) for Dow.
- Establish overall water stress action plan to drive freshwater intake reduction as KWSS.

Dow's six KWSS, which all comply with ISO 14001-2015 standards, include:

- Brazos River, Freeport, Texas
- Guadalupe River, Seadrift, Texas
- Purchased fresh water, Bahia Bianca, Argentina
- Rivers Rhine and Meuse, Terneuzen, the Netherlands
- River Weisse Elster and Lake Witznitz (Böhlen site), Dow Central Germany
- Purchased freshwater supply source from Ebro River diversion, Tarragona, Spain

As Dow operates mature, capital-intensive assets, water consumption and effluents are evaluated and managed on long-term timelines (10+ years) involving multi-decade assessments. These assessments include water withdrawals, consumption and availability, costs associated with water withdrawal and treatment, regulatory drivers and technology trends. In the short- to medium-term timeframe (<10 years), water withdrawals and effluents are managed through a combination of technological, commercial and operational activities. Key elements of our strategy to manage water include:

- Avoid additional water withdrawals and effluents.
- Reduce water consumption.
- Increase the proportion of water reused or recycled both internally and externally.
- Advance treatment of effluents that support reduction of water consumption and discharge, understanding our responsibility at a watershed level, and define and drive impactful collective action measures to improve health of watersheds.



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Long-term, Dow's management of water and effluents involves strategic implementation of higher-efficiency, lower-energy and water-consumption assets, and improved water treatment technologies.

Other areas of water management include:

- Dow's supplier water assessments – See [GRI 308-103 Supplier Environmental Assessment](#) for additional details.
- Our research and development portfolio assessment process prioritizes sustainability elements such as benefits and impacts to water and driving innovation in water consumption and effluents.
- Dow collaborates with customers to help them with their respective water stewardship efforts.
- Our product stewardship team develops handling guides and training materials for our customers on safe handling practices to minimize potential impacts to watersheds.
- Additionally, we routinely evaluate the potential hazard of chemicals to the aquatic environment. Tools for these evaluations include aquatic toxicity and fate testing, computer modeling predictions and aquatic risk assessment.

Dow's internal auditing practices focus on the effectiveness of the water management approach. This includes Dow's maintenance and reliability strategy for detecting leaks and losses of water, status of assets, and comparison against most-effective technologies, effectiveness of current metering strategy and possible water conservation opportunities. Additionally, Dow discloses our water impact via CDP.

Management Approach Components	Description
Commitments	<p>Building on our commitment to U.N. Sustainable Development Goal 6 (SDG 6), Dow supports the CEO Water Mandate mobilizing businesses to advance water stewardship within our own operations and by collaboratively working to enhance water management at the watershed level. We are committed to progress against three elements: direct operations, supply chain and watershed management. By using our materials science to innovate products and processes, we help improve sustainable water management across our entire value chain.</p> <p>As signatories of the Water Resilience Pledge, we have established commitments to achieve the following by 2050, through both individual and collective actions:</p> <ul style="list-style-type: none">• Net positive water impact: Achieve a measurable and net positive impact in water-stressed basins on availability, quality and accessibility through industry-leading water operations and basin initiatives.• Water-resilient value chain: Develop, implement and enable strategies to support leading impact-based water resilience practices across the global value chain.• Global leadership: Raise the global ambition of water resilience through public and corporate outreach.
Targets	<ul style="list-style-type: none">• As part of our WLO goal, Dow will reduce the freshwater intake intensity at key water-stressed sites by 20% by 2025.• Dow's blueprint on sustainable watershed management (Sustainable Watershed Management Dow 2025 Sustainability Goals Dow Corporate) establishes how collaboration can be a path to addressing water scarcity.• By 2025, Dow will deliver \$1 billion in value through projects that are good for business and good for ecosystems including water filtration, water provisioning, flooding control and water quality.
Responsibilities	<ul style="list-style-type: none">• Accountability of water management begins at the site level where the operating permits exist and elevates to the board level providing oversight of water-related issues. Additionally, each employee also has a vested interest in continued progress, linking sustainability performance to each individual Dow employee's performance award.



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Specific Actions	<ul style="list-style-type: none">Implemented water conservation projects equivalent to 2% of Freeport's freshwater withdrawal associated with Dow production. Freeport accounts for roughly 80% of our overall freshwater intake intensity reduction goal.In Terneuzen, the Netherlands, Dow is working with farmers and the regional water board to store fresh water underground – collecting it in the winter for use in the summer, so farmers can benefit in periods of drought.In Böhlen, Germany, we are working through AquaSPICE on strategies to reshape our water use by improving recycling of various process water streams, treating rainwater via advanced wetlands, and creating the next level of site water management by using smart monitoring algorithms and controls on raw water, discharge and recycle streams. The project is aligned with the EU Green Deal.
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303-1 Interactions with water as a shared resource

Recognizing that water is a resource requiring shared action, Dow is working to advance water stewardship both within our own operations and at the watershed level to deliver improvements to water quantity, quality and accessibility.

The various sources of water intake to each Dow facility depend on local availability. Most of our facilities withdraw from surface water bodies. In locations where seawater/brackish water is readily available, such as at production facilities on the coast, it is used for one-pass cooling. Groundwater is used at very few Dow sites. Rainwater is recovered in multiple sites and used as firewater and for other purposes. Efforts to reuse and recycle water from both internal and external sources are put in place when economically and technically feasible. Several Dow sites purchase water from third-party sources in two forms – raw or treated surface water and as treated effluent wastewater. Dow also sells and treats water for tenants within our industrial parks (iParks).

Most of our water is discharged as surface water, with a small portion returned to bays and oceans. At a few sites, Dow sends wastewater to be treated by a third party before discharge (typically to surface water). Rainwater and non-contact cooling waters are typically not treated or metered, although they are monitored for quality. Dow appropriately treats and monitors the quality of water discharged back to the environment. Dow works to eliminate or minimize the generation of emissions to water at the source through research, process design, plant operations and maintenance.

Some of the key challenges associated with improving our performance in water stewardship include:

- Complexity of water systems across our facilities and performing water measurements.
- Large fluctuations associated with conveyance systems subject to weather.
- Making the business case for water due to low cost of water.
- Predicting water risks in a changing climate.
- Risk management aligned with long-term capital planning.
- High costs associated with aging infrastructure.

Dow is engaged in many stakeholder feedback activities pertaining to water such as:

- Community engagement driving watershed-level improvements using nature-based solutions, sharing technical advice and financial support.
- Customers' joint reviews and rating of Dow's performance with respect to water risks.
- External groups such as American Chemistry Council (ACC), World Business Council for Sustainable Development (WBCSD), The Nature Conservancy (TNC) and CEO Water Mandate where we actively develop collective actions, improve work process tools and develop best practices, overall guidance on water use and efficiency and waterbody risk stress assessment.



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303-2 Management of water discharge-related impacts

The management of water discharge-related impacts is governed by Dow's ODMS and includes discharge directly to surface water bodies, subsurface water and third-party treatment entities. All Dow businesses, locations and facilities are required to develop a program that is consistent with the principles of Responsible Care®, company goals, and required external management systems, ISO-14001 as applicable, and comply with local applicable environmental licenses and permits. Employees must reduce the impacts to the environment by using appropriate work practices to prevent, report and mitigate releases to the environment. Management of wastewater includes handling, storage, containment, treatment (e.g., destruction) disposal and on-site transportation. Each external contractor or outside service provider used for treatment operations to recycle, recover, convert, treat, or contain wastewater must be approved and meet Dow's ODMS surface water protection standard.

As a Responsible Care® company and member of the International Council of Chemical Associations, we are continually engaged in waste reduction and pollution prevention efforts in our operations, including those linked to water. Water discharge quality is strictly governed by local regulations, and each operating site is accountable for meeting the established permit discharge limits and has monitoring capability in place to meet these limits. Additionally, the responsible local authorities regularly audit our facilities and management program.

See actions related to our water discharge within the [Environmental/Climate/Water section](#) of this report.

303-3 Water withdrawal

Water is withdrawn from the natural environment and used for Dow's industrial processes. However, only a small proportion of water withdrawn ends up in our products. 85% of source water is returned to the environment at equal or better quality than at withdrawal (for additional information see [GRI 303-5 Water consumption](#)). Total water intake accounting standards are owned and developed by the Waste and Emissions Reporting System (WERS) while each site is accountable to establish a methodology with associated assumptions. The source data can be based on meters, calculations, engineering estimates or invoices provided by third party suppliers. In prior years' reporting, we provided our data in millions of metric tons. In 2021, we converted to megaliters to follow the GRI standard guidance.

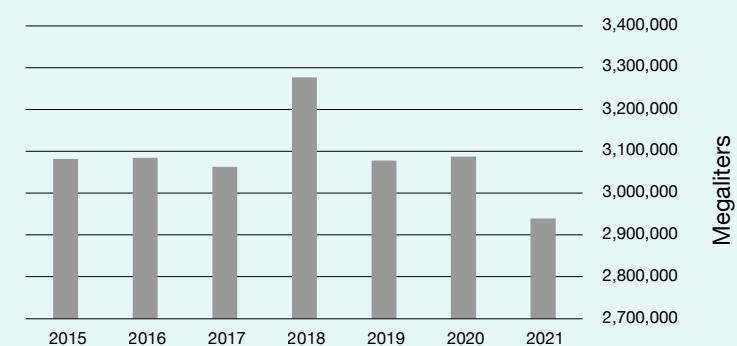
Total water withdrawal from all areas:

Source (Megaliters)	2021	2020 ¹	2019 ¹
Surface	1,699,905	1,831,697	1,928,351
Groundwater	34,440	35,672	36,231
Seawater	1,092,075	1,101,371	997,485
Produced Water	174	174	173
Third-Party Water ²	125,192	118,532	115,617
Total Water Withdrawal	2,951,786	3,087,446	3,077,857

¹ The prior year data was restated by an immaterial amount.

² Purchased steam and condensate are not included as most facilities are equipped with condensate return.

Total Water Withdrawals – All Sites





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Total water withdrawal from KWSS:

A breakdown of total water withdrawal from each of the sources is listed below for all areas.

Source (Megaliters)	2021	2020 ¹	2019 ²
Surface	119,968	187,160	247,130
Groundwater	614	358	515
Seawater	1,086,112	1,095,556	991,862
Produced Water	0	0	0
Third-Party Water Total	54,137	50,811	28,524²
Third-Party Groundwater	0	0	0
Third-Party Surface Water	28,778	27,713	
Third-Party – Produced Water	0	0	
Third-Party – Seawater Fresh Water	0	0	
Third-Party – Seawater Non-Fresh Water	25,359	23,098	
Total Water Withdrawal – KWSS	1,260,831	1,333,885	1,268,031

¹ The prior year data was restated by an immaterial amount.

² Data collected in 2019 contains all purchased water including from non-freshwater sources. Methodology changes that allowed for visibility of source of third-party water started in 2020.

The 2021 total water withdrawal was reduced vs. 2020 due to rainfall at major sites and winter storm Uri, which had a broad impact on the U.S. Gulf Coast, resulting in unplanned shutdowns and production outages.

Source (Megaliters)	2021	2020 ¹	2019 ²
i. Fresh water (<1,000 mg/L Total Dissolved Solids)	1,834,178	1,962,804	2,080,198
ii. Other water (>1,000 mg/L Total Dissolved Solids)	1,117,608	1,124,643	997,658

¹ The prior year data was restated by an immaterial amount.

A breakdown of total water withdrawal from each of the sources listed above for all areas with water stress.

Source (Megaliters)	2021	2020 ¹	2019 ²
i. Fresh water (<1,000 mg/L Total Dissolved Solids)	149,360	215,231	276,169
ii. Other water (>1,000 mg/L Total Dissolved Solids)	1,111,471	1,118,654	991,862

¹ The prior year data was restated by an immaterial amount.

To see our progress on our freshwater intensity intake target, please see [TCFD Metric: Freshwater intake intensity at key water-stressed sites](#).



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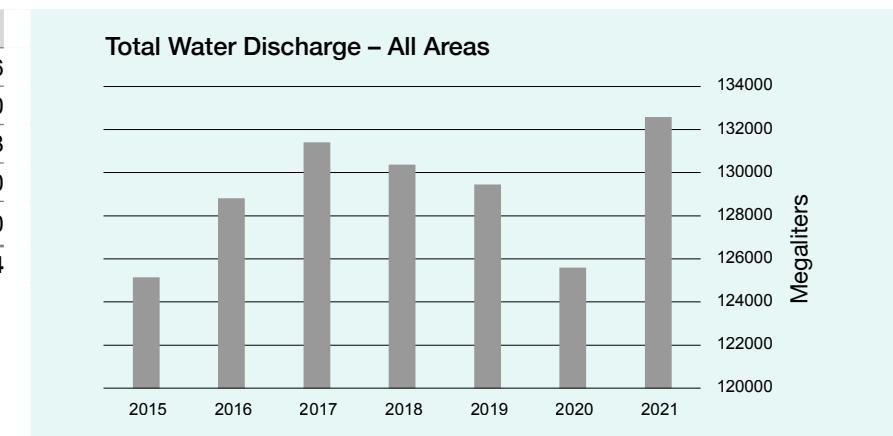
303-4 Water discharge

The accounting of water discharge-related flows is governed by WERS and includes water that has been treated, meets the appropriate discharge quality, and is subsequently discharged to the environment or hydraulic flows that are transferred to 3rd party for treatment. This water is measured upon discharge at our wastewater treatment facilities or transferred to a third party. All Dow businesses, locations and facilities are required to develop a water discharge accounting methodology that complies with WERS standards. Sources of water that are discharged without treatment such as one pass cooling and cooling tower blowdowns are monitored for quality but may not be quantified.

Total water discharge breakdown by area:

Source (Megaliters)	2021	2020	2019 [†]
Surface	59,742	59,121	55,386
Groundwater	0	0	0
Seawater	57,569	53,284	60,888
Produced Water	0	0	0
Third-Party Water	15,199	13,196	13,170
Total Water Discharge – All Areas¹	132,510	125,601	129,444

¹ Dow has water discharges to categories not included in this table.



Total water discharge breakdown by area for sites with water stress:

Description (Megaliters)	2021	2020	2019 [†]
Surface	965	988	942
Groundwater	0	0	0
Seawater	44,511	40,608	44,367
Produced Water	0	0	0
Third-Party Water	1,460	1,633	1,966
Total Water Discharge – KWSS	46,936	43,229	47,275

A breakdown of total water discharge:

Description	2021 (Megaliters)	2020 (Megaliters)	2019 [†] (Megaliters)
Fresh water (<1,000 mg/L Total Dissolved Solids)	73,481	70,683	66,590
Other water (>1,000 mg/L Total Dissolved Solids)	59,029	54,918	62,854



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Total water discharge to areas with water stress:

Description	2021 (Megaliters)	2020 (Megaliters)	2019 [†] (Megaliters)
Fresh water ($\leq 1,000 \text{ mg/L Total Dissolved Solids}$)	965	988	942
Other water ($> 1,000 \text{ mg/L Total Dissolved Solids}$)	45,971	42,241	46,333

Dow has developed a priority compound list that is composed of chemicals with persistent, bioaccumulative and toxic hazards, and chemicals with carcinogenic, mutagenic and reproductive hazards. This list is global in nature and comprises chemicals from multiple agencies including the U.S. Environmental Protection Agency (EPA), the International Agency for Research on Cancer (IARC), through the World Health Organization and the European Commission. Discharge limits are set using regulatory requirements. We had one incident of non-compliance with discharge limits in 2021.

303-5 Water consumption

Dow's actual water consumption within our operations is limited. Water is used as a coolant to produce steam and condensate within our manufacturing processes and a small portion is a key ingredient of certain products. Past assessment of sites with the highest freshwater intake showed that more than 85% of the source water was returned to the watershed at equal or better quality than at withdrawal. Understanding that water discharges for many large sites are composed of significant portion of non-metered flows (e.g., one pass cooling water), the reported value is therefore estimated. Estimates were developed using an approach based on Dow examples and benchmarking examples.

Description	2021 (Megaliters)	2020 (Megaliters)	2019 [†] (Megaliters)
Total water consumption from all areas	442,768	463,117	461,678
Total water consumption from all areas with water stress	189,125	200,083	190,205

The change in our water storage is not tracked separately but is included within our surface water intake accounting methodology.

GRI 304: Biodiversity 2016

304-103 Biodiversity Management Approach 2016

See also: [GRI 103 Management Approach \(General\)](#)

As noted by Global Biodiversity Outlook 5/Convention on Biological Diversity, the loss of biodiversity has cascading consequences for businesses, for nature and for human society, including in the global economy, the availability of food and water, and human security, health and wellbeing. Biodiversity underpins nature's ability to provide a variety of valuable services – such as clean air, clean water and healthy soil. Maintaining biological diversity is therefore directly tied to Dow's business success across our value chain, from raw materials we purchase, to our global operations and to the use and end of life of our products. We have a responsibility to manage our business in a way that preserves and protects nature and its essential services to people.



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More specifically, we manage biodiversity in the following ways:

Within our manufacturing sites

- Within Dow's operations our interactions with biodiversity occur through land use change, water intakes and effluents, air emissions and waste management tied to ecosystem integrity.
- In the short- to medium-term timeframe (<10 years), biodiversity impacts are managed through a combination of technological, commercial and operational activities. The management principles governed by Dow's Operating Discipline Management System are included in order of priority: avoid, reduce, reuse, regenerate, restore and transform. Avoiding new water withdrawals and effluents; reducing emissions contributing to climate impacts by purchasing renewable power; increasing the proportion of water reused both internally and externally; regenerating waste streams to reduce materials sent to landfills; and restoring parcels of lands within our manufacturing assets to native habitats are examples.
- As Dow operates mature, capital-intensive assets, biodiversity impacts are also evaluated and managed on long-term timelines (10+ years) by including impacts (+/-) to nature as part of our capital allocation involving multi-decade assessments of water withdrawals; consumption and availability; costs associated with waste generation and treatment; biobased alternatives as raw material sources; regulatory drivers; and technology trends. Long-term, Dow's management of biodiversity at an asset level involves replacing end-of-life equipment with higher- efficiency, lower-overall-environmental-footprint assets, as well as efforts to scale efficient economical technologies not yet available for widespread deployment today, such as carbon-neutral crackers.
- We are taking an ecosystem approach to understand how our manufacturing assets fit within nature. We screen all projects for opportunities to use nature-based solutions that deliver not only the functionalities serving Dow's purpose but often deliver additional co-benefits to nature and surrounding communities. Finally, we seek to work collectively with our neighbors, recognizing the flow of ecosystem services reaches beyond our properties.
- As part of our WLO goals, Dow screens all capital projects for their environmental impacts, including an assessment of the extent of environmental disturbances. Our approach to the reclamation and restoration of lands disturbed by our operations is to adhere to all regional regulatory requirements. All disturbed land is restored to a condition that is appropriate for redevelopment or other reuse.

Within our supply chain

Dow has initiated efforts in defining potential issue areas and value chain locations for target setting with respect to biodiversity. Key efforts in 2021 include:

- Promoting and strengthening best practices associated with biobased raw materials. We have screened 70% of the suppliers in the Latin America region for the use of biologically sourced materials. On a global level such screening initially prioritized the most relevant and high-volume raw materials but will be extended to lower volumes over the next few years. On a global level such screening initially prioritized the most relevant and high-volume raw materials but will be extended to lower volumes over the next few years. We have implemented several check points throughout the product creation cycle to identify biobased raw materials as early as possible. Such measures allow us to investigate the origin of the biobased material, as well as to identify and comply with any relevant national regulatory requirements. Dow colleagues have been trained on the Nagoya Protocol and national regulations on the protection of biodiversity from various functions around the globe: R&D, Legal, Marketing, Sustainability and Intellectual Property.
- Initiating the roadmap for integrating biodiversity across Dow's value chain. Dow's Consumer Solutions business was chosen as the pilot for its direct extraction of raw materials, manufacturing and commercial activities in Brazil, the most biodiverse country in the world. Timber products, quartz, charcoal, coal and woodchips are raw materials purchased in the market and/or portion produced in our Natural Resources Operation in Brazil. Their management approach includes third-party auditing program of wood and charcoal; a certification of suppliers and Dow land management practices by a third party; a registration of timber production and an annual production/consumption plan administered by the local Secretariat of the Environment.
- We are expanding the CDP supply chain program to include biodiversity. The data received will be used to prioritize key issues and specific geographical locations of concern. Ultimately this will enable Dow to design and implement a risk mitigation plan in collaboration with our key suppliers.



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Within our product offering

- Our R&D portfolio is screened for benefits and impacts to sustainability. Dow also actively participates in helping our customers with their respective biodiversity efforts. Dow's product stewardship team develops handling guides and training materials for our customers on safe handling practices to minimize potential impacts to the environment. Dow routinely evaluates the potential hazard of its chemicals to the environment. Tools for these evaluations include aquatic toxicity and fate testing, in silico predictions and aquatic risk assessment.

Dow has a formal internal audit system reviewing our environmental management system, which includes items such as effectiveness of the maintenance system in detecting leaks and losses to air, water and land; status of assets and comparison against most-effective technologies; effectiveness of the current metering strategy; and possible water conservation opportunities. Dow participates in external performance rating by the nonprofit organization CDP's Forest assessment. Dow was rated for the first time in 2020 (grade: B).

Management Approach Components	Description
	Biodiversity and ecosystems feature prominently across many of the SDGs set forth by the United Nations as defined by the Secretariat of the Convention on Biological Diversity (1,2,3,5,6,8,11,12,14,15,16,17). Dow's alignment to U.N. Sustainable Development Goals defines our commitment. Our three focus areas of Climate Protection, Circular Economy and Safer Materials are well-aligned to drive measurable reductions in our impacts. Dow also has opportunities to enhance biodiversity with the rivers we interact with, the lands we own, the communities we operate in and the innovative products we offer.
Commitments	<p>Recognizing the changing climate as a key stressor for biodiversity, Dow has made the commitment to achieving our goal of keeping temperature rise well below 2°C and pursuing efforts to limit the increase to 1.5°C.</p> <p>Dow is also committed to comply with national regulations on the protection of biodiversity as countries develop and implement their regulatory framework in fulfillment of their commitment to the Convention on Biological Diversity and to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization.</p>
Targets	Dow has established a target to reach 70% Forest Stewardship Council (FSC) certification by 2025 for both wood and charcoal commodities produced and purchased within our silicon operations in Brazil, the only location Dow purchases timber-related raw materials. To date our Pará timber farms are certified (certification renewed on 2020), 100% of the charcoal we purchase from market is certified and 5% of woodchips suppliers are FSC certified.
Responsibilities	Since 2014 we have held ourselves accountable to the principles defined by the Responsible Care® Global Charter that addresses ongoing stakeholder expectations and evolving challenges. These principles apply to Dow globally and are managed through the implementation of and compliance with our internal ODMS. Accountability is defined starting from the sites owning the operating permits to the Board-level oversight of water-related issues. Each employee also has vested interest in continued progress linking sustainability performance to each individual Dow employee's performance award.



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Specific Actions	<p>Among our 2021 actions:</p> <ul style="list-style-type: none">As part of our collaboration with The Nature Conservancy, we have continued our work to investigate biodiversity assessment tools, research best-in-class companies' approach to the topic and learn from key collaborations to craft a relevant and fit-for-purpose strategy and management practices based on the best science.Dow participated within the Aligning Biodiversity Measures for Business collaboration, launched by the U.N. Environment Programme World Conservation Monitoring Centre Europe, the Capitals Coalition, Arcadis and ICF. This project will assist the European Commission's efforts to support businesses and other stakeholders in developing a standardized approach to both biodiversity measurement and natural accounting practices.Pursued pilot projects both internally and with the help of other key contributors to further understand the best way to quantify biodiversity and ecosystem services such as the Loch Leven Wetlands restoration project.Completed the assessment of biological diversity within high-priority sites such as Dow's 38,000-hectare Amazon rainforest preserve. The next effort includes the ecosystem service assessment of both the preserve and eucalyptus farming operations.Joined the Brazilian Business Council for Sustainable Development (CEBDS), a nonprofit organization that promotes sustainable development for companies in Brazil.Developed a geospatial information tool that can help in making informed decisions by exploring various feasible solutions and recommending the best land management strategy that incorporates biodiversity as a key metric.
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304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

We have supplemented our existing data on biodiversity impacts by using information generated by an Integrated Biodiversity Assessment Tool (IBAT). This tool provided geographic information about global biodiversity. Using the GIS coordinates and looking for areas of biodiversity importance within the 50km radius of the site, these become our priority sites. As an initial analysis, we are focusing on our top 28 priority manufacturing sites, as defined by both CO₂ emission levels and water stress, located within 50km of a protected area as defined by the International Union for Conservation of Nature and Natural Resources (IUCN). Specifically, we reviewed IUCN's Protected Area Management categories and Ramsar Convention, national legislation for the convention on wetlands, especially as habitats for waterfowl. The information included in the table below is being interpreted and prioritized into corporate action plans with respect to our global production facilities.



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Name	Latitude	Longitude	IUCN Categories (50km)	National Protected Area (50km)	Ramsar Protected Area (50km)
Alberta	53.733936	-113.172617	II, III, IV	Yes	Yes
Aratu	-12.7765	-38.4981	III, IV, V, VI	Yes	No
Bahia Blanca	-38.7183	-62.2663	VI	Yes	No
Barry DCC	51.411442	-3.240745	IV, V	Yes	Yes
Böhlen (DCG)	51.18847	12.354563	IV, V	Yes	No
Breu Branco	-3.7712	-49.5656	V, VI	Yes	No
Cabangu	-21.447778	-43.609722	Ia, II, IV	Yes	No
Carrollton	38.70912	-85.104670	III, IV, V	Yes	No
Deer Park	29.7052	-95.1238	Ia, IV, V, VI	Yes	No
Freeport	28.987400	-95.38	IV, V, VI	Yes	No
Leuna (DCG)	51.29141	11.98593	IV, V	Yes	No
Louisville	38.21129	-85.841600	III, IV, V, VI	Yes	No
Map Ta Phut	12.7132	101.1686	Ia, II, VI	Yes	No
Midland	43.61396	-84.197600	IV, V	Yes	No
Orange	30.093	-93.7366	III, IV, V, VI	Yes	No
Palmyra Aqua Azul	-21.464002	-43.554788	Ia, II, IV	Yes	No
Plaquemine	30.314207	-91.240608	III, IV, V	Yes	No
Schkopau (DCG)	51.39441	11.97442	IV, V	Yes	No
Seadrift – TCFD	28.508180	-96.77611	IV, V	Yes	No
South Charleston	38.368090	-81.68547	V	Yes	No
Stade	53.652090	9.50786	II, IV, V	Yes	Yes
St. Charles Operations	29.984457	-90.4442	III, IV, V	Yes	No
Tarragona	41.10182735	1.187549157	III, IV, V, VI	Yes	Yes
Terneuzen	51.3323	3.8324	II, IV, VI	Yes	Yes
Texas City	29.379120	-94.944780	Ia, IV, V, VI	Yes	No
Victoria	28.67551	-96.95453	IV, V	Yes	No
Wiesbaden (DCG)	50.0782	8.2398	IV, V	Yes	Yes
Zhangjiagang	31.8756	120.556	None	No	No



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304-2 Significant impacts of activities, products and services on biodiversity

Direct areas of impacts to biodiversity are taken into consideration in the management of our manufacturing facilities and green belts surrounding our assets. We operate our facilities and work to minimize negative impacts on the land we own and occupy. Our remediation efforts are strictly managed and overseen by local authorities. Our methodology ensures we screen projects for opportunities to apply nature-based solutions that often deliver additional benefits tied to biodiversity. Some examples to highlight:

- We have implemented sustainable landscaping practices promoting areas for enhanced biodiversity such as our Leuna site in Germany, where grass is only mowed when it is tied to a specific operational need. The remainder of the areas are left for nature.
- We look for nature-based solutions to be integrated within our unit of operation such as Elizabethtown, Kentucky, where a wetland was built, as opposed to dry pond, to enhance the local habitat.
- Portions of our green belt areas have been put into conservation such as our Bristol, Pennsylvania, facility, where 80 acres of wetland forest was sold to a local land trust (the Heritage Conservancy) for conservation in perpetuity.
- Restoring an old ash pond into a wetland in Midland, Michigan.
- Partnerships in organizations such as the Alliance to End Plastic Waste contribute to the preservation of biodiversity in bodies of water.

For indirect areas of impact, we engage across our entire value chain from our suppliers through our sustainable purchasing program to our product offering via rigorous eco-toxicological testing and product stewardship program.

OMISSION 304.2b Significant direct and indirect positive and negative impacts

Information not available. We do not keep detailed records by species affected, extent of areas impacted, duration of impacts or reversibility/irreversibility of the impacts.

304-3 Habitats protected or restored

Restoration or protection activities completed in 2021 include:

Location of Habitat	Habitat Type & Size	Partnership with 3rd Party to Protect/Restore	Regulatory Approvals	Status	Standard
Barry, U.K.	Grassland; 10 acres	AECOM	Pending	Capped landfill and seeded with wildflowers	Landfill capping guidelines followed
Barry, U.K.	Wetlands; 10 acres	AECOM	Pending	Built freshwater wetlands	n/a
Red Diamond (Iberville Parish, LA)	Bottomland hardwoods, Cypress-Tupelo swamp; 3,692 acres	The Nature Conservancy	n/a	Property sold; this sale expands TNC's conservation and restoration efforts in the Atchafalaya River Basin	n/a
Loch Leven, Mississippi River Delta, LA	Bottom land hardwoods forested wetlands; 4,500 acres	The Nature Conservancy	n/a	Property sold; this project is part of a larger effort restoring 10,000 acres in the lower Mississippi Alluvial Valley	n/a

304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations

Dow completes plant species inventory and ecological appraisals to understand and appropriately manage animal and plant life at our sites. We take the outcome of this information into our planning for protection and restoration activities. These studies also inform teams on when projects should occur to not impact breeding seasons. We also support species conservation across our sites. Some examples include having multiple bee hotels and a bird island.

OMISSION 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations

Information not available. We do not keep detailed records by level of extinction risk. We will continue to annually assess mechanisms to be able to report this information in the future.



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GRI 305: Emissions 2016

305-103 Emissions management approach 2016

See [GRI 302-103 Management of Energy and Emissions](#)

305-1 Direct (Scope 1) GHG emissions

GHGs are accounted for in accordance with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, applying the operational control approach and using emissions factors from the United Nations Intergovernmental Panel on Climate Change Sixth Assessment Report (AR6). Additionally, for sites working under the European Union Emissions Trading System (EU ETS), Dow's Scope 1 GHG emissions are externally assured. Overall, Scope 1 emissions decreased slightly in 2021 relative to 2020 supported by energy reduction projects such as flare gas reduction and other energy efficiency projects as listed in [GRI 302-4 Reduction of energy consumption](#) and [GRI 305-5 Reduction of GHG Emissions](#).

Emissions (Millions of Metric Tons CO ₂ e)	2021	2020 ¹	2019 ²
Scope 1 GHG Emissions	28.29	28.49	27.20
Scope 1 GHG Emissions excluding power and steam not consumed by the company	22.55	22.93	21.79

¹ Updates to the 2020 Scope 1 GHG Emissions were completed in 2021 to account for facilities and emissions not previously reported and corrections in calculation methodologies. For further information refer to GHG Protocol Disclosure Report.

² Changes in methodology applied to 2021/2020 and that could not be applied 2019 due to significant burden.

Scope 1 includes Kyoto Protocol greenhouse gases [carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and hydrofluorocarbons (HFCs)]. Dow does not have emissions of perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), or nitrogen trifluoride (NF₃).

Biogenic CO₂ emissions in metric tons of CO₂ equivalent were 0.5, with 2020 being the base year for the calculation.

The source of Global Warming Potential factors is from the United Nations Intergovernmental Panel on Climate Change Sixth Assessment Report: [IPCC AR6 WGI Chapter 07.pdf](#) (GWP 100, Table 7.15 beginning on Page 7-124). Note: Assuming all methane is “fossil” using GWP 29.8. Results in conservative estimate, as not yet implementing use of methane non-fossil (GWP 27.2) for some sources (e.g., landfill, wastewater treatment plant, etc.).

Dow uses the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard operational control approach for emissions. Additionally, we use a hierarchy approach for calculation methods (e.g., Regulatory, Analyzer, Emission Factors, etc.).

305-2 Energy indirect (Scope 2) GHG emissions

Scope 2 emissions, baselined in 2020, reflect power purchases to supply manufacturing operations around the world. These are calculated according to the Greenhouse Gas Protocol Scope 2 Guidance, including both location-based and market-based methods. The Scope 2 emissions included in the corporate total used for tracking progress against Dow's carbon emissions-reduction targets are calculated using the market-based method.

For Scope 2 emissions, Dow requests, but does not verify, the factors used when data is received from our suppliers. We assume the most recent Intergovernmental Panel on Climate Control (IPCC) assessment report (AR6) 100-year GWP values for all data if not provided. We will continue to improve our understanding of the factors used from our suppliers to represent the information as accurately as possible in the future. The data below includes four of the seven GHG emissions covered by the UNFCCC/Kyoto protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs). Dow does not have emissions of perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), or nitrogen trifluoride (NF₃).

Emissions (Millions of Metric Tons CO ₂ e)	2021	2020	2019 ³
Scope 2 – market	5.68	6.07 ¹	6.58 ^{1,2,3}
Scope 2 – location	3.94	3.95 ¹	4.66 ^{1,3}

¹ For consistency and comparability, 2019 and 2020 values were updated using the work potential method vs. the energy content method for steam energy accounting.

² A correction was made to an emission factor used for electricity purchases.

³ A correction was made to the quantity of steam purchased and consumed.



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In 2021, Dow's Scope 2 emissions were reduced by approximately 400,000 metric tons CO₂e (6.4% reduction) as a result of Dow's efforts to source cleaner energy to support our sites. In 2021, we implemented sourcing of cleaner power agreements to support our operations in Europe, resulting in a material decrease in our Scope 2 emissions from 2020 to 2021 (see [GRI 305-5 Reduction of GHG Emissions](#)). We also laid the groundwork for further reductions in Scope 2 emissions through the addition of several renewable power agreements that will come into effect over the next few years:

- In Latin America, Dow signed a long-term agreement in Brazil with Casa dos Ventos aligned to the construction of a new wind power plant in Rio Grande do Norte state. The agreement will provide Dow's site in Cabangu, Brazil, with access to cost-competitive capacity for wind-generated electricity, which will supply power for silicon metal production.
- In North America, a long-term agreement with Capital Power Corporation in Alberta, Canada, will provide wind power capacity, replacing approximately 40% of the energy demand at Dow's Prentiss, Alberta, site for polyethylene production. In addition, Dow has signed an agreement with the Louisville Gas and Electric Company (LG&E) and Kentucky Utilities (KU) to supply solar power to Dow's site in Elizabethtown, Kentucky, U.S.
- In Europe, Dow has entered into a number of agreements over the past few years that have enabled Dow sites in Spain, U.K., Sweden, France and Germany to transition to 100% green electricity. The impact of this work can be seen in the reduction of Scope 2 emissions in 2021 and will contribute to additional Scope 2 reductions in 2022.

Dow's access to renewable power today has expanded to over 900 MW, surpassing Dow's 2025 Sustainability Goal of obtaining 750 MW of its power demand from renewable sources.

305-3 Other indirect (Scope 3) GHG emissions

Scope 3 emissions are defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard as indirect emissions from value chain activities. Understanding the relative scale of Scope 3 emissions contributes to our strategies for targeting reduction initiatives.

Total estimated Scope 3 emissions for 2021 were 77.64 million metric tons. The largest category of our Scope 3 emissions remains Scope 3.1, Purchased Goods & Services. Our estimates of Scope 3 emissions are made according to the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard and the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, as well as the World Business Council for Sustainable Development (WBCSD) Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain and the Global Logistics Emissions Council (GLEC) Framework. Emissions factors applied in Scope 3 estimates include representative GHG emission inventories from EcoInvent v3.8, economic input-output model factors, GLEC Framework carbon intensity factors, and others. Estimates include all or a subset of Kyoto GHGs [CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃] depending on the product, activity, category and estimation methodology.

Dow's scope 3 emissions in 2021 are higher when compared to 2020 results and are driven by two primary factors. First, some variations were due to differences in Dow's products or operations. Most significantly, an increase in emissions in category 3.11 Use of Sold Products, by approximately four million tons of CO₂e was primarily tied to the growth in sales of hydrocarbon-based byproducts from Dow's manufacturing processes that are used in fuel by downstream customers. Secondly, as part of our work to continuously improve the accuracy and comprehensiveness of our Scope 3 accounting, several of our improvements were implemented in this reporting cycle that are described below.

The following changes improved accuracy and accounting systems without significantly varying the final values.

- Across all categories, we refined emissions estimates by increasing the specificity of factors for materials and activities wherever possible. First, our estimates make use of region-specific emissions factors for materials where available. Second, we matched emissions factors as specifically as possible for material types and transportation, covering over 90% of purchased materials (by weight) and transportation (by ton-kilometer).
- Improving accuracy by making better use of Dow's primary data, such as the quantities of purchased goods and shipment weights, by building new tracking systems and reporting flows.
- For 3.3 Fuel- and Energy-Related Activities, country-specific data was integrated for electricity grids and transmissions and distribution losses.
- Dow is advancing the potential to embed supplier data for upstream Scope 3 categories in the future via engagements with suppliers as well as with the CDP Supply Chain Program and the WBCSD Carbon Transparency Pathfinder.



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In some cases, changes in methods or underlying data led to increases or decreases in a category's emissions for 2021 when compared to 2020.

- Improving the underlying data and emissions factors to calculate 3.4 Upstream Transportation and Distribution emissions resulted in a large variance compared to previous years. Historically, transportation emissions were calculated at a very high level, taking the gross weight by mode of transportation (MOT), a global carbon factor for the mode, and an average distance to generate a carbon footprint. In 2020, Dow's Integrated Supply Chain team calculated transportation emissions at the shipment stage level. Gross weights were refined and validated across several reports and the distance measurement improved significantly across each mode of transport using GPS data, a port-to-port distance dataset, and the Great Circle Distance (GCD) calculation between origins and destinations. A GLEC Framework carbon intensity factor was applied to each Dow shipping type within the MOT based on region, vehicle characteristics and payload. This resulted in a much more granular and accurate calculation of Upstream Transportation emissions, resulting in a decrease of approximately 50% from 2020.
- The increase in emissions in category 3.11 was primarily tied to the growth in sales of hydrocarbon-based byproducts from Dow's manufacturing processes that are used in fuel by downstream customers. In addition, we included a carbon black feed in this category, which contributed a small but significant increase in downstream emissions.
- The End-of-Life emissions in category 3.12 are due to an increase in revenue, which was used as a proxy to estimate the end-of-life emissions for sold products. In the future, we intend to move to actual production output data to improve accuracy.

GHG Emissions Breakdown (Millions of Metric Tons CO ₂ e)	2021	2020	2019 ²
Purchased Goods & Services	39.65	38.17	60.05
End-of-Life Treatment of Sold Products	11.96	7.27	9.03
Use of Sold Products	11.13	6.44	3.18
Fuel- & Energy-Related Activities	5.22	4.75	8.27
Investments	4.59	4.92	4.84
Upstream Transportation & Distribution ¹	2.01	4.14	4.09
Downstream Transportation & Distribution ¹	0	0	0
Other	3.08	3.57	4.47
Total	77.64	69.26	93.93

¹ Emissions from purchased logistics have been re-aligned to Upstream Transportation & Distribution in accordance with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. These emissions were previously aligned to Downstream Transportation & Distribution. The company has revised all prior periods within this report to conform with the new presentation.

Dow's Scope 3 GHG emissions accounting will continue to evolve as the industry improves accounting methodologies and as value chain data becomes more widely available. In 2022 and 2023, Dow is advancing a baselining initiative to improve the accuracy and transparency of our scope 3 emissions. We are working to establish a coordinated approach to define a robust and trackable scope 3 climate target and path-to-zero roadmap that will allow us to demonstrate clear progress on our 'decarbonize and grow' commitment. The company has made specific commitments and created accountability towards reducing our value chain emissions by embedding Scope 3 milestones into our 2022–2024 performance share long-term incentive compensation program as defined in the [2022 Proxy Statement³](#) filed with the SEC on March 4, 2022. This includes establishing milestones for defining our Scope 3 emissions exposures by year-end 2023 for upstream Scope 3 categories 1, 3 and 4². Dow will engage with key suppliers through supplier relationship management activities and the CDP Supply Chain Program, requesting that they provide product carbon footprint data and set climate targets.

GHG emissions intensity is calculated by taking the sum of the Scope 1 and 2 emissions data and dividing by production volume. The Scope 1 emissions value excludes emissions from power and steam not consumed by the company. The scope 2 value uses the market-based value. The production value used in this calculation is the total valued production volume. Dow observed an overall decrease in GHG emissions intensity relative to 2020 due to a decrease in Scope 1 and 2 emissions.

² The 2022 Proxy notes category 9. Subsequent to the publication of the Proxy, the company re-aligned its transportation emissions from Category 9 – Downstream Transportation & Distribution to Category 4 – Upstream Transportation & Distribution to comply with the GHG Protocol.



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305-4 GHG emissions intensity

GHG Emission Intensities (Metric Tons CO ₂ e/Metric Tons of Production)	2021	2020	2019 ¹
GHG Intensity	0.533	0.546 ¹	0.534 ¹

¹ Scope 1 and Scope 2 emissions used within this GHG intensity calculation had changes applied to prior periods as documented above in 305-1 and 305-2.

305-5 Reduction of GHG emissions

Dow tracks overall GHG emissions and intensity as key metrics. The following table outlines a sampling of reduction initiatives completed in 2021 that have had a material impact on Dow's reported Scope 1 and Scope 2 emissions. The baseline year for all projects is 2020. Emissions savings were determined by comparing plant operating conditions before projects were implemented to conditions after implementation.

Project Summary	Location	Scope of Emissions Reduced	Approximate Amount (Metric Tons CO ₂ e/yr)	Gases Included
LA-2 flare gas reduction from cracker	Plaquemine, Louisiana, U.S.	Scope 1	24,000	CO ₂ , N ₂ O, CH ₄
Implementation of new pressure controller to modulate steam turbine, controlling off-gas header pressure and reduce requirements for header pressure makeup with natural gas	Plaquemine, Louisiana, U.S.	Scope 1	23,000	CO ₂ , N ₂ O, CH ₄
Implementation of tunable diode laser analyzers on cracker furnaces	Terneuzen, the Netherlands	Scope 1	14,500	CO ₂
Sourcing cleaner power and steam to support Dow operations in Europe	Multiple locations in Germany, France and Spain	Scope 2	550,000	CO ₂ , N ₂ O, CH ₄
Project Impact			611,500	

Also see [GRI 302-4 Reduction of energy consumption for reduction of GHG emissions](#).

305-6 Emissions of ozone-depleting substances (ODS)

Ozone-depleting emissions include substances with ozone depletion potential greater than zero. Emissions are reported in CFC-11 equivalents using ozone depletion factors based on the Montreal Protocol.

2021 (Metric Tons)	2020 ¹ (Metric Tons)	2019 ¹ (Metric Tons)
1.52	2.88	2.10

¹ Historical numbers updated to reflect error identified when converting to CFC-11 equivalents.

Since 2005, Dow has eliminated 98% of ozone-depleting emissions as these gases have been phased out. The remaining emissions are primarily fugitives and can vary significantly year to year. Dow seeks to minimize all releases of fugitive emissions and has a robust detection program to identify and correct leaks. In 2021, emissions were lower vs. 2020 due to a reduction in unplanned emissions releases.



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305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions

This table shows Dow's significant air emissions. Dow does not have emissions of PFCs, SF₆ or NF₃.

Area	2021 (Metric Tons)	2020 (Metric Tons)	2019 [†] (Metric Tons)	Source of the Emissions Factors	Standards, Methodologies, Assumptions and/or Calculation Tools Used
NOx	18,068	18,133 ¹	19,236 ¹	NOx emissions are largely driven by operation of Dow's Hydrocarbons, Specialty Plastics and Energy assets.	NOx emissions decreased in 2021 vs. 2020 due to maintenance activities and improved sample collection procedures in 2021.
SOx	2,048	2,242	2,774	SOx emissions are largely driven by our silicon smelter operations that produce raw materials for our Consumer Solutions business, and our Acrylic Monomer production within our Performance Monomers business.	SOx emissions decreased in 2021 vs. 2020 due to improved calculation methodologies and lower production in 2021.
Volatile Organic Compounds (VOCs)	8,004	7,495	7,635	VOCs are organic materials that have a high vapor pressure and low boiling point at room temperature.	VOC emissions increased in 2021 vs. 2020 due to increased flaring activity due to increased maintenance events and improved calculation methodologies in 2021.
Chemicals to Air and Water	15,256	13,910	13,959	Chemical emissions are any release or discharge to the air or water of any pollutant from a facility. The chemical emissions category is largely driven by emissions from our wastewater treatment operations at our large integrated sites.	<p>This data excludes NOx, SOx, carbon monoxide, CO₂, particulates, methane, hydrogen, nitrogen, oxygen, water, aluminum and certain salts.</p> <p>These emissions include the posttreatment chemical emissions from our industrial park tenant companies.</p> <p>2021 Chemical Emissions to Air and Water increased vs. 2020 due to higher volumes of effluent sent for treatment and unanticipated weather events causing process issues in 2021.</p>
Priority Compounds to Air and Water	225	209	294	Priority Compounds are a subset of VOCs that contain carcinogenic, mutagenic and reproductive hazards and/or are persistent and bioaccumulative in the environment.	2021 Priority Compounds to Air and Water increased vs. 2020 due to unanticipated weather events and maintenance activities in 2021.

[†]An update to the calculation methodology at one of Dow's largest silicon sites resulted in an increase in historical NOx emissions from the reported value in the 2020 ESG report. The site had been using estimates and now are using actuals.



Dow Disclosures – GRI Content Index

GRI 306: Waste 2020

306-103 Waste Management Approach 2016

See also: [GRI 103 Management Approach \(General\)](#)

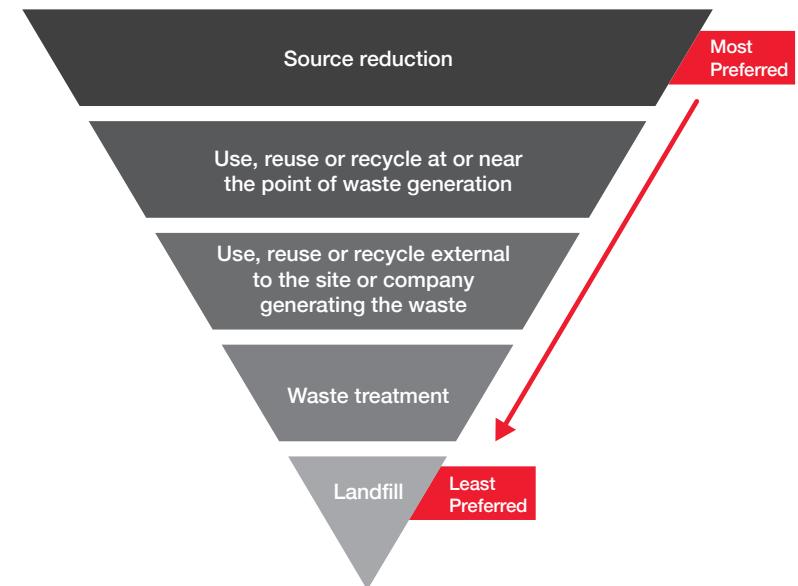
All waste at Dow is tracked and categorized using defined work processes such as the Waste Characterization Office. The waste is reviewed and placed into the appropriate waste disposal, recovery or recycling channel. This placement is based on chemical properties, physical state, local governmental regulation and hazard classification.

Dow has implemented guidelines that align to this waste management hierarchy that minimizes the impact of waste and emissions on the environment.

We first work to eliminate or minimize the generation of waste and emissions at the source through research, process design, plant operations and maintenance. Then we find ways to reuse and recycle materials. Next, unusable, or non-recyclable hazardous waste is treated before disposal to eliminate or reduce the hazardous nature and volume of waste. Treatment may include destruction by chemical, physical, biological or thermal means. Disposal of waste materials in landfills is considered only after all other options have been thoroughly evaluated.

Dow manages environmental data for reporting within our waste inventory system, WERS. All manufacturing sites globally record their waste generated and disposal in the system annually. The data is reviewed at the facility level and then by global coordinators before being aggregated for corporate reporting.

The evaluation approach ties to the fact that all Dow waste is recorded and monitored during the annual environmental reporting. This data is compared to the previous year's quantities to ensure consistency and identify significant increases. This data is granular to the production plant level, allowing for identification of opportunities for waste reduction and recycling. In addition, the Dow value recovery team has specific targets to divert waste and coproduct streams away from disposal to secondary markets.



Management Approach Components	Description
Commitments	Dow's adherence and commitment to the waste management hierarchy is applied in all waste decisions. Waste is characterized and then reviewed to identify recycle/reuse opportunities and, if necessary, treated as waste.
Targets	As part of our World-Leading Operations (WLO) Environmental Stewardship goal, our target is to reduce our waste intensity footprint by 20% by 2025.
Responsibilities	Implementation of the waste management hierarchy is the responsibility of the WLO team.
Specific Actions	Dow has implemented several programs to reduce waste at the source, specifically: <ul style="list-style-type: none">• Waste Minimization VIP (Value Improvement Practice) – reducing waste produced through improved project design. All projects >\$2MM have a mandatory waste and water minimization VIP review. Five such reviews were completed in 2021.• Value Recovery Team – directing material from disposal to external sales.• Environmental Stewardship Projects – support and promote projects supporting 2025 and beyond sustainability goals.



Dow Disclosures – GRI Content Index

306-1 Waste generation and significant waste-related impacts

Dow uses raw materials, purchased feedstocks, and additives and catalyst to produce chemical products. The high level of product integration and internal byproduct recycling allows Dow to minimize the amount of waste produced. In addition to produced chemicals, byproducts are also sold to secondary customers. These byproducts are used as downstream raw materials, blended into solvents and fuels, etc. Waste produced can be treated internally at Dow for energy recovery, incinerated or sent to a Dow-owned landfill. Waste can also be sent to external disposal facilities as a final option.



The amount of waste generated by Dow is directly impacted by the quality of raw material, internal production efficiency, internal quality measurement and, finally, product specifications. The amount of impurities either entering or produced during chemical manufacture ultimately determines the amount of product, byproduct and waste produced from a chemical process.

306-2 Management of significant waste-related impacts

Prevention of waste generation is impacted by several factors at Dow including strict raw material specification, testing and certification. High levels of integration allow byproduct streams that would be waste to be recycled or used as raw materials inside Dow. Waste downstream to customers is minimized by strict quality control of all Dow products. Purer chemical feeds result in less waste.

Actions:

- All suppliers are qualified and must meet global material specifications when working with raw material, additive, and/or purchased chemicals. Materials have certificates of analysis and are, in many cases, tested prior to receiving.
- During the chemical production process, internal quality measurements are maintained to minimize waste. Quality of byproduct streams is monitored before transfer to integrated production facilities.
- Product and byproduct streams sold outside of Dow must be approved by product stewards that ensure the final use meets governmental, health and regulatory requirements.
- Quality of products is controlled by testing and ensuring that products sold meet the global product specifications. Material that does not meet the quality standard is recycled internally, sold to an approved secondary application or sent for disposal.
- Dow products that may do not meet the final quality measures due to shelf-life limitations, slight quality issues, damaged packaging, surplus, etc. may be sold into approved secondary markets. These materials are thereby diverted from disposal but are subject to product steward final approval.
- As an active member of Operation Clean Sweep® (OCS), a program designed to prevent pellet, flake and powder loss to the marine environment, our plastics manufacturing and logistics facilities around the world are engaged in this important initiative to help achieve zero pellet loss.

Waste sent outside of Dow is characterized, then transported to a certified waste disposal facility for destruction or landfill. All disposal facilities are certified by Dow using third-party auditing to ensure compliance with all appropriate governmental regulations. Only approved disposal methods and facilities can receive Dow waste.

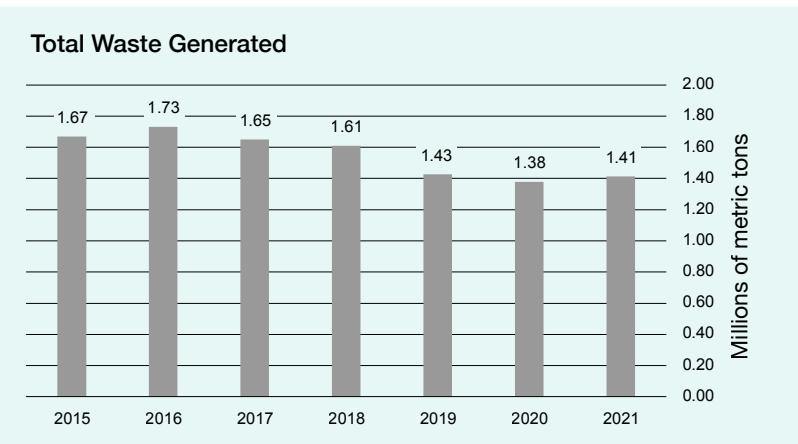


Dow Disclosures – GRI Content Index

306-3 Waste generated

The table below shows Dow's total weight of waste generated (in metric tons), and a breakdown of this total by composition of the waste.

In Millions of Metric Tons	Hazardous Waste			Non-Hazardous Waste		
Waste Composition	2021	2020 ¹	2019 ^{†1}	2021	2020	2019 ^{†1}
Total Waste Generated	0.635	0.669	0.717	0.775	0.709	0.710
Energy Recovery	0.262	0.355	0.367	0.038	0.029	0.029
Landfill	0.014	0.011	0.024	0.255	0.284	0.285
Combustion	0.193	0.173	0.197	0.385	0.309	0.296
Flare	0.024	0.021	0.023			
Waste to Wastewater	0.073	0.043	0.027	0.056	0.058	0.051
Underground Injection	0.002	0.001	0.002	0.012	0.000	0.000
Other Treatment	0.067	0.065	0.077	0.029	0.029	0.049



¹ The prior year data was restated by an immaterial amount.

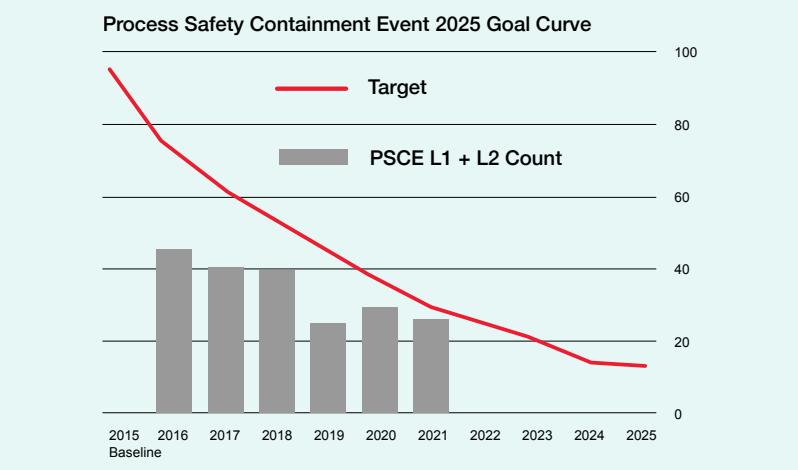
Although the total waste generated in 2021 has increased slightly over 2020 due to unplanned events, the volume of hazardous waste decreased relative to 2020.

306-3 (2016) Significant Spills

Description	2021	2020	2019 [†]
Process Safety Containment Events	26	29	25

Process Safety Containment Event (PSCE) 2025 Goal Curve – target line on the chart is equivalent to the 2025 goal line utilized in WLO metrics.

The PSCE metric, which started in 2016, is derived from an industry best practice, American Petroleum Institute (API) developed and recommended practice (RP) 754-Process Safety Performance Indicators for the Refining and Petrochemical Industries. As an industry leader in sustainability performance, we have been heavily involved in the development of this metric. We believe aligning to this measure will help us achieve an even higher level of performance related to the containment and control of the materials we handle and produce.





Dow Disclosures – GRI Content Index

Similar to the approach we are now taking with injury and illness measurement, our PSCE metric focuses on both incidents that have the greatest impact, as well as incidents with the greatest potential for significant impact – including process damage, interruption or possible impact on our surrounding communities. We have defined Levels 1-4, with Level 1 incidents having the highest actual or potential impact. By 2025, our goal is to reduce the number of Level 1 and Level 2 events by more than 80% from our 2015 baseline.

In 2021, the company had 26 PSCEs. This performance is slightly better than the target line for achieving our 2025 goals. We will continue our focus on PSCE reduction, specifically targeting improvement in the quality and use of our operating discipline and in our mechanical integrity preservation management system implementation. We also will strive to continue to understand and prevent our near misses with the greatest potential for avoidance.

OMISSION 306-3 (2016) Significant Spills

Information not available. Tracking of incidents is by the industry standard definition of PSCE.

306-4 Waste diverted from disposal

OMISSION 306-4 Waste diverted from disposal

Information not available. We will continue to annually assess mechanisms to be able to report this information in the future.

306-5 Waste directed to disposal

Total weight of hazardous waste directed to disposal:

Disposal Operation (Millions of Metric Tons)	2021	2020	2019⁷
Incineration (w/Energy recovery)	0.262	0.355	0.367
Incineration (w/o/Energy recovery)	0.217	0.194	0.221
Landfilling	0.014	0.011	0.024
Other disposal operations	0.142	0.109	0.105

Total weight of non-hazardous waste directed to disposal:

Disposal Operation (Millions of Metric Tons)	2021	2020	2019⁷
Incineration (w/Energy recovery)	0.038	0.029	0.029
Incineration (w/o/Energy recovery)	0.385	0.309	0.296
Landfilling	0.255	0.284	0.285
Other disposal operations	0.097	0.087	0.100



Dow Disclosures – GRI Content Index

The totals for waste directed to disposal shown in the above table by onsite/offsite:

Disposal Operation (Millions of Metric Tons)	Hazardous Waste		Non-Hazardous Waste	
	Directed Onsite	Directed Offsite	Directed Onsite	Directed Offsite
Incineration (w/Energy recovery)	0.235	0.027	0.031	0.007
Incineration (w/o/Energy recovery)	0.175	0.042	0.372	0.013
Landfilling	0.003	0.011	0.157	0.098
Other disposal operations	0.059	0.083	0.069	0.028

GRI 307: Environmental Compliance 2016

307-103 Management Approach

See also: [GRI 103 Management Approach \(General\)](#)

At Dow, protecting people and the environment is a part of everything we do and every decision we make. We will report our progress and be responsive to the public. To meet our commitments, as well as the laws and government regulations related to environmental protection and remediation to which our global operations are subject, Dow has well-defined policies, requirements and management systems.

Waste, Water and Emissions Inventory

Dow manages environmental data for reporting with a waste, water and emissions inventory system. All emitting manufacturing sites globally record their emissions and water use in the system annually. The data are reviewed at the facility level and then by global coordinators before being aggregated for corporate reporting.

Managing EH&S Performance

Dow's EH&S Management System (EMS) defines the "who, what, when and how" needed for the businesses to implement the company's policies and requirements, and meet performance objectives, leadership expectations and public commitments. To ensure effective utilization, the EMS is integrated into a companywide management system for EH&S, Operations, Quality and Human Resources.

Responsible Care®

Third-party verification and transparent public reporting are cornerstones of world-class EH&S performance and building public trust. Numerous Dow sites in Europe, Latin America, Asia Pacific and North America have received third-party verification of Dow's compliance with Responsible Care® and with outside specifications such as ISO-14001. Dow continues to be a global champion of Responsible Care® and has worked to broaden the application and impact of Responsible Care® around the world through engagement with suppliers, customers and joint venture partners.

Management Approach Components	Description
Commitments	We are committed to world-class Environmental, Health & Safety (EH&S) performance, as demonstrated by industry-leading results, a long-standing commitment to Responsible Care®, and our commitment to achieve our 2025 Sustainability Goals and our new targets around advancing a circular economy and climate protection.
Targets	Our goal is to eliminate all injuries, prevent adverse environmental and health impacts, reduce waste and emissions, and promote resource conservation at every stage of the life cycle of our products.
Responsibilities	Each employee has a responsibility to ensure that our products and operations meet applicable government or Dow standards, whichever are more stringent.



Dow Disclosures – GRI Content Index

307-1 Non-compliance with environmental laws and regulations

Environmental proceedings are listed in Part I, Item 3 of the Dow Inc. Annual Report on [Form 10-K](#) for the year ended December 31, 2021, filed with the SEC on February 4, 2022.

GRI 308: Supplier Environmental Assessment 2016

308-103 Management Approach

See also: [GRI 103 Management Approach \(General\)](#)

Dow's supply chain is vast and global, with more than 30,000 suppliers providing materials and services to Dow each year. As such, it is critical to ensure that our suppliers and, in turn, our suppliers' suppliers, align to Dow's ESG priorities and strategies. Dow selects and manages its suppliers based on a robust set of criteria, ranging from performance and economics to ESG factors. Engaging suppliers that prioritize environmental issues is critical for Dow. In the reporting year, suppliers were engaged on ESG factors through data collection, policies and guidelines like the Supplier Code of Conduct ([Supplier Code of Conduct](#)| [Public Policy](#) | [Corporate](#)), which stipulates the requirements related to Respect the Environment, Protect Health and Safety, and Protect Communities During Transportation.

In addition, some Dow procurement selection processes include additional environmental criteria related to a certain sector or commercial area. Beginning in 2022, ESG criteria will be used for all sourcing decisions.

The management, objectives and requirements for our suppliers and supplier evaluation include an evolving set of specific actions:

1. Inspiring Dow's procurement staff and suppliers to learn more about sustainability issues via various training opportunities, share best practices on how to integrate sustainability into their activities, and to continuously identify new innovations and collaboration opportunities.
2. Working with suppliers to collect ESG data on an annual basis via programs like CDP and Ecovadis. Results are then integrated into supplier relationship management frameworks and improvement action plans.
3. Recognizing that our chemical supply chain management is a collaborative topic, Dow will use the Together for Sustainability (TfS) and Ecovadis partnership to expand our audit program for suppliers associated with potential ESG risks.
4. Finally, we seek continuous improvement, by not only lowering our supply chain's environmental impact, but also by identifying new innovations to advance a low-carbon, circular and fair economy. These improvements are tracked through our supplier ESG data collection program, as well as through our success stories based on individual supplier engagements. In addition, Dow is continually monitoring our supply chain for potential ESG risks, flagging materials, regions or individual suppliers that could represent a negative environmental impact.

On a high level, Dow considers the management approach effective when our suppliers are not associated with environmental claims or legal action.

Management Approach Components	Description
Commitments	Dow aims to leverage our supply chain to improve ecological and social outcomes and contribute to the transition to a more sustainable economy.
Targets	As part of our WLO goal, Dow will demonstrate a 50% improvement in a Transportation Stewardship Index through progress in incident-free performance, leading-edge programs to influence logistics and raw material suppliers, and risk reduction across the value chain by 2025.

**Dow Disclosures – GRI Content Index**

Responsibilities	The management of supplier ESG is broad and encompassing. It begins with the need to embed sustainability into every purchase Dow makes, using ESG criteria as a decision-making factor and ensuring the suppliers agree to our Code of Conduct for Suppliers. Once on board as a supplier, ESG is integrated into supplier relationship management frameworks, such as advancing ESG topics during regular supply meetings, and measured via ESG data collection programs like CDP and Ecovadis. These engagements will form the foundation of Dow's new Supplier ESG Program, launching in 2022, which will become the pathway through which Dow engages on ESG topics with suppliers.
Specific Actions	<p>Dow's most significant action was the launch of its multigenerational plan for Sustainable Procurement in 2021, evolving our ESG program from compliance to a culture that embeds sustainability as a strategic and financial advantage. Some key highlights of this initiative:</p> <ul style="list-style-type: none">• We updated our Supplier Code of Conduct.• 105 suppliers responded to our CDP Program request, and we are following up to address gaps.• We implemented a Supplier Dashboard to inform Dow decision-makers of Dow's internal supplier ESG scores.• Launched multiple training sessions to support the rollout of this program. <p>Dow began to monitor suppliers potentially associated with high greenhouse gas emissions via the CDP Supply Chain Program, allowing for visibility of our suppliers' climate impacts and strategy over time, building on our continuous efforts to monitor our supply chain for environmental impacts. Continuing this journey, Dow will begin to request ESG data from suppliers associated with high spend and/or high ESG risk using the Ecovadis platform in 2022.</p>

308-1 New suppliers that were screened using environmental criteria**OMISSION 308-1 New Suppliers that were screened using environmental criteria**

Information not available. Dow assessed 105 suppliers on climate change issues, representing 31% of Dow's spend, but did not track how many were new versus existing. We will continue to annually assess mechanisms to be able to report this information in the future.

308-2 Negative environmental impacts in the supply chain and actions taken

Dow focused its environmental assessments during the reporting year on key ESG topics, including climate and deforestation. 2021 marked our first year capturing climate data via CDP, and Dow assessed 105 suppliers on climate change issues, representing 31% of Dow's 2020 spend. In this first assessment year, the information was simply collected for consideration. Actions were not taken with individual suppliers in the reporting year; however, beginning in 2022, via Dow's forthcoming Supplier ESG Program, suppliers will be asked to commit to corrective action plans based on environmental assessments through CDP, Ecovadis and other frameworks.

Outcome from Assessments	Response
Number of suppliers assessed for environmental impacts.	105
Number of suppliers identified as having significant actual and potential negative environmental impacts.	0
Significant actual and potential negative environmental impacts identified in the supply chain.	None
Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which improvements were agreed upon as a result of assessment.	0%
Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which relationships were terminated as a result of assessment, and why.	0%

**Dow Disclosures – GRI Content Index****GRI 400: Social Standards****GRI 401: Employment 2016**

401-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#)

At Dow, we're a diverse and inclusive community of relentless problem-solvers that offers the daily opportunity to contribute our perspective, transform industries and shape the future. We believe in putting people first. Our people are using their unique perspectives and backgrounds to find new ways to solve challenges and exceed customer expectations in an environment of inclusion, diversity and equity.

Dow's companywide People and Culture strategy is focused on driving the outcomes of a positive employee and business success through our deliberate efforts to invest in ALL people and institutionalize an ALL INclusive culture.

Employees are invited to provide feedback through Voice, our annual all employee survey, as well as quarterly pulse surveys. Topics on these surveys are focused on satisfaction with inclusion and belonging, wellness and safety, tools and technology, and leader effectiveness. In addition, an overall measure of Employee Experience – based on feelings of pride, inspiration, and belonging – is tracked each quarter. In 2021, our Overall Satisfaction was rated favorable by 71% of employees.

Management Approach Components	Description
Commitments	<ul style="list-style-type: none">• As part of our dedication to the diversity of our workforce and fostering an inclusive culture, Dow is committed to equal opportunities in employment.• Dow's benefits offerings reflect our commitment to employees and their future.• We have a pay-for-performance compensation philosophy that includes programs such as:<ul style="list-style-type: none">– Competitive base salary– Annual bonus and/or other short-term incentives– Long-term incentives• We recognize the many demands on Dow people's time – in the workplace, at home and in the community. Dow is committed to a workplace strategy that enables and empowers flexibility, grounded in role requirements and individual needs. Design Your Day is Dow's new approach to workplace flexibility.
Targets	<p>Dow's employment is based on company and organizational needs.</p> <p>As part of Dow's 2025 Sustainability Goals, Dow will positively impact students and teachers through programs in support of STEM education, achieving 10% of workforce participation with 100,000 teachers and 500,000 students impacted.</p> <p>Additional Engaging for Impact activities will support Dow's overall strategy to achieve top-quartile scores for Employee Engagement, and 100% of core leadership development programs will include sustainability impact exposure and opportunity to help build a culture of volunteering.</p>
Responsibilities	Our People and Culture strategy is led by chief human resources officer and chief inclusion officer Karen S. Carter, who reports directly to Chairman and Chief Executive Officer Jim Fitterling.

**Dow Disclosures – GRI Content Index****401-1 New employee hires and employee turnover**

Total number and rate of new employee hires during the reporting period, by gender, age group and U.S. ethnic minority:

Description	Number	Rate
New Employee Hires by Gender		
Men	1,736	65.4%
Women	917	34.6%
New Employee Hires by Age		
<30	1,102	41.5%
30-50	1,373	51.8%
50+	178	6.7%
New Hires by U.S. Ethnic Minority		
U.S. Non-Minority	373	68.7%
U.S. Ethnic Minority Total	170	31.3%
American Indian or Alaska Native	1	.2%
Asian	29	5.3%
Black or African American	58	10.7%
Hispanic or Latino	67	12.3%
Native Hawaiian or Other Pacific Islander	0	0%
Two or More	15	2.8%
New Hires by Region		
Europe, Middle East, Africa and India	619	23.3%
Latin America	154	5.8%
North America	1493	56.3%
Asia Pacific	387	14.6%

**Dow Disclosures – GRI Content Index**

Total number and rate of employee turnover during the reporting period, by gender, age group and U.S. ethnic minority:

Description	Number	Rate
Voluntary Turnover by Gender		
Men	860	3.4%
Women	399	4.0%
Voluntary Turnover by Age		
<30	320	7.5%
30-50	604	2.9%
50+	335	3.2%
Voluntary Turnover by U.S. Ethnic Minority		
U.S. Non-Minority	506	4.2%
U.S. Ethnic Minority Total	184	4.5%
American Indian or Alaska Native	2	3.4%
Asian	42	4.5%
Black or African American	70	5.1%
Hispanic or Latino	57	3.7%
Native Hawaiian or Other Pacific Islander	0	0%
Two or More	13	6.6%
Voluntary Turnover by Region		
Europe, Middle East, Africa and India	230	2.2%
Latin America	81	2.7%
North America	734	4.2%
Asia Pacific	214	4.4%
Global Dow	1,259	3.5%
Involuntary Turnover by Gender		
Men	1,183	4.7%
Women	310	3.1%
Involuntary Turnover by Age		
<30	64	1.5%
30-50	477	2.3%
50+	952	9.1%



Dow Disclosures – GRI Content Index

Description	Number	Rate
Involuntary Turnover by U.S. Ethnic Minority		
U.S. Non-Minority	602	5.0%
U.S. Ethnic Minority Total	194	4.7%
American Indian or Alaska Native	3	5.2%
Asian	18	1.9%
Black or African American	127	9.2%
Hispanic or Latino	42	2.7%
Native Hawaiian or Other Pacific Islander	0	0%
Two or More	4	2.0%
Involuntary Turnover by Region		
Europe, Middle East, Africa and India	374	3.6%
Latin America	155	5.2%
North America	833	4.8%
Asia Pacific	131	2.7%
Global Dow	1,493	4.2%

401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees

Permanent full-time and less-than-full-time employees are provided a wide variety of benefits. Dow's benefit plans are designed to meet the needs of our employees, while remaining competitive with the market and aligned with our company strategy. They are also designed to build on the social security benefits provided in each country and, as a result, vary by country. We offer the following benefits to both full-time and part-time employees at all our significant locations of operation. These locations include but are not limited to all countries with more than 50 employees covering greater than 99% of our global workforce.

- Pension plans – either defined benefit or defined contribution plans
- Medical plans – often including prescription drugs coverage and dental
- Life insurance
- Disability protection
- Accident insurance
- Paid vacation, holiday and leave programs
- Business travel accident insurance



Dow Disclosures – GRI Content Index

401-3 Parental leave

Dow's new global parental leave policy is intended to provide flexibility, work-life balance and an equitable offering for all new parents, birthing and non-birthing, including adoptive and foster parents, regardless of gender. Dow's global parental leave policy provides 16 weeks of paid time-off, which can be taken during the 12 months following the birth of a child. The policy applies to all full- and part-time employees, subject to collective bargaining negotiations where applicable.

OMISSION 401-3b through 401-3e Parental leave

Information not available. We will continue to annually assess mechanisms to be able to report this information in the future.

GRI 403: Occupational Health and Safety 2018

403-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#)

Dow uses a comprehensive operating discipline management system that includes policies, requirements, processes, best practices and procedures associated with Environment, Health and Safety, and is integrated with Quality, Operations and related external standards. Within this system, we lay the foundational expectations of hazard assessment and risk mitigation, aligned to Responsible Care® and in compliance with OSHA 18001 or ISO 45001 standards. We require each organization within Dow to implement and use Health and Safety Programs to:

- Identify, assess, and eliminate or mitigate hazards
- Prevent unsafe acts and conditions
- Maintain and improve the health of personnel
- Foster communication on health and safety issues

We require self-assessments, regular inspections and independent internal audits to monitor compliance and identify gaps and best practices. Audit results are reviewed quarterly by Dow's Executive Sustainability Team, which is accountable to Dow's Executive Leadership Team and serves as Dow's management governance body for the company Sustainability, Environment, Health & Safety Policy. At least annually, the Environmental, Health, Safety & Technical Committee of the Board reviews EH&S audit program findings and results.

Management Approach Components	Description
Commitments	Aligned with the global management system, every work group at Dow must establish site- and unit-specific procedures that assure full implementation of our health and safety standards and compliance with local regulations.



Dow Disclosures – GRI Content Index

Targets	<p>Annually, we set performance targets aligned with our sustainability metrics for health and safety. Elements include transportation safety, environmental stewardship, decrease in unplanned events, healthy culture improvement, reduced chronic health risks (e.g., noise), health improvement and occupational injury illness reduction. As part of our World-Leading Operations Goals, we have the following milestones:</p> <ul style="list-style-type: none">• Dow will strive to eliminate fatalities, significantly reduce severe injury and illness incidents, and maintain the total recordable injury and illness rate at industry-leading levels.• Dow will strive to eliminate all process safety events that impact our people, our communities and the environment.• Dow will strive to eliminate all preventable Motor Vehicle Accident (MVA) fatalities.• Dow will have a Total Worker Health® (TWH) implementation that comprehensively controls workplace health risks, protects workers and improves the health of Dow people (Healthy Culture, Healthy Workplace, Healthy People).• Dow will demonstrate a 50% improvement in a Transportation Stewardship Index through progress in incident-free performance, leading-edge programs to influence logistics and raw material suppliers, and risk reduction across the value chain.• Dow will strive to eliminate severe transportation incidents that impact people, property and the environment in the communities through which our products, raw materials and intermediates flow.
Responsibilities	<p>In addition to an Environmental, Health, Safety, and Sustainability (EHS&S) organization providing resources with expertise in occupational health and safety, additional roles are in place across business, manufacturing, research and supply chain with expertise in occupational health and safety. These roles support and institutionalize the application of the management system to protect workers.</p> <p>Management system elements are owned by experts with deep knowledge of aspects of occupational health and safety and who stay current on emerging trends and industry best practices and help to build those back into the management system to further strengthen occupational health and safety controls for our workers.</p> <p>Each employee has a responsibility to ensure that our products and operations meet applicable government or Dow standards, whichever is more stringent, as well as for using required operating and maintenance procedures.</p> <p>Performance monitoring is in place for each of our targets and commitments as well as for performance against goals, execution of our work processes, adherence to our policies and standards as well as for environmental, safety, sustainability and health performance.</p> <p>Roles and responsibilities are defined at multiple levels, including our policies, standards and procedures. Workers who fulfill each role in the management system are trained in the requirements, work process, tools and procedures that are needed for the role, and periodically depending upon the identified re-training requirements for each role.</p> <p>Team meeting frequency varies from quarterly to biweekly depending on the site.</p> <p>Decision-making authority is given to the teams with Dow leaders having final approvals. All workers are represented by these teams and some sites also include representation for select external contracting companies.</p>



Dow Disclosures – GRI Content Index

	<p>In 2021, we elevated the Heavy Equipment and Moving Vehicle Standard to a Life Critical Standard, which requires additional training to ensure consistent application. We also added new requirements for additional protection using a hierarchy of controls approach for heavy equipment or moving vehicles operating in reverse.</p> <p>Specific Actions</p> <p>To reduce the number of injuries related to hand-held portable tool usage, we developed a new Hand-Held Portable Tools standard. The standard was piloted extensively and translated to over 15 languages prior to the anticipated 2022 rollout.</p> <p>To address risks associated with fatigue, we drafted and piloted a new Fatigue Risk Management standard in 2021. Development will continue in 2022 as the standard is fine-tuned and implemented globally.</p>
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403-1 Occupational health and safety management system

Dow's management system includes policies, requirements, processes, best practices and procedures and is integrated with Environment, Health and Safety, Quality and Operations standards. Our system is grounded in requirements of the U.S. Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), and incorporates some non-U.S. region-specific regulatory requirements, as well as our own more stringent requirements.

Our management system covers Dow workers regardless of whether they are working on or off Dow premises, and all contracted workers performing work on Dow premises. We also include contractors in our calculated OSHA injury rate performance to drive inclusiveness at our sites. Workers who deliver materials (e.g., package delivery services) are excluded from our full management system but receive an orientation if entering our sites. The management system is designed and implemented by professionals employed or contracted by Dow (e.g., Occupational Health, Industrial Hygiene and EH&S Delivery).

403-2 Hazard identification, risk assessment and incident investigation

As a chemical company it is important to understand that chemicals are in closed systems; exposure can occur when they are opened. There is no contact between chemicals and workers during normal manufacturing processing. We institutionalize safe practices to open lines or reactors and when we shut down for large maintenance such as a turnaround.

Hazard Identification

Initial and routine hazard analysis programs are in place. A team of toxicologists, industrial hygienists and physicians apply their expertise and knowledge of the scientific and medical literature and work processes to monitor trends and regulations in worker health assessment. Worker health hazards are considered as part of the risk review process for new products and changes in the manufacture of current products.

Qualitative exposure assessments are conducted for chemical, physical, ergonomic and biological hazards overseen by professional industrial hygienists. We use a hierarchy of controls to mitigate worker safety and health risks. Industrial hygiene guidelines drive use of engineering controls and appropriate personal protective equipment. There is regular evaluation and periodic re-evaluation of process safety hazards via our Process Hazard Analysis and Layers of Protection Analysis methodologies. Personal safety risk analysis is performed as a part of numerous work processes (e.g., permit to work, safe work permit, pre-task analysis and pre-startup safety reviews).

Risk Assessment

Occupational Health and local EH&S operations personnel identify workers at potential risk.

Dow's global ODMS includes requirements, work processes and tools to ensure that incident investigations are identified, conducted, and include requirements and recommendations for improvements. This includes a list of global trigger criteria that identify the events that require an investigation. Dow's management system is externally assessed and meets both ISO-14001, ISO-9001 and Responsible Care® code requirements.



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Quality is driven through the requirements, performance principles and work processes embedded in ODMS. Compliance with ODMS and regulations is tracked through self-assessments, audits, management system reviews and overdue mechanical integrity inspections. Behavior-based interactions and interventions, and environmental and safety incidents undergo investigation – and in cases where there is a potential of severe consequence, a formal root-cause investigation – to identify opportunities for improvement. The results of medical surveillance exams (performed to assess patterns of recognized occupational illnesses and breakdown in protective measures) are used to provide feedback and continuous improvement. Employee feedback is encouraged through site safety meetings and senior leadership visits.

Workers receive training on the management system and its components applicable to their role. Knowledge and ability to perform their role within the management system is validated.

We maintain an independent internal audit process and every company location is audited with frequency based on the relative risk of the activities at each location. Dow's EH&S Auditing Group is aligned to Dow's Corporate Auditor, who reports to the Audit Committee of the Board and administratively to Dow's CFO. Periodic external audits are based on government requirements. Additionally, more than 75% of our large U.S. and Canadian manufacturing sites participate in voluntary programs, which include additional auditing, for example, OSHA's Voluntary Protection Program and the Canadian Federation of Construction Safety Associations' Certificate of Recognition program (COR™). Audit findings are shared for global learning and improvement. Gaps identified in these internal audits are addressed via corrective or preventive actions captured in our global corrective and preventive action (CAPA) repository, with gap closure required within 12 months of the audit.

Incident Investigation

We apply root cause investigation (RCI) methodology for all recordable injuries and many of our near-miss situations. A near-miss situation is where the potential existed for a life-impacting injury. Consistent use of the methodology ensures we understand the cause and take corrective actions at the point of the problem, as well as at the strategy and management system levels. We use a hierarchy of controls approach to develop robust protection layers designed to prevent repeat incidents.

Workers have a direct line of sight to potential hazards. They are expected and encouraged to identify, report and intervene when unsafe or unhealthy work conditions are observed. They also positively recognize coworkers making safe choices. Worker input on hazards and solutions is part of local near-miss programs and leveraged where appropriate.

403-3 Occupational health services

Through baseline and periodic medical surveillance exams and testing, Dow's Occupational Health team ensures identification of adverse health effects among employees based on role or potential exposure to occupational hazards. Exam content and frequency are defined in Dow's ODMS. We use the same rigorous standards globally. Health results are documented in our health records system and carefully monitored for health trends.

Travel health services (e.g., counseling, infectious disease, vaccinations and access to local care) reduce risk for endemic or acute health problems while on business.

The impact of personal health on ability to work is assessed through fitness for duty consultations. Worker health is protected or enhanced through workplace tobacco and substance-use policies, a fatigue management system, ergonomic assessment referral, health engagement and well-being programming.

Occupational Health staff hold recognized qualifications and accreditations. Occupational Health maintains a personnel list, capturing those items necessary for the role and audits this list twice a year. For external clinics this is part of an established quality review of the facility.

Workers' personal health information adheres to the [Dow Code of Conduct Policy | Public Policy | Dow Corporate](#)⁷ for data protection. Occupational Health does not share personal health information outside its subfunction without the informed consent of the individual and on a need-to-know basis with respect to work-related injury/illness cases for classification purposes. We use only aggregated data (personal identifiers removed) in reporting health data. Confidentiality training is assigned prior to access to medical records.

Every Dow employee has access to occupational health services at no cost through an on-site company-managed clinic at our major sites, or an off-site provider managed by Dow Occupational Health. Clinical treatment is available to all employees for work-related injury or illness, and employees can access occupational health care on paid work time.



Dow Disclosures – GRI Content Index

403-4 Worker participation, consultation, and communication on occupational health and safety

At all levels of the organization, safety and health are part of our conversations with employees. From our CEO to business and functional leaders to site leaders, our safety performance and top issues are reviewed and discussed to keep safety front and center. In addition, at all Dow locations globally, workers are invited to participate in Health and Safety teams at the facility and site level. At the local level, employees participate in root cause investigations (RCIs), “fresh eyes” assessments, internal audits and numerous other continuous improvement activities. Moreover, all workers are expected to comply with regulatory requirements and attend safety meetings where select trainings and communications are provided and discussed for the workforce at large.

Our workforce is represented either by monthly joint-management worker safety committees or participate in monthly safety meetings, where we review and act upon worker safety data and concerns, and develop implementation plans for new or improved government or company health and safety requirements. Decision making authority varies by site, but includes EH&S professionals and leadership with input from affected workers.

403-5 Worker training on occupational health and safety

Training needs are assessed based on job role, job location, and knowledge and skill performance assessments. Subject matter experts work with learning specialists to design training content and determine the delivery method appropriate for the training needs risk level. Training topics align with our EH&S ODMS and cover Transportation Safety and Security; Emergency Preparedness and Response; Employee Health and Safety; Pollution Prevention; Process Safety; Product Stewardship; and Security. Where needed, based on role or local requirements, training content is translated.

All employees and contractors receive occupational health and safety training. The frequency of the training is dependent on risk, performance as determined by needs assessments and regulatory requirements. Training is offered free of charge during working hours. In the case of Operations, some roles receive overtime pay to attend training sessions.

Training effectiveness is assessed dependent on role and risk. Knowledge checks are assessed in web-based training, at the end of instructor-led training, via in-field performance assessments or by training review boards.

403-6 Promotion of worker health

Emergency care is provided to all (employees, contractors, visitors). Access to non-occupational care for Dow employees is through on-site Dow clinics, through Dow Family Health Centers (U.S.) or to external community health care facilities. Employee costs may be offset through Dow-provided or subsidized medical insurance coverage. In general, Dow does not offer medical care to non-Dow employees, such as contractors, unless required by regulations.

The company has embraced Total Worker Health™ as part of its World Leading Operations sustainability targets. It integrates occupational safety and health protection with health promotion through the elements of Healthy Culture, Healthy People and Healthy Workplace. By 2025, Dow strives to reach 100% Total Worker Health™, which includes three key indices. The Healthy Culture index, which includes achievement of healthy meal choices for on-site cafeterias and the promotion of staffed and unstaffed fitness centers, is an example of one such index. As part of the Healthy People assessment, we make our employees aware of their health risks and target health promotion programs based on the site population's most significant risks.

Recognizing that mental health issues are on the rise, we continue to encourage our employees and leaders to utilize and promote the Dow employee assistance programs, which have long been available for all our employees globally.

No voluntary programs or services are associated with decisions regarding employment or engagement of workers.



Dow Disclosures – GRI Content Index

403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships

Dow has a multipronged approach toward preventing and mitigating occupational health and safety impacts linked by business relationships, which includes:

- Dow's transportation safety and security requirements are communicated to help businesses and functions minimize the risk of harm posed by chemicals in the supply chain to the public, contractor and supply chain workers, and the environment. The program includes a supply chain security program that meets or exceeds applicable governmental and transportation regulation requirements, in addition to Responsible Care® Security Code of Management Practice. The program also includes distribution and business risk reviews and management; safe handling guidelines for products in transport; packaging and container requirements qualification; monitoring and periodic assessment of logistics service providers per Responsible Care® principles or approved equivalent; safe handling of chemicals at loading and unloading facilities; and transportation incident reporting and investigation.
- The External Manufacturing work process and standard set minimum performance expectations for external manufacturers to demonstrate adherence to sound health, safety, security, and environmental principles and operating philosophy such as Responsible Care®. External manufacturers agree to submit to an initial on-site Environmental, Health, Safety and Quality (EH&S-Q) Assessment and subsequent EH&S-Q Audits at a frequency determined by Dow based on risk.
- Businesses establish a Product Stewardship Program to ensure that health, safety and environmental protection is an integral part of designing, manufacturing, marketing, distributing, using, recycling and disposing of Dow products.
- Dow organizations meet applicable internal and external Good Manufacturing and Distribution Practice requirements for active pharmaceutical and cosmetic ingredients, as well as food contact and food additives and pharmaceutical excipients.
- When Dow employees operate the assets of a third party, such as part of our Dow Services Business, we ensure that, at a minimum, the Dow EH&S standards will be met to ensure the same level of protection of the workforce and the environment.
- The Global Remediation group manages Dow's global portfolio of remediation liabilities. Mitigation of risk to human health and the environment is the primary objective in remedial plans. Selected solutions for remediation opportunities are based on risk assessment results; highest and best land use and sustainability; full compliance with legal requirements; and ensuring alignment with Dow's core values around protecting our people and our planet.

Additionally, Dow selects and manages its suppliers based on a robust set of criteria ranging from performance and economics to ESG factors. See [GRI 308-103 Supplier Management Approach](#) for more information.

403-8 Workers covered by an occupational health and safety management system

100% of workers whose work and/or workplace is controlled by Dow are required to comply with health and safety management system requirements. We also employ a comprehensive permit-to-work system that facilitates a robust dialogue around hazards and mitigation of such hazards for each task.



Dow Disclosures – GRI Content Index

403-9 Work-related injuries

In the table below you will find Dow's three-year total work-related injuries. Recordable work-related injuries include Dow employees and contractors performing work at Dow locations. Dow stands out in the industry by integrating contractor recordable work-related injuries into its overall tracking. Recordable work-related injuries are considered as Recordable Injuries/Illnesses. Where the term "injuries" is used, it refers to Injuries/Illnesses, unless specified otherwise. Rates are calculated based on 200,000 hours worked.

Category	2021	2020	2019 [↗]	Employees and Contractors	
				Employees and Contractors	
Fatality Count	0	1	1		
Fatality Rate	0	0.001	0.001		
High-Consequences Work-Related Injuries Incident Count	1	1	1		
High-Consequences Work-Related Injuries Incident Rate	0.001	0.001	0.001		
Recordable Work-Related Injuries Incident Count	99	86 ¹	127		
Recordable Work-Related Injuries Incident Rate	0.14	0.12	0.16		
Worker Hours	139,726,491	140,053,502	155,263,916		

¹ In 2021, a 2020 injury was reclassified from a RWC (Restricted Work Case) to a FAC (First Aid Case).

Category	2021	2020	2019 [↗]	2021	2020	2019 [↗]
				Employees Only		Contractors Only
Fatality Count	0	0	0	0	1	1
Fatality Rate	0.000	0.000	0.000	0.000	0.003	0.003
High-Consequences Work-Related Injuries Incident Count	1	0	0	0	1	1
High-Consequences Work-Related Injuries Incident Rate	0.003	0.000	0.000	0.000	0.003	0.003
Recordable Work-Related Injuries Incident Count	49	45	68	50	41	59
Recordable Work-Related Injuries Incident Rate	0.12	0.11	0.16	0.16	0.14	0.16
Worker Hours	76,067,581	79,598,857	83,383,059	63,658,910	60,454,645	71,880,857

In 2021, the most common types of work-related injuries for Dow employees and contractors were due to slips, trips and falls from non-elevated conditions. 2021 work-related injury types are consistent with the most common work-related injuries observed in 2020.

Dow has implemented Life Critical Standards (LCS) to minimize the likelihood of high-consequences work-related injuries. These include elevated work, electrical work, line and equipment opening, isolation of energy sources, safe work permit, hot work, confined space entry, hydro blasting pressure washing, heavy equipment and moving vehicles. An LCS gap assessment tool, rolled out in the 4th quarter of 2021, will allow facilities to identify and prioritize for gap closure.



Dow Disclosures – GRI Content Index

403-10 Work-related ill health

In the table below you will find Dow's three-year total work-related ill health. Recordable work-related injuries include Dow employees and contractors performing work at Dow locations. The majority of our illness counts relate to hearing, so we are taking the following actions:

- All noise hazards have been identified based on industrial hygiene assessments and noise monitoring.
- Noise hazards in the workplace caused or contributed to these work-related hearing threshold shifts.
- Noise hazards are identified, prioritized and then projects are put in place to reduce or eliminate noise hazards. These projects include elimination, engineering controls, and improved personal protection equipment (PPE) and administrative controls. (Refer to P1 Health hazard elimination efforts, which include P1 noise hazards).

Category		2021	2020	2019 ^{1↗}
Employees and Contractors	Fatality Count (Illness)	0	0	0
	Total Recordables (Illness)	7	2	22
Employees Only	Fatality Count (Illness)	0	0	0
	Total Recordables (Illness)	7	1	22
Contractors Only	Fatality Count (Illness)	0	0	0
	Total Recordables (Illness)	0	1	0

¹ Total recordables updated to be in line with Dow and OSHA criteria for illness/Occupational Hearing Loss determination. Additionally, hearing loss events have been reclassified from injury classifications to ill health to align with GRI standard.

GRI 404: Training and Education 2016

404-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#)

Dow is committed to a continuous learning approach that will result in a more engaged and future-ready workforce. We have streamlined the learning experience through role-based curriculums centralized within our learning management system, Diamond Learning.

The company continues evolving towards an individualized and digital learning approach that incentivizes employees to be accountable for their own learning experience, while acknowledging the value and purpose of traditional learning methodologies (e.g., on-the-job learning). Dow continues to invest and prioritize leadership and people skills development as the baseline for the company's success.

Management Approach Components	Description
Commitments	Dow is committed to providing a career-long learning journey to all employees as the key enabler to maintain our competitiveness. Our workforce needs to be agile and adaptable to meet continuously evolving skills and job requirements.
Responsibilities	Our development model is designed by the Human Resources Center of Expertise, governed by the Talent Management and Learning discipline. Talent Management provides the tools and platforms Dow's functional learning teams need to be successful.



Dow Disclosures – GRI Content Index

Specific Actions	<p>During 2021, Dow kicked-off a global program to modernize our workforce capabilities with the goals of enhancing our continuous learning and development approach and upgrading our learning model, governance and learning management platforms.</p> <p>Below are several examples of key development initiatives delivered to leaders and employees during 2021:</p> <ul style="list-style-type: none">• LEAD - Corporate leadership-oriented program focused on Dow strategy and priorities, leadership mindset, change management and financial acumen.• Leader's Foundations Program delivered to more than 330 leaders providing baseline concepts and tools to support employees' annual performance and development cycles.• Functional learning programs focused on specific needs such as change management, inclusive leadership, communication and interpersonal effectiveness.• Total health, nutrition and wellness centers, and associated programs, mobile apps and counseling.• ERGs that support a variety of development opportunities such as networking, mentoring and sponsorship programs.• Leader and employee toolkits to prepare for employee career development discussions and action plans.• A global educational assistance program supporting employees in pursuing external training certifications, new language skills, executive programs and other educational opportunities for continuous career development.• Online benefits and counseling available to coach employees during key life moments including retirement planning.• Financial planning and well-being seminars.
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OMISSION 404-1 Average hours of training by category and gender

Information not available. We will continue to annually assess mechanisms to be able to report this information in the future.

404-1 Average hours of training per year per employee

Dow employees logged an average of 40.7 training hours through our digital learning platforms and regional based initiatives. People Leaders recorded an additional 30.7 training hours for the different global programs designed and implemented during 2021 to keep pace with global challenges and needs throughout our business and functional teams.

404-2 Programs for upgrading employee skills and transition assistance programs

Dow supports employees' continuous career development through My HR Portal, an online people and data insights platform where employees document their career experiences, job interests, track performance and development goals, receive continuous feedback and may apply to new career opportunities. Dow also manages employee learning through tailored learning curricula via Diamond Learning.

Dow is committed to providing transition assistance to eligible employees impacted by workforce restructuring. During 2021, we continued to offer outplacement services to employees separated from Dow at no cost. These outplacement services include career and life coaching, resume optimization, networking, and interview preparation to guarantee a meaningful employee experience throughout this transitional career stage.

Dow recognizes that there are potential social impacts associated with our climate strategy and transition. Consistent with the Paris Agreement on climate change, we commit to ensuring a Just Transition of the workforce and the creation of decent work and quality jobs as part of our transition. In fact, we believe that our technology transition and innovations will create quality jobs consistent with the recent announcement of our net-zero carbon emissions integrated ethylene cracker and derivatives site in Alberta, Canada that will triple the site's capacity. The project is expected to create 400 to 500 permanent jobs at Dow.



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404-3 Percentage of employees receiving regular performance and career development reviews

Dow leaders are expected to partner with their team members to identify strengths and opportunities for continuous development. Our performance culture cycle finalizes every year with an annual review. In preparation, leaders gather multi-rater feedback throughout the year through the online My HR Portal platform to enhance a digitalized, accurate and high-quality discussion ensuring multiple inputs before making compensation decisions.

For the 2021 performance cycle, 96.3% of our active employees were eligible to receive an Annual Performance Review. The remaining 3.7% were ineligible due to employment status and local contractual agreements or were hired after the launch of year-end performance cycle. Of the eligible employees at the end of 2021, 95.8% received a documented 2021 performance summary. Compared to the overall eligible populations, there were no meaningful differences between employees who did or did not receive a performance summary across gender or employee category.

Gender	Received Summary	Employee Category	Received Summary
Men	95.3%	Executive	100.0%
Women	96.9%	Director	99.5%
		Manager	97.0%
		Non-Management	95.7%

GRI 405: Diversity and Equal Opportunity 2016

Management approach

See also: [GRI 103 Management Approach \(General\)](#)

Every Dow story starts with our people. Together, our 35,700 employees form an inclusive community of problem-solvers who help us deliver innovative solutions and a positive customer experience, while transforming industries and shaping a sustainable future. Attracting and retaining world-class talent is the key to maintaining Dow's competitive advantage.

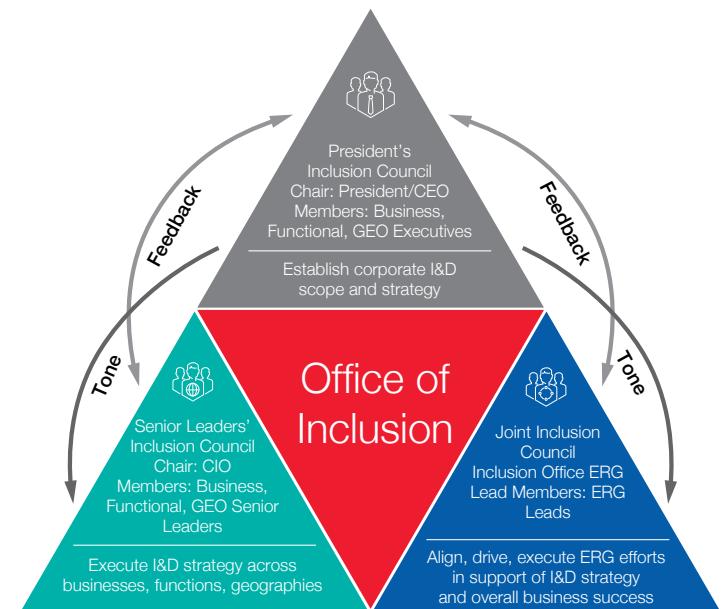
The Talent Pillar of Dow's ALL IN 2025 strategy ensures that ALL employees, irrespective of gender, race or ethnicity have an equal opportunity to thrive. We are committed to diversifying our workforce, including representation of women and U.S. ethnic minorities at senior management levels.

Management Approach Components	Description
Commitments	As part of our dedication to the diversity of our workforce and fostering an inclusive culture, Dow is committed to equal opportunities in employment. In 2021, we updated Dow's Inclusion, Diversity and Equity Strategy – ALL IN 2025, which focuses on leading with inclusion, elevating our focus on diversity, and embedding equity into our practices, policies and processes. And we outlined bold new actions to deliver breakthrough results by 2025, while amplifying transparency and accountability.
Targets	Dow's 2021 Annual Performance Award program included ESG metrics and further drove accountability across the organization. This design was approved by our Board of Directors and holds all members of Team Dow accountable for delivering on our company ambition by including targets on customer experience, sustainability, and inclusion and diversity (I&D). The I&D metrics included global ERG Participation, Global Representation of Women, and U.S. ethnic minority Representation.



Dow Disclosures – GRI Content Index

	<p>Dow's global ID&E strategy is led by chief human resources officer and chief inclusion officer Karen S. Carter, who reports directly to Chairman and Chief Executive Officer Jim Fitterling. This strategy has been endorsed by Dow's Board of Directors, and progress is reviewed by the Compensation and Leadership Development Committee of the Board.</p> <p>Three Inclusion Councils drive the ID&E strategy from the top of the company and across the enterprise.</p> <p>The President's Inclusion Council defines and supports Dow's ID&E strategy from the top.</p> <ul style="list-style-type: none"> • The Senior Leaders' Inclusion Council influences change through senior and mid-level business, geographic and functional leaders. • The Joint Inclusion Council collaborates to drive maximum employee engagement through ERG leadership. <p>This three-tiered approach is designed to represent and reach employees around the globe, while providing autonomy to set ID&E priorities and plans that are relevant and appropriate to Dow's businesses, functions and geographies. Although each council plays a unique role, there is collaboration between all three. This governance structure drives enterprise-wide alignment, engagement and progress.</p>
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405-1 Diversity of governance bodies and employees

Percentage of individuals within the organization's governance bodies by gender, age group and U.S. ethnic minority:

Percent of Directors by Gender		Percent of Directors by Age		Percent of Directors by U.S. Ethnic Minority	
Men	66.7%	<30	0%	U.S. Non-Minority	66.7%
Women	33.3%	30-50	8.3%	U.S. Ethnic Minority Total	33.3%
		50+	91.7%	Black or African American	25.0%
				Hispanic or Latino	8.3%



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Number and percentage of employees per employee category by gender, age group and U.S. ethnic minority:

	Non-Management	Manager	Director	Executive	Total
Total Number of Employees by Gender					
Men	23,586	1,643	146	20	25,395
Women	9,313	906	73	7	10,299
Total Number of Employees by Age					
<30	4,274	15	0	0	4,289
30-50	19,138	1,719	108	3	20,968
50+	9,487	815	111	24	10,437
Total Number of Employees by U.S. Ethnic Minority					
U.S. Non-Minority	10,989	952	110	17	12,068
U.S. Ethnic Minority Total	3,950	256	33	6	4,245
American Indian or Alaska Native	54	4	0	0	58
Asian	850	94	10	2	956
Black or African American	1,332	75	8	2	1,417
Hispanic or Latino	1,499	73	14	2	1,588
Native Hawaiian or Other Pacific Islander	12	1	0	0	13
Two or More	203	9	1	0	213
Percent of Employees by Gender[^]					
Men	71.7%	64.5%	66.7%	74.1%	71.1%
Women	28.3%	35.5%	33.3%	25.9%	28.9%
Percent of Employees by Age[^]					
<30	13.0%	0.6%	0%	0%	12.0%
30-50	58.2%	67.4%	49.3%	11.1%	58.7%
50+	28.8%	32.0%	50.7%	88.9%	29.2%



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	Non-Management	Manager	Director	Executive	Total
Percent of Employees by U.S. Ethnic Minority [^]					
U.S. Non-Minority	73.6%	78.8%	76.9%	73.9%	74.0%
U.S. Ethnic Minority Total	26.4%	21.2%	23.1%	26.1%	26.0%
American Indian or Alaska Native	0.4%	0.3%	0%	0%	0.4%
Asian	5.7%	7.8%	7.0%	8.7%	5.9%
Black or African American	8.9%	6.2%	5.6%	8.7%	8.7%
Hispanic or Latino	10.0%	6.0%	9.8%	8.7%	9.7%
Native Hawaiian or Other Pacific Islander	0.1%	0.1%	0%	0%	0.1%
Two or More	1.3%	0.8%	0.7%	0%	1.3%

For more information, see Dow's Equal Employment Opportunity – Employer Information Report: [EEO-1 Report | Dow Corporate[†]](#)

405-2 Ratio of basic salary and remuneration of women to men

Global pay equity studies have been conducted at Dow for over 20 years to assess fair treatment and ensure our pay practices are being implemented as designed. Our pay equity studies compare the pay gap across all compensation components: base pay, short-term incentives (STI), long-term incentives (LTI), and between genders and U.S. ethnic minorities and non-minorities.

In 2021, we engaged an expert third party as a partner to ensure that we are applying best-in-class methodology to our pay equity analysis and validate our findings.

Pay Ratio measures average base pay¹, STI² & LTI³ for all⁴ majority and minority groups regardless of work performed.

Minority to Majority Pay Ratio	
Global Female to Male Pay Ratio ⁴	0.97:1:00
U.S. Ethnic Minority Pay Ratio	0.97:1:00

¹ Base pay is calculated as the average base pay salary.

² STI is calculated based on the actual short-term incentive award paid.

³ LTI is calculated based on the actual long-term incentive granted to eligible roles.

⁴ Gender is evaluated globally excluding Germany.



Dow Disclosures – GRI Content Index

Closing the pay gap is a part of our commitment to inclusion, diversity and equity. We will continue to conduct our annual pay equity analysis to identify and initiate any necessary gap closure actions. In addition, we will continue to apply an equity lens to our programs, policies and practices with a focus on ensuring our:

- Pay is market-competitive.
- Employee pay decisions are based on a robust and objective framework.
- Pay framework and processes are globally consistent.
- Leaders can clearly communicate our pay equity approach.
- Employees have clarity on how pay decisions are made.

OMISSION 405-2 Reporting by employee category/significant locations of operation

Information not available. We will continue to annually assess mechanisms to be able to report this information in the future.

GRI 413: Local Communities 2016

413-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#)

Our global citizenship strategy directs our investments to accelerate social change and create a more sustainable and equitable future. Dow Company Foundation and company contribution rules govern eligibility requirements for grant-giving across the global organization. An external third party, Charities Aid Foundation America, reviews, vets and validates organization eligibility prior to distributing Foundation grant money outside of the United States. Dow uses CyberGrants giving and philanthropy software to manage and process all Dow grants. Aligned to our measurement framework, priority grantees report on their program's full outcomes using standardized logic models and indicators.

Our management approach and citizenship strategy incorporate employee perceptions using the Voice Annual Employee Survey, as well as community perceptions obtained through a variety of community outreach efforts.

At Dow's manufacturing sites, community awareness and outreach policies are integrated into our operating management discipline system, and sites are audited on this policy on a regular basis. The policy requires stakeholder lists, stakeholder education activities, a community outreach program, communications process and community dialogue process. In particular, at Dow's large manufacturing sites, community stakeholder engagement is a key priority, with resources aligned to ensure strong community involvement along with active listening by both Dow and our community partners.

Management Approach Components	Description
Commitments	Charitable contributions support the following commitment areas: Advancing Sustainable Solutions, Building Inclusive Communities, Developing Tomorrow's Innovators, Engaging Employees for Impact and Collaborating with Communities.



Dow Disclosures – GRI Content Index

Targets	<p>Specific targets within our Engaging for Impact 2025 Sustainability Goal include:</p> <ul style="list-style-type: none">• 70% of Dow employees will contribute time and expertise through volunteer engagement.• Positively contribute to Dow's enterprise goals on overall employee satisfaction and the employee experience metric – through significantly higher than average favorable scores for employees who volunteer.
Responsibilities	<p>Dow's philanthropic work is governed by two teams – the Dow Company Foundation's Board of Directors and the Corporate Contributions Committee. The Foundation is a separately governed, private foundation designed to carry out the charitable efforts of Dow. Its Board of Directors consists of 10 voting members, as well as one retiree and five officers. The Corporate Contributions Committee consists of nine voting members and one officer. Officers advise the members on charitable matters related to legal, tax and finance. Dow's Office of Ethics and Compliance also plays a key advisory role.</p> <p>Local and inclusive committees exist within each region to review grant requests. Regional grant requests of \$50,000 and above are reviewed by a global committee. Grant requests of \$300,000 and above go to the Dow Company Foundation Board or Corporate Contributions Committee for review, approval or declination.</p> <p>Additionally, Dow employees collaborate across communities to develop and implement local community programs to address unmet needs. Dow works closely with nonprofit partners, including local United Way chapters, to understand the needs of the communities and prioritize resources. Among the needs addressed in communities around the world where Dow operates in 2021:</p> <ul style="list-style-type: none">• Food insecurity• Education infrastructure• Health infrastructure• Well-being of Indigenous people• Opportunity for students with disabilities• Environmental literacy• Long-term career and entrepreneurial skills• COVID-19 relief
Specific Actions	<p>In 2021, charitable contributions totaled \$32.4MM. Dow provided 888 grants in 2021 to 653 partner organizations, and 50% of Dow employees reported volunteering. The charitable organizations that received Dow funding last year reported on priority impacts.</p> <p>Investment highlights from 2021 include:</p> <ul style="list-style-type: none">• \$350,000 committed for new ALL IN ERG Fund projects to promote equity, inclusion and diversity.• 8 Business Impact Fund projects totaling \$2MM awarded for shared value projects.• New STEM partnership with Teach for All initiated with \$300,000 grant. <p>Additionally, the Global Employee Relief Fund supported employees and their families through Hurricane Ida, Hurricane Nicholas and flooding in India.</p> <p>In 2021, Dow launched a Community Opinion and Needs Assessment initiative, designed to further inform Dow's approach with data-based and objective insights into the needs of strategic Dow communities (defined as cities near large Dow manufacturing facilities).</p>



Dow Disclosures – GRI Content Index

413-1 Operations with local community engagement, impact assessments and development programs

Across Dow, more than 85% of all sites implement local community engagement programs which include employee volunteerism, donations, serving on community boards, participation in community or municipality committees, and hosting Community Advisory Committees (CACs).

Stakeholder mapping identifies the following as key audiences in community awareness programs: Employees, residents and community representatives, local and state authorities, law enforcement agencies, local emergency planning organizations, CACs, educational institutions, media, customers, suppliers and industrial-park tenants.

Dow sites have a documented Community Outreach Program, which details site operations, products, applications and distribution, corporate social responsibility and projects to protect the community's safety, health and the environment. Dow maintains a dialogue with stakeholders about emergency response plans, reduction of waste and emissions, and we create opportunities to educate and improve community confidence and address community needs. Feedback received from community sources (CAC meetings, local government organizations, industry partnerships, directly from community members, etc.) is addressed to maintain the highest standards of safety, security and emergency preparedness in every Dow community. Community members have access to Dow and Dow-related information 24/7, whether it is through social media, WhatsApp, local community hotlines, Dow websites and/or email. Dow is committed to acting on community input and communicating transparently to ensure our communities where we live and work remain strong and vibrant.

Social impact is defined as ways in which people's lives are improved or contributions to society. For Dow charitable contributions totaling \$100,000 and above, we assess social impact by applying our measurement approach to determine return on investment and understand community outcomes. True Impact, Dow's third-party vendor, completes the evaluation process by working directly with nonprofit organizations to collect and interpret data.

413-2 Operations with significant actual and potential negative impacts on local communities

Reference Note 16 – Commitments and Contingent Liabilities, Environmental Matters and Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, Environmental Matters section of the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

GRI 414: Supplier Social Assessment 2016

414-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#) & [308-103 Supplier Management Approach](#).

We believe that engaging suppliers on climate change is an entry point to a broader discussion on sustainability and social responsibility. By requesting climate data, as Dow did via CDP in 2021, we connected to our supplier's sustainability representatives in a new way and advanced novel conversations on ESG. We are leveraging and expanding this engagement in 2022 to cover a broader suite of ESG topics, including supplier diversity and social topics. We also upgraded our Supplier Code of Conduct to reflect the aspects of social risk and responsibilities and the expectations that we have of our suppliers.



Dow Disclosures – GRI Content Index

Engaging suppliers that prioritize social issues is important. We select and manage suppliers based on a robust set of criteria ranging from performance and economics to ESG factors. In the reporting year, all new suppliers were engaged on ESG factors through data collection, policies, and guidelines like the Supplier Code of Conduct ([Supplier Code of Conduct](#) | [Public Policy](#) | [Corporate](#)). The Supplier Code of Conduct stipulates requirements related to social responsibility including Respect Freedom of Association and Collective Bargaining, No Forced and Compulsory Labor, No Harassment and Abuse of Labor, No Child Labor, No Discrimination, Supplier Diversity, Appropriate Work Hours and Wages, and No Conflict Minerals Sourcing.

In addition, some Dow procurement selection processes include additional social criteria related to a certain sector or commercial area. Beginning in 2022, ESG criteria will be used for all sourcing decisions.

Management Approach Components	Description
	<p>Gender Pay Gap</p> <ul style="list-style-type: none">• Dow is committed to making continued progress in several key areas to advance gender equity and further develop our female talent pipeline• Dow is committed to correcting underlying disparities through pay audits and annual compensation reviews that factor in how we set pay (education, experience, responsibilities and performance).• We are also committed to looking beyond wages to examine bonuses, stock awards, promotion rates and concentration levels by gender in certain jobs.• Dow also looks to eliminate bias in hiring through unconscious-bias training (i.e., inclusive hiring standard, inclusive job descriptions, unconscious bias training and inclusive leadership training).
Commitments	<p>Minimum Wage</p> <ul style="list-style-type: none">• Dow is committed to worker prosperity. We are investing in workforce, education and skills training to create economic opportunity for all workers. <p>Immigration</p> <ul style="list-style-type: none">• Dow supports the rule of law. Immigration policies should make borders secure while also reflecting the realities of the 21st century economy. It must help build a diverse workforce that allows companies to serve global customers, compete in new markets and leverage different perspectives that fuel innovation. <p>Environmental Justice</p> <ul style="list-style-type: none">• Dow is committed to ensuring the health and safety of our communities.• No community should bear an adverse environmental or health outcome as a result of our operations. We do not operate our sites to different standards based on who our neighbors are.• Dow has long been committed to exceeding our own ambitious sustainability goals, and we work closely with the appropriate regulatory bodies to meet or out-perform all standards.• As part of a similar longstanding commitment, Dow listens to our communities — their concerns, their questions and their needs.

**Dow Disclosures – GRI Content Index**

Commitments, continued	<p>Voting Rights</p> <ul style="list-style-type: none">• Dow believes that voting rights of citizens should not be abridged on account of race, color, previous condition of servitude, sex or age.• Dow believes laws must safeguard and guarantee the right to vote. We call on elected officials to advance voting rights by continuing efforts to provide greater access to voting and encourage broad voter participation.
	<p>Dow has a stated position and commitments on gender pay gaps, minimum wage, immigration, environmental justice and voting rights. These elements are all significant actual and potential negative social impacts in the supply chain. Here are the actions we are taking to address these negative social impacts:</p> <p>Gender Pay Gap</p> <ul style="list-style-type: none">• Implementing inclusive hiring standards to ensure women have a fair chance in Dow's hiring process at all levels, including graduates and apprentices.• Retaining and developing women at all levels, including graduates and apprentices.• Developing female talent to leadership and senior technical positions.• Enhancing parental leave and workplace flexibility to enable employees to balance work and personal commitments.• Increasing focus on inclusion and diversity to support employees throughout their careers.• Investing in STEM education programs, including for girls and young women, in communities around our sites globally to build grassroots STEM capabilities.
Specific Actions	<p>Minimum Wage</p> <ul style="list-style-type: none">• Dow supports an economically based increase in the U.S. minimum wage to \$10-12 per hour over several years to minimize the potential for job losses and other adverse economic effects, consistent with Congressional Budget Office (CBO) analyses. <p>Immigration</p> <ul style="list-style-type: none">• Dow works to retain graduates of U.S. schools; we partner with 50+ universities to hire the best and brightest. We do not go overseas to recruit, but 50% of STEM grads at U.S. colleges are foreign born.• Dow also supports ensuring and streamlining border security, including customs processes.• Dow urges U.S. Congress to act on a permanent legislative solution to ensure a fair and just outcome for the 800,000 Deferred Action for Childhood Arrivals (DACA) recipients.

**Dow Disclosures – GRI Content Index****Specific Actions,
continued****Environmental Justice**

- Dow has long been committed to very high internal regulatory requirements, and we comply with all local laws. We do not operate our sites to different standards based on who our neighbors are.
- We work closely with the appropriate regulatory bodies to meet or out-perform all standards. Dow follows industry best practices for acquiring and maintaining green belts – non-industrialized properties around our sites that provide added distance between our operations and our neighbors.
- Dow is committed to listening to our communities – their concerns, their questions and their needs. We have done this for decades via our Community Advisory Panels (CAPs). The membership of the CAPs varies widely, and includes community activists, local leaders, former Dow employees and other stakeholders who have an important perspective to share.
- We use these CAPs to engage our communities in our challenges and in decisions about our sites' futures. We encourage their engagement in the open comment periods associated with our permits, consent orders and other regulatory matters.
- We actively review the membership of all our CAPs to ensure they are properly reflective of the communities in which we operate.

Voting Rights

- As we look to encourage full participation in the voting process, it is likewise important to ensure election integrity.
- We call on elected leaders to work across political parties to ensure that every eligible voter has the freedom to easily cast their ballot and participate fully in the political process.

Highlights of Supplier Engagement Best Practices

- As part of a compliance program audit with all raw material suppliers for our Consumer Solution Business which enabled supplier site visits, we were able to assess that appropriate labor laws/legislation related to not contracting forced labor or child labor were being followed. This enabled Dow to support suppliers while improving supplier relationships and engagement on ESG topics.
- We audited one of our charcoal suppliers, Mineira Empreendimentos Florestais, which is a women-owned company responsible for supplying charcoal and wood to Santos Dumont Site. This company is also included on the Diversity Supplier list in Latin America.
- CBNS Negocios Florestais SA, a raw material supplier who supplies charcoal and woods, has for several years worked and supported the communities located around their farms by supporting them on their youth professional development, opportunity to develop their products to increase their business.
- As part of our Supplier engagement best practices, we supported the education of diversity and inclusion topics. Partnering with the White Martins group showcasing "In the Right Hand", which is a program related to information and awareness about sexual abuse on the roads.
- Dow was again selected to receive the Premio Redes of Development Award. This accomplishment recognizes companies that support the small State of Para suppliers. These suppliers are small and still under development. Dow supports the supplier's growth by purchasing and fostering their products, raw materials and services in the surrounding region.
- Partnership Platform for Amazon (PPA) - The PPA seeks to build innovative, tangible and practical solutions for sustainable development and the conservation of biodiversity, forests and natural resources in the Amazon. Dow is a member of the strategy committee, which is marketing the development of small suppliers into the Amazon region with the aim of driving community support.

414-1 New suppliers that were screened using social criteria

OMISSION 414-1 New suppliers that were screened using social criteria

Information not available. We will continue to annually assess mechanisms to be able to report this information in the future.



Dow Disclosures – GRI Content Index

414-2 Negative social impacts in the supply chain and actions taken

OMISSION 414-2 Negative social impacts in the supply chain and actions taken

Information not available. Please see specific actions within 414-103. We will continue to annually assess mechanisms to be able to report this information in the future.

GRI 415: Public Policy 2016

NOTE: Political contributions is not a material topic for Dow, as determined by our ESG materiality assessment. We provide some perspective in this report for those stakeholders who have an interest in this topic.

415-103 Management approach

See [GRI 103 Management Approach \(General\)](#)

415-1 Political contributions

Direct Political Contributions

The political process significantly impacts Dow through government policies, legislation, and judicial and regulatory decisions. Dow actively participates in the political process through legally authorized advocacy, grassroots efforts and financial contributions.

Dow is committed to the highest standard of ethical conduct in its involvement in the political process. All financial contributions strictly adhere to federal and state laws regarding contribution limits on amount and source, criteria and reporting requirements. Contribution information is a matter of public record in the United States and readily available to interested parties through the Federal Election Commission, Internal Revenue Service (IRS) and Secretaries of State.

More information on Dow's direct political contribution policy can be found here: [Corporate Political Contributions Policy | U.S. Public Policy | Dow Corporate](#)[↗]

Our authorization process for political contributions is available at: [Authorization for Political Contributions | U.S. Public Policy | Dow Corporate](#)[↗]

Dow provides lists of candidates who receive corporate political contributions for the previous five years online at: [Corporate Political Contributions | U.S. Public Policy | Dow Corporate](#)[↗]

A link to Dow's Lobbying Disclosure Act (LDA) (U.S. Congressional Lobbying Disclosure Filings) can be found here: [Policy on Trade Association & Civic Organization Engagement | U.S. Public Policy | Dow Corporate](#)[↗]

Indirect Political Contributions

Dow participates in many trade and business associations. Engagement with trade and business associations, whose purpose is to promote common business interests, assists us in managing priorities relevant to Dow and the chemical industry and disclosures. Disclosures Dow makes related to trade association expenditures, represent Dow's indirect political contributions.

More information on Dow's trade association policy can be found here: [Policy on Trade Association & Civic Organization Engagement | U.S. Public Policy | Dow Corporate](#)[↗]

Dow receives information from trade and business associations as well as civic leagues and social welfare organizations in the U.S. regarding the portion of our dues or contributions that are used for lobbying expenses and political expenditures. We include this information in the aggregate in our quarterly lobbying activity reports filed with the U.S. Congress, as required by the LDA, which can be viewed under the link named "Dow's LDA filings" within the Trade Associations link above.

In addition, Dow provides a list of trade association memberships and discloses expenses above \$25,000 per year, for the previous five years, at: [Policy on Trade Association & Civic Organization Engagement | U.S. Public Policy | Dow Corporate](#)[↗]



Dow Disclosures – GRI Content Index

GRI 416: Customer Health and Safety 2016

416-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#)

Dow has a comprehensive management approach to ensuring the health and environmental safety of our products. We adhere to the Responsible Care® Product Safety Code and have based our own internal program on this code.

Risk Characterization Tool

The human and environmental risks of all our products are characterized using Dow's risk characterization process/tool. The tool requires the assessment of hazard and exposure information to identify the appropriate risk tier. The risk tier then determines the required actions and reviews for the Product Stewardship program, including EH&S information development and publication, Business Risk Review requirements and distributor/customer support.

Business Risk Review Process

Our businesses utilize the Business Risk Review process to assess and minimize possible adverse impacts on people, property and the environment from our business activity, including minimizing EH&S impacts associated with new and existing products, applications and services throughout the product's life cycle. Businesses are required to conduct risk reviews when new information is received, including for launch of new products; changes in product uses, chemical regulations or raw materials; when new health and safety data are generated; or when triggered, in certain cases, by the passage of time. Risk mitigation measures are identified and implemented as a direct result of the Business Risk Review work process. Various product stewardship efforts such as distributor and customer qualifications and industry safe handling guide development are examples of involvement in the storage, distribution, supply and use steps of product life.

Dow focuses product environmental, health and safety (EH&S) management on the full product life cycle, from product innovation and raw material selection to production, customer and consumer use, and end of life or reuse. Dow continuously looks for improvement opportunities as part of our management approach at each stage of the product life cycle.

Assessments are conducted on the life cycle of Dow's products in accordance with ISO 14040/14044 standards. The company provides results of these assessments upon request when data is available.

Management Approach Components	Description
Commitments	<p>Through our product safety program, we:</p> <ul style="list-style-type: none">• Ensure that adequate EH&S information is available to assess the safety of each product for its intended uses.• Characterize the risk of products and establish product safety programs and risk management requirements based on risk level.• Engage product safety subject matter experts in all product and process innovation and assessments of external manufacturing.• Ensure that appropriate product safety and stewardship expectations are established for suppliers and distributors.• Ensure that customers are provided appropriate product information.
Targets	<p>As aligned to our 2025 Safe Materials for a Sustainable Planet 2025 Sustainability Goal, here are some specific milestones:</p> <ul style="list-style-type: none">• Develop and implement Product Stewardship Academies in emerging regions. By 2025, academies will be launched in 10 countries covering three regions (e.g., Africa, Asia Pacific and Latin America).• Develop five collaborations to advance the conversation on product safety.• Define and maintain Dow's Product Safety Story.
Responsibilities	Dow's Product Safety & Compliance team, including our business-aligned Product Stewardship group, our Toxicology and Environmental Research Lab, our Product Regulatory Services team and our Hazard Communication experts, manages this element for the company.



Dow Disclosures – GRI Content Index

416-1 Assessment of the health and safety impacts of product and service categories

100% of Dow products are assessed in an appropriate manner depending upon environmental, health and safety (EH&S) profile, product application or use, and exposure potential.

416-2 Incidents of non-compliance concerning the health and safety impacts of products and services

OMISSION 416-2 Incidents of non-compliance concerning the health and safety impacts of products and services

Confidentiality Constraints. Dow tracks product safety incidents, and non-conformance with our internal standards, as well as any regulatory non-compliances through our innovative Product Stewardship Metric. Dow had zero health and safety related recalls of our commercially sold products in 2021. While disclosing specifics related to this metric is not possible due to confidentiality concerns, the metric, which fosters a culture of issue identification and resolution, has led to improvements in raw material and product composition data, distributor training and new distributor requirements, and better internal work process documentation and training for new and experienced employees. We will assess additional disclosure on a yearly basis.

GRI 418: Customer Privacy 2016

NOTE: Political contributions is not a material topic for Dow, as determined by our ESG materiality assessment. We provide some perspective in this report for those stakeholders who have an interest in this topic.

418-103 Management approach

See also: [GRI 103 Management Approach \(General\)](#)

Management approach for customer privacy falls across several areas.

Data Protection and Privacy

Strict data privacy legislation is appearing in regions across the globe, such as General Data Protection Regulation (GDPR) in Europe and Personal Information Protection Law (PIPL) in China. In response to this trend, Dow established the Data Privacy Office within the Information Security Services organization to oversee data privacy and protection practices and compliance with global and regional regulations.

Dow's Data Protection & Privacy Policy governs the treatment of personal information for employees, customers, suppliers, contractors and any other person interacting with Dow. This policy mandates appropriate principles for the collection, processing and storage of personal data. It also identifies several key elements of the appropriate protection of personal data, including limitation of purpose, transparency, rights of access, security, confidentiality and restrictions on transfers to third parties. This policy reflects principles from the EU GDPR 2016/679 as well as the Canadian Personal Information Protection and Electronic Documents Act (PIPEDA).

Data Ethics

Dow is currently developing data ethics principles and related training and communication programs to promote the fair and responsible use of data within Dow. A governance structure is being defined to oversee the adoption of data ethics to drive the right balance between mitigating risk and delivering business value. In addition, Dow formed the Business Data Services (BDS) organization to establish long term ownership, roles and responsibilities, for preparing and maintaining data across our end-to-end processes. BDS will also share and promote data ethics, guidelines and practices throughout Dow's business data network.



Dow Disclosures – GRI Content Index

Cybersecurity

Dow also prepares for potential cybersecurity incidents and has an established and mature information and cybersecurity process and training program, consisting of security policies and procedures, immediate notification system, simulation drills and formal training programs for all with access to the company's network. Protocols and trainings exist to recognize, communicate and escalate suspicious activities including phishing, viruses, insider threats, suspect human behaviors or safety issues. Dow's cybersecurity practices contribute to Dow's overall emergency response readiness objectives – to prevent harm to the community, environment and workers; to minimize loss; and to preserve critical business continuity.

The effectiveness of Dow's information security controls is regularly assessed to ensure that the monitoring and governance of security processes and controls are in place and are effective. Some of these assessments include internal and external audits, vulnerability testing, governance processes over outsourced information technology (IT) cloud service providers, active risk management and benchmarking against peers in the industry. Dow leverages multiple external cybersecurity performance rating agencies, such as Security Scorecard, to validate our security posture and continually ranks in a leadership position compared to industry peers.

Management Approach Components	Description
Commitments	Dow has established robust information security standards that dictate technical security requirements for various information technologies in use at Dow, including standards for access control, the cloud, network security, identification and authentication and role-based security. A formal governance process has been established to ensure that these standards adequately address the latest IT threats.
Responsibilities	<p>Dow's IT Security Policy identifies the roles of users, data owners and information systems and further mandates a high level of due care from users of Dow systems. Information protection and data privacy policies have been established to govern the generation, storage, processing and use of data, including the Dow Code of Conduct, Information Handling Policy, Data Protection/Privacy Policy and Dow Record Management Policy. Annual training for these policies and their procedures is required for all employees.</p> <p>An on-site, enterprise-class Security Operations Center (SOC) provides end-to-end operations for purposes of monitoring, detecting, alerting and responding to cyber-incidents. Dow has also established formal Crisis and Incident Management Programs, which respond to critical events at a geographic, business and functional level. These programs are periodically tested to ensure their effectiveness in the event of a real crisis or significant incident. Full disaster recovery exercises are conducted on a regular basis and business continuity programs are in place.</p>
Specific Actions	<ul style="list-style-type: none">The company has an established Global Security Operations Center (GSOC) to provide 24-hours-a-day, seven-days-a-week, real-time monitoring of global risks to Dow assets and people. The GSOC employs state-of-the-art social media monitoring, threat reporting and geo-fencing capabilities to analyze global risks and report those risks, facilitating decision-making and actions to prevent Dow crises.Enhanced cybersecurity monitoring has been established to reduce cyber risks and data accessibility disruptions due to remote working arrangements that resulted from the COVID-19 pandemic.Recent external benchmarking conducted by EY ranked Dow as a leader against industry peers in all elements of the NIST Cybersecurity Framework.Dow has established robust Security by Design & Privacy by Design training programs to ensure that security and data privacy principles are built into our culture as IT solutions are being designed.

418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data

Dow is not aware of any material incidents relating to information systems security affecting the safety of Dow's operations or ability to serve customers or significant breaches of personal information. Additional cybersecurity and information security information can be found on pages 34-35 of the [2022 Proxy Statement](#)² filed with the SEC on March 4, 2022.



Independent Assurance Statement

Deloitte.

INDEPENDENT ACCOUNTANTS' REVIEW REPORT

**Management of
Dow Inc. and The Dow Chemical Company
Midland, MI**

We have reviewed management of Dow Inc.'s and its consolidated subsidiaries, including The Dow Chemical Company (collectively, "Dow" or the "Company") assertion that the ESG disclosures referenced or included in the Global Reporting Initiative ("GRI") Content Index (the "ESG disclosures") included within the accompanying Dow 2021 Environmental, Social and Governance Report (the "2021 ESG Report") as of, and for the year ended December 31, 2021 are presented in accordance with the Global Reporting Initiative Sustainability Reporting Standards under its Comprehensive option (the "GRI Standards – Comprehensive option"). The Company's management is responsible for its assertion. Our responsibility is to express a conclusion on management's assertion based on our review.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C section 105, *Concepts Common to All Attestation Engagements*, and AT-C section 210, *Review Engagements*. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to management's assertion in order for it to be fairly stated. The procedures performed in a review vary in nature and timing from, and are substantially less in extent than an examination, the objective of which is to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. Because of the limited nature of the engagement, the level of assurance obtained in a review is substantially lower than the assurance that would have been obtained had an examination been performed. We believe that the review evidence obtained is sufficient and appropriate to provide a reasonable basis for our conclusion.

We are required to be independent and to meet our other ethical responsibilities in accordance with the *Code of Professional Conduct* issued by the AICPA. We applied the Statements on Quality Control Standards established by the AICPA and, accordingly, maintain a comprehensive system of quality control.

The procedures we performed were based on our professional judgment. In performing our review, we conducted inquiries and performed analytical procedures. For a selection of ESG disclosures, we performed tests of mathematical accuracy of computations, compared the disclosures to underlying records, or observed the data collection process in regard to the accuracy of the data in the ESG disclosures.

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The preparation of the ESG disclosures in the GRI Content Index included within the 2021 ESG Report requires management to interpret the criteria, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect reported information. Measurement of certain amounts and ESG disclosures includes estimates and assumptions that are subject to substantial inherent measurement uncertainty resulting, for example, from the accuracy and precision of greenhouse gas emission conversion factors and the process to measure energy consumption. Obtaining sufficient, appropriate review evidence to support our conclusion does not reduce the inherent uncertainty in the amounts and ESG disclosures. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or ESG disclosures being reported.

Information outside of the ESG disclosures referenced or included in the GRI Content Index, including linked information, was not subject to our review, including the Alignment to UN Sustainable Development Goals, TCFD Disclosure Report, SASB Disclosures Report, WEF Disclosure Report, and Non-GAAP Financial Measures and, accordingly, we do not express a conclusion or any form of assurance on such information. Further, any information relating to periods prior to the year-ended December 31, 2020 or information relating to forward looking statements, targets, goals and progress against goals, was not subject to our review and, accordingly, we do not express a conclusion or any form of assurance on such information.

As disclosed in the GRI Content Index related to GRI 302-1, the Company changed the methodology used to calculate energy consumption as of December 31, 2021. The methodology for this calculation was not revised in the prior periods presented. Our conclusion is not modified with respect to this matter.

Based on our review, we are not aware of any material modifications that should be made to management of Dow's assertion that the ESG disclosures referenced or included in the GRI Content Index included within the accompanying Dow 2021 ESG Report as of, and for the year ended December 31, 2021 are presented in accordance with the GRI Standards – Comprehensive option, in order for it to be fairly stated.

Deloitte & Touche LLP

June 15, 2022



Greenhouse Gas (GHG) Protocol Disclosure Report

Management of Dow is responsible for the completeness, accuracy and validity of the Environmental, Social and Governance (ESG) disclosures referenced or included in the GHG Protocol Disclosure Report for the year ended December 31, 2021. Management is also responsible for the collection, quantification and presentation of the information included in the 2021 ESG Report and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the ESG disclosures.

Management of Dow asserts that the ESG disclosures referenced or included in the GHG Protocol Disclosure Report for the year ended December 31, 2021, are presented in accordance with GHG Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), published by the World Resources Institute/World Business Council for Sustainable Development. Any information relating to Scope 3 was not subject to Deloitte & Touche LLP's review; and accordingly they do not express a conclusion or any form of assurance on such information.

Dow Disclosures – GHG Protocol Disclosure Report

Reporting Policy and Scope for Greenhouse Gas Emissions

Scope 1 and 2 GHG emissions are collected and accounted for in accordance with the World Resources Institute/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition).

The GHG emissions covered by this inventory are based on the calendar year January 1 to December 31, 2021. Dow reports GHG emissions under the operational control approach criteria described in this standard. The company reports GHG emissions at approximately 100 sites globally with approximately 25 of those sites accounting for over 95% of our total GHG emissions. In cases where asset ownership is shared, a company has operational control over an asset if they have the full authority to introduce and implement its operating policies at the facility. For operations where Dow is a 50-50 partner or less and does not have full authority to implement our policies, emissions are excluded from this inventory.

Scope 3 emissions data are prepared according to the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard and the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, as well as the WBCSD's Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain. Scope 3 GHG emissions data is reported for 13 of the 15 categories. Dow continues to work to develop data collection methodologies aligned with Scope 3 reporting for categories not currently being reported.

Current Global Emissions in CO₂e

The following accounting includes four of the seven GHG emissions covered by the UNFCCC/Kyoto protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs). Dow does not have emissions of perfluorocarbons (PFCs), sulfurhexafluoride (SF₆), or nitrogen trifluoride (NF₃). GHG emissions are reported in metric tons of carbon dioxide equivalents (CO₂e).

GHG Emissions (Millions of Metric Tons CO ₂ e)	2021	2020 (Base Year)	Amount Change 2021/2020	% Change 2021/2020
Scope 1	28.29	28.49 ¹	-0.23	-0.8%
Scope 1 Emissions from Power Sold to Third Party/Grid	5.74	5.56	+0.18	+3.2% ²
Scope 2 (Market)	5.68	6.07	-0.39	-6.4%
Scope 2 (Location)	3.94	3.95	-0.01	-0.3%
Gross Scope 1&2 (Market)	33.97	34.56	-0.62	-1.8%
Scope 3	77.64	69.26	+8.38	+12% ³

¹ Updates to the 2020 Scope 1 GHG baseline were completed in 2021 to account for facilities and emissions not previously reported and corrections in calculation methodologies.

² Emissions associated with sold power increased in 2021 vs 2020 due to excess electric power generated at one of our North American facilities which was sold to the GRID

³ For additional information on 2020/2021 changes see [305-3 Other indirect \(Scope 3\) GHG emissions](#)



Dow Disclosures – GHG Protocol Disclosure Report

Other GHG Emissions

GHG Emissions (Millions of Metric Tons CO ₂ e)	2021	2020 (Base Year)	Amount Change 2021/2020	% Change 2021/2020
Biomass CO ₂ ¹	0.54	0.45	.08	+17.4%
“Other” GHG Emissions ²	0.06	0.09	-.03	-33.3%

¹ In 2021, our purchased steam energy calculation was updated to use the work potential method. Previous reporting utilized the energy content method. 2020 value has been updated in this report to reflect the work potential method.

² Other GHG Emissions includes bromomethane, carbon monoxide, carbon tetrachloride, dimethyl ether and methylene bromide.

Calculation Methodologies

When calculating Scope 1 GHG emissions, source data is collected within multiple systems following internal processes. Calculation methodologies vary based on a hierarchical approach. Permit-specific or regulatory-required emissions factors are prioritized and, where these do not exist, other published emissions factors and calculation methodologies are used. Some sources for these factors include [Intergovernmental Panel on Climate Control \(IPCC\)⁷](#) Guidelines for National Greenhouse Gas Inventories; U.S. Resources ([U.S. EPA State Inventory and Projection Tools⁸](#); [U.S. Emissions Factor Resources⁹](#), or [AP-42¹⁰](#)); and German Environmental Authority (12/2016).

For the purposes of tracking against our targets to reduce GHG emissions, Dow utilizes the market-based methodology for Scope 2 accounting. Emissions are calculated by multiplying the amount of company-purchased steam and electricity consumed by supplier-specific emissions factors or factors denoted through energy attribute certificates, when available. When these factors are not available, Dow utilizes location-based emission factors rather than utilizing the residual mix emission factors. The impacted portion of electricity purchases is insignificant to overall Scope 2 emissions. Dow also reports Scope 2 emissions using the location-based method in which quantities of company-purchased steam and electricity are multiplied by the appropriate emissions factors for that geographic area, rather than supplier-specific factors. EPA EGrid factors are used for U.S.-based locations and International Energy Agency (IEA) factors are used for non-U.S. locations.

GHG emissions calculations for Scope 3 follow the Greenhouse Gas Protocol and use recognized methodologies that leverage Dow's primary data from purchasing, logistics, and sales records to build robust inventories. Most emissions are estimated using best available GHG emissions factors from sources like Ecoinvent v3.8, economic input-output models, and the Global Logistics Emissions Council (GLEC) Framework, although primary data from the value chain was used wherever possible.

Base Year

Dow measures our progress toward our current reduction target by our baseline year, 2020. If changes occur in the configuration of Dow assets or if significant emission changes are found that make a material impact to our global footprint, the baseline year will be recalculated to include the new configuration. These changes include, but are not limited to, transfer of ownership, improvement of calculation methodologies or the accuracy of emissions factors, and discovery of significant errors, singly or collectively.

Baseline emissions for 2020 Scope 1 GHG emissions were updated in 2021 in accordance with our business rules to include previously not reported emissions from landfills and wastewater treatment facilities and improvements in calculation methodologies. Baseline emissions for 2020 Scope 2 GHG emissions are calculated using the market-based method.

Targets

For GHG emissions targets, see [GRI 302-103 Energy Management Approach 2016](#) and [305-103 Emissions Management Approach 2016](#). For additional information on method's used, see [305-2 Energy indirect \(Scope 2\) GHG emissions](#).

Global Warming Potential (GWP)

To compare the global warming impacts of different greenhouse gases, a universal unit of measurement is needed. Global warming potential (GWP) factors were developed to measure the amount of energy the emissions of one ton of gas will absorb relative to one ton of carbon dioxide. For Scope 1 emissions, in accordance with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, Dow uses the most recent IPCC assessment report (AR6) 100-year GWP values for all data, including the baseline, to maintain consistency across time. For Scope 2 emissions, Dow requests, but does not verify, the factors used when data is received from our suppliers. We will continue to improve our understanding of the factors used by our suppliers to represent the information as accurately as possible in the future.



Dow Disclosures – GHG Protocol Disclosure Report

Scope 1 Emissions by GHG

GHG Emissions	2021 Scope 1 (MT)	2021 Scope 1 Total (MT CO ₂ e)	2020 Scope 1 (Base Year) Total (MT CO ₂ e)
Carbon Dioxide	27,470,000	27,470,000	27,630,000
Methane	19,000	570,000 ¹	519,000 ¹
Nitrous Oxide	580	159,000	251,000
HFCs	60	94,000	85,000

¹ Assumes all methane emissions are “fossil” and uses associated emissions factors provided in the IPCC AR6 report. Conservative method as non-fossil methane emissions has a lower GWP factor.

Note: Numbers are rounded for reporting purposes. Dow does not have emissions of PFCs, SF₆, or NF₃. Speciated emissions data is not available for Scope 2 accounting as suppliers provide the data to Dow in carbon dioxide equivalents. Dow will continue to work with suppliers to improve the information provided so the data can be reported in future reports.

To include a complete and comparable emissions disclosure relevant to users of this information, Dow will continue to work with suppliers to improve the information provided so that speciated emissions data can be reported for both market-based and location-based Scope 2 accounting in future reports.

Scope 3 Emissions by Activity

Category (Millions of Metric Tons CO ₂ e)	2021	2020	Amount Change 2021/2020	% Change 2021/2020
Category 1: Purchased Goods & Services	39.65	38.17	+1.48	3.88%
Category 2: Capital Goods	1.97	1.76	+0.21	11.93%
Category 3: Fuel & Energy Related Activities	5.22	4.75	+0.47	9.89%
Category 4: Upstream Transportation & Distribution ¹	2.01	4.14	-2.13	-51.45%
Category 5: Waste Generated in Operations	1.04	1.75	-0.71	-40.57%
Category 6: Business Travel	0.0045	0.0051	-0.0006	-11.76%
Category 7: Employee Commuting	0.051	0.046	+0.0049	10.61%
Category 8: Upstream leased Assets	0.014	0.017	-0.0029	-17.47%
Category 9: Downstream Transportation & Distribution ¹				
Category 10: Processing of Sold Products ²				
Category 11: Use of Sold Products	11.13	6.44	+4.69	72.83% ³
Category 12: End-Of-Life Treatment of Sold Products	11.96	7.27	+4.69	64.51% ⁴
Category 13: Downstream Leased Assets ⁵	0	0	0.00	0
Category 14: Franchises ⁵	0	0	0.00	0
Category 15: Investments	4.59	4.92	-0.33	-6.71%

¹ Emissions from Category 9: Downstream Transportation & Distribution have been re-aligned to Category 4: Upstream Transportation & Distribution to comply with the GHG Protocol.

² Dow is currently developing a methodology to report this category in the future.

³ The increase in emissions in category 3.11 was primarily tied to the growth in sales of hydrocarbon-based byproducts from Dow's manufacturing processes that are used in fuel by downstream customers. In addition, we included a carbon black feed in this category, which contributed a small but significant increase in downstream emissions.

⁴ The End-of-Life emissions in category 3.12 are due to an increase in revenue, which was used as a proxy to estimate the end-of-life emissions for sold products.

⁵ Dow does not currently have any downstream leased assets or franchises therefore these categories are not relevant for Scope 3 accounting.



GHG Protocol Assurance Statement

Deloitte.

INDEPENDENT ACCOUNTANTS' REVIEW REPORT

**Management of
Dow Inc. and The Dow Chemical Company
Midland, MI**

We have reviewed management of Dow Inc.'s and its consolidated subsidiaries, including The Dow Chemical Company (collectively, "Dow" or the "Company") assertion that the GHG Protocol Disclosure Report referenced or included within the accompanying Dow 2021 Environmental, Social and Governance Report (the "2021 ESG Report") for the year ended December 31, 2021 is presented in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), published by the World Resources Institute/World Business Council for Sustainable Development (the "GHG Protocol"). The Company's management is responsible for its assertion. Our responsibility is to express a conclusion on management's assertion based on our review.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C section 105, *Concepts Common to All Attestation Engagements*, and AT-C section 210, *Review Engagements*. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to management's assertion in order for it to be fairly stated. The procedures performed in a review vary in nature and timing from, and are substantially less in extent than an examination, the objective of which is to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. Because of the limited nature of the engagement, the level of assurance obtained in a review is substantially lower than the assurance that would have been obtained had an examination been performed. We believe that the review evidence obtained is sufficient and appropriate to provide a reasonable basis for our conclusion.

We are required to be independent and to meet our other ethical responsibilities in accordance with the *Code of Professional Conduct* issued by the AICPA. We applied the *Statements on Quality Control Standards* established by the AICPA and, accordingly, maintain a comprehensive system of quality control.

The procedures we performed were based on our professional judgment. In performing our review, we conducted inquiries and performed analytical procedures. For a selection of amounts, we performed tests of mathematical accuracy of computations, compared the amounts to underlying records, or observed the data collection process in regard to the accuracy of the data in the GHG disclosures.

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The preparation of the GHG disclosures in the GHG Protocol Disclosure Report included within the 2021 ESG Report requires management to interpret the criteria, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. Measurement of Scope 1 and Scope 2 GHG emissions includes estimates and assumptions that are subject to substantial inherent measurement uncertainty resulting, for example, from the accuracy and precision of greenhouse gas emission conversion factors. Obtaining sufficient, appropriate review evidence to support our conclusion does not reduce the inherent uncertainty in the amounts and GHG disclosures. The selection by management of different but acceptable measurement methods, input data or assumptions may have resulted in materially different amounts or GHG disclosures being reported.

Information outside of the GHG Protocol Disclosure Report, including linked information, was not subject to our review, including the Alignment to U.N. Sustainable Development Goals, TCFD Disclosure Report, SASB Disclosures Report, WEF Disclosure Report, and Non-GAAP Financial Measures and, accordingly, we do not express a conclusion or any form of assurance on such information. Any information relating to Scope 3 was not subject to our review; and accordingly, we do not express a conclusion or any form of assurance on such information. Further, any information relating to Scope 3 and periods prior to the year ended December 31, 2021 or information relating to forward looking statements, targets, goals and progress against goals, was not subject to our review and, accordingly, we do not express a conclusion or any form of assurance on such information.

Based on our review, we are not aware of any material modifications that should be made to management of Dow's assertion that the GHG Protocol Disclosure Report included within the accompanying 2021 ESG Report for the year ended December 31, 2021 is presented in accordance with the GHG Protocol, in order for it to be fairly stated.

Deloitte & Touche LLP

June 15, 2022



Task Force on Climate-Related Financial Disclosures (TCFD) Report

Dow Disclosures – TCFD Disclosure Report

Category Governance: Disclose the organization's governance around climate-related risks and opportunities

Describe the board's oversight of climate-related risks and opportunities.

Board Oversight

The Board is responsible for overseeing the company's strategy development and planning process, including annual review of the corporate and business plan. The Board is also responsible for overseeing the ESG priorities of the company, including climate priorities, ensuring transparency and accountability. The Board has Committees (individually a "Committee" and collectively the "Committees") with well-defined oversight responsibilities including the company's strategy, ESG priorities, risk management and overall performance. Each Committee reports to the Board on the topics discussed and actions taken at Committee meetings. The Committees work together and with the Board to ensure that the Committees and the Board have received all information necessary to permit them to fulfill their duties and responsibilities.

The responsibilities of each of Dow's four standing Board Committees are stated in the Bylaws and in their respective Committee Charters. A brief description of the Committees and their responsibilities is provided in the diagram. The Environment, Health, Safety & Technology Committee has specific oversight and responsibility for climate-related opportunities. The Audit Committee has specific oversight and responsibility for climate-related risks as part of the Enterprise Risk Management (ERM) process. Although each Committee oversees the management of certain responsibilities as described in the table, the full Board is regularly updated by the Committees, management and senior leaders. In addition, each Committee has accountability for specific areas of Dow's strategy, which includes climate initiatives. This enables the Board and the Committees to coordinate the various priorities of the company.

AUDIT COMMITTEE	COMPENSATION & LEADERSHIP DEVELOPMENT COMMITTEE	ENVIRONMENT, HEALTH, SAFETY & TECHNOLOGY COMMITTEE	CORPORATE GOVERNANCE COMMITTEE
<p>Key Responsibilities</p> <ul style="list-style-type: none">Quality, reliability and integrity of financial statements and application of accounting principlesQuality, reliability and integrity of ESG reportingLegal or regulatory requirements and ESG reporting frameworks, adequacy of internal controlsInternal audit function performanceIndependent auditor engagement and performanceOversee the company's risk management process <p>Risk Oversight</p> <ul style="list-style-type: none">Management and effectiveness of accounting, auditing, external reporting, ethics, compliance and internal controls and cybersecurity	<p>Key Responsibilities</p> <ul style="list-style-type: none">Leadership talent assessment; CEO successionExecutive compensation and benefit plans including incentive programs and performance metrics, including ESG metricsIndependent Compensation Consultant engagement and performanceOversee the company's human capital management including ID&E commitment and results, work environment and culture philosophy <p>Risk Oversight</p> <ul style="list-style-type: none">Executive compensation policies, practices and disclosures, succession planning, work environment and culture	<p>Key Responsibilities</p> <ul style="list-style-type: none">Corporate citizenship, social responsibility, public policy and reputationSustainability and ESG commitments and progress, including efforts to protect the climate, reduce carbon emissions, eliminate plastic waste and deliver circular economy solutionsScience and technology capabilities and protection of intellectual propertyPolitical contributions and lobbying expensesOversee the company's environment, health and safety policies, performance and compliance <p>Risk Oversight</p> <ul style="list-style-type: none">Environment, health and safety policies and operations, emerging regulatory developments and compliance	<p>Key Responsibilities</p> <ul style="list-style-type: none">ESG matters, including stockholder engagement and governance best practicesQualifications of director nomineesBoard structure and function including annual evaluation of Board and Committee performanceOversee the company's governance practices <p>Risk Oversight</p> <ul style="list-style-type: none">Director independence, refreshment and succession planning, overall Board effectiveness, potential conflicts of interest and other governance, reporting and compliance matters



Dow Disclosures – TCFD Disclosure Report

Throughout the year and at every Board meeting, the Board receives information and updates from management and actively engages with senior leaders with respect to management's execution of the corporate and business plans as well as progress on ESG priorities including economic, environmental and social topics. The Board and management review the company's short- and long-term strategic priorities throughout the year and dedicate time at each Board meeting for appropriate discussion.

Risk management is considered a strategic priority for the company, and responsibility for managing risk rests with executive management, while the Committees, and the Board as a whole, provide oversight. The ERM approach and process are overseen by the Audit Committee and reviewed at least annually with key risks regularly evaluated at meetings of the Committees and Board, including risks with economic, environmental and social impacts.

Describe management's role in assessing and managing climate-related risks and opportunities.

Climate Management Structure

See [GRI 102-20 Executive-level responsibilities for economic, environmental and social topics](#). To manage the implementation of Dow's Climate Strategy, Dow has established a Climate Program Management Office (Climate PMO). The team is led by the Climate Steering Team (CST), which sets strategy and oversees the activities related to assessing and managing climate-related risks and opportunities. The CST consists of executive business and functional leaders who report to either the CEO or CFO. The CST is facilitated by the global climate transition director, who also facilitates the Climate PMO.

The Climate PMO is composed of business and functional leaders from across the company. The Climate PMO has a series of sub-teams responsible for assessing and managing climate related risks and opportunities, including reducing Scope 1, 2 and 3 emissions; improving metric tracking and reporting; developing products, technologies and business models to address customers' climate-related needs; and developing and executing actions to deliver committed targets. Each sub-team is sponsored by two or more members of the CST, who are accountable for the team's success.

The Climate PMO is tasked with setting goals and targets, prioritizing actions, monitoring progress of sub-teams and ensuring alignment of cross-team objectives. Both the CST and Climate PMO meet at least every six weeks and report to the ELT at a minimum of once per quarter. Climate PMO sub-teams meet more frequently as required to drive actions and progress toward project targets.

Category Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning

Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.

See also: [GRI 201-2 Financial implications and other risks and opportunities due to climate change](#)

Addressing climate-related risks now, and in the future

Addressing climate-related risks and opportunities is part of Dow's overall climate strategy. In 2020, the company announced commitments to reduce its net annual greenhouse gas emissions by an additional 5 million metric tons by 2030 versus our 2020 baseline, a 15% reduction (the 2020 baseline represents a 15% reduction in greenhouse gas emissions since 2005). Dow also announced its intention to be carbon neutral by 2050 (Scopes 1+2+3, as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, plus product benefits).

Despite these commitments, climate change-related risks and uncertainties, legal or regulatory responses to climate change, and failure to meet our climate change commitments could negatively impact Dow's operations, financial condition and/or reputation. Climate-related risks include both physical and transition risks.



Dow Disclosures – TCFD Disclosure Report

Climate-related physical risks include more frequent severe weather events, potential changes in precipitation patterns, water scarcity and extreme variability in weather patterns, which can disrupt the operations of the company as well as those of its customers, partners and vendors. In 2021, Dow partnered with S&P Global Trucost (Trucost) to assess the company's exposure to climate-related physical risks based on the geographic location of our manufacturing operations. The risks assessed included water stress, heat waves, cold waves, droughts, hurricanes, wildfires and flooding. The analysis included an assessment of the physical risks using a baseline year of 2020 with time periods ranging to 2050, and scenarios of low, moderate and high climate change. Based on the Trucost methodology, which scores the exposure of sites to physical risks relative to global conditions, Dow is assessed as at moderate exposure in 2050 under all scenarios, with a weighted average that is slightly lower than the average of the materials industry (as defined by Trucost). Dow will use this information to inform decision-making at our sites with respect to managing climate-related physical risks.

Climate-related transition risks include the availability, development and affordability of lower greenhouse gas emissions technology, the effects of carbon pricing and changes in public sentiment, regulations, taxes, public mandates or requirements.

There are also significant climate opportunities for Dow, including the ability to be a leader in the development of lower emissions technology consistent with the recent announcement of a net-zero emissions facility in Alberta, Canada. Additional opportunity actions to achieve carbon neutrality include expanding access to renewable power and initiating a joint development project with Shell to develop electrified cracking technology powered by clean energy. Our technology and materials science leadership also provide a significant opportunity to deploy materials to help reduce emissions for customers and industries that will allow us to capture value from increasing demand for low-carbon and sustainable products. These are just some examples of critical steps on our path to carbon neutrality by 2050 while enabling business growth.

The table below provides a summary of our climate-related risks and opportunities and the associated value chain stage, time horizon and magnitude of impact:

		Risk/Opportunity Type	Description	Value Chain Stage(s) Covered	Time Horizon (term)			Magnitude of Impact			
Risks	Physical	Acute & Chronic	More frequent incidents of severe weather, or long-term changes in precipitation patterns	<ul style="list-style-type: none"> • Direct operations • Upstream 	SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	
	Transition	Regulatory	Carbon pricing mechanisms		SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	
Opportunities	Technology	Technology	Transition to lower-emissions technology	<ul style="list-style-type: none"> • Direct operations • Upstream • Downstream 	SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	
					SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	
	Resource Efficiency	Resource Efficiency	Use of more efficient production and distribution processes		SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	
					SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	
	Products & Services	Products & Services	Dow products can enable the transition to a low-carbon economy	<ul style="list-style-type: none"> • Upstream • Downstream 	SHORT	MEDIUM	LONG	LOW	MEDIUM	HIGH	



Dow Disclosures – TCFD Disclosure Report

Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.

The potential impacts of climate-related risks and opportunities are part of Dow's climate strategy and factored into Dow's business and financial planning. When assessing the magnitude of impact, Dow evaluates elements such as changes to the cost of raw materials, impact on operating cost (e.g., energy costs, costs of complying with regulation), cost of investment in new technology to reduce emissions, impact to the price at which products can be sold, impact of potential lost sales, or in the case of opportunities, improvements in production, increased revenues, cost efficiencies and market share gained. In addition, there could be impacts that need to be considered that are not able to be quantified financially (e.g., reputational impact of certain risks and opportunities).

Dow is taking specific actions to mitigate identified climate-related physical and transition risks, while also advancing opportunities in several key areas. These include:

- **Optimizing Facilities and Processes:** Water recycling investments to reduce Dow's water use and the potential impact of water stress. One example is our commitment to [100% water circularity by 2025](#) at our site in Terneuzen, the Netherlands.
- **Increasing Renewable Energy:** Dow continues to invest in cost-efficient clean energy, including wind, solar and hydropower, across our operations. In 2021, we expanded access to renewable power to more than 900 MW, so that more than 25% of our purchased electricity comes from renewable sources. Dow is a leading user of renewable energy in the chemical industry and in the top 20 among global corporations according to BloombergNEF.
- **Investing in and Innovating for Carbon Reduction:** In support of Dow's long-term GHG reduction targets, Dow announced \$1B in annual capital spending allocation for the foreseeable future to decarbonize assets, in a phased approach, while growing capacity. This investment plan includes large, industry-leading projects, such as the recently announced net-zero carbon emissions site in Alberta, Canada, as well as emissions-reduction investments in existing facilities and replacement of end-of-life carbon intensive assets with state-of-the-art, carbon-efficient and sustainable technologies. In 2021, Dow implemented energy efficiency and emissions reduction projects, reducing energy consumption by 1.232 million KJ/year and amounting to 611,500 metric tons of CO₂ reduction ([GRI 302-4](#) and [305-5](#)). In 2021, Dow's Terneuzen site outlined a roadmap to support the Dutch Climate Agreement and enable a reduction of 1.7 million metric tons of CO₂ annually by 2030 vs. a 2020 baseline.
- **Engaging our Suppliers to Reduce Value Chain Emissions:** Dow joined the CDP Supply Chain Program to collect supplier data and identify value-chain emissions improvement opportunities.
- **Innovating Materials to Enable Customers to Reduce Emissions:** Dow is aligning its innovation and product portfolios to address sustainability opportunities, including climate. Examples include the launch of our industry-leading solution for carbon capture into the Asia Pacific market, encompassing innovative formulated UCARSOL™ and SELEXOL™ solvents, as well as professional solvent management and maintenance services. The company also introduced three new DOWSIL™ silicone technologies for electric and hybrid vehicle applications.



Dow Disclosures – TCFD Disclosure Report

			Elements of Dow's Climate Action Plans Addressing Risk/Opportunity							
Examples of Climate Risks and Opportunities and Related Potential Impacts										
Risks	Physical	Description	Impacts/Opportunity		Optimizing Our Facilities and Processes	Increasing Renewable Energy	Investments in Carbon Capture	Innovating Low-Carbon Technologies	Engaging Suppliers to Reduce Value-Chain Emissions	Deploying Materials to Help Our Customers Reduce Their Emissions
Opportunities	Physical	Acute & Chronic	More frequent incidents of severe weather, or long-term changes in precipitation patterns	<ul style="list-style-type: none"> Reduced revenue/decreased production (supply chain disruptions, etc.) Increased operating or capital costs 	●					
	Transition	Regulatory	Carbon pricing mechanisms	<ul style="list-style-type: none"> Increased costs to comply with changes in regulations 	●	●	●			
	Technology	Technology	Transition to lower-emissions technology	<ul style="list-style-type: none"> Increased expense/capital investment in technology and innovation Reduced exposure to carbon cost 		●	●	●		●
	Resource Efficiency	Resource Efficiency	Use of more efficient production and distribution processes	<ul style="list-style-type: none"> Reduced operating costs through efficiency gains and cost reductions 	●			●	●	
	Products & Services	Products & Services	Dow products can enable the transition to a low-carbon economy	<ul style="list-style-type: none"> Increased revenue from carbon-advantaged products and technologies 				●	●	●

Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Scenario Analysis: Evaluating Risks & Opportunities

To further evaluate risks and opportunities related to climate change, as well as test the robustness of Dow's strategic plans to address the risk or opportunity, Dow utilizes climate-related scenario analyses.



Dow Disclosures – TCFD Disclosure Report

Dow takes an exploratory approach to climate-related scenario analyses to evaluate a range of different futures. Most recently, Dow has utilized two boundary scenarios to assess our strategy: one where our global ambition aligns with the International Energy Agency (IEA) Sustainable Development scenario of decarbonizing the economy, and another that aligns with the Regional Rivalry Shared Socioeconomic Pathway (SSP) 3.0, which explores a more uneven path to decarbonization. As Dow is a large consumer of energy, scenarios that focus on trends in energy consumption are particularly relevant to Dow. The scenarios selected were intended to span a range of potential energy futures in terms of global primary energy consumption and energy types. Dow also selected these scenarios to cover a range of assumptions around policy development. The scenarios highlight varying outcomes. For example, in the Sustainable Development scenario, Dow's cost of regulatory compliance is higher than in Regional Rivalry, but our opportunities for the development of low-emissions goods and services and low-carbon technologies are much greater. We utilize these results to build the resiliency of our company as it relates to a variety of outcomes.

The following table shows summary parameters of externally developed scenarios selected to evaluate climate risk/opportunity:

Scenario Descriptions, 2050 Snapshot	Sustainable Development ¹	Regional Rivalry ²
Description	Coordinated path to decarbonization	Uneven path to decarbonization
Market Trends	Increased demand for solutions that mitigate climate change	Slower, regionally driven demand for solutions that mitigate climate change, greater market for climate adaptation products
Temperature Rise	<1.5°C	2.1°C
Carbon Price (USD/metric ton)	135	30
Renewable Energy (% of total primary energy)	47	17

¹ IEA Sustainable Development Scenario

² Regional Rivalry, Shared Socioeconomic Pathway 3.0, RCP6.0

Dow's strategy is resilient to a range of potential outcomes. For example, in 2021, we outlined a clear path to decarbonize our production processes (Scope 1 and 2 GHG emissions) utilizing a phased approach in which end-of-life capacity is replaced with higher-efficiency, lower GHG-emitting assets. This phased approach will enable us to achieve decarbonization in our Scope 1 and 2 GHG emissions in line with a well-below 2°C world, as is envisioned by the Sustainable Development scenario, while mitigating the affordability risk that presents itself should there be a slower global adoption of the regulatory frameworks needed to address climate change, as is the potential under the Regional Rivalry scenario. For Dow's downstream businesses, both scenarios present opportunities to develop solutions related to climate change – whether these are focused on the mitigation of climate change or the products that address climate adaptation. Climate scenarios also are incorporated into our long-term assessments of Dow's manufacturing sites, which is a key input into Dow's capital approval process.

Category Risk Management: Disclose the processes used by the organization to identify, assess and manage climate-related risks

Describe the organization's processes for identifying and assessing climate-related risks.

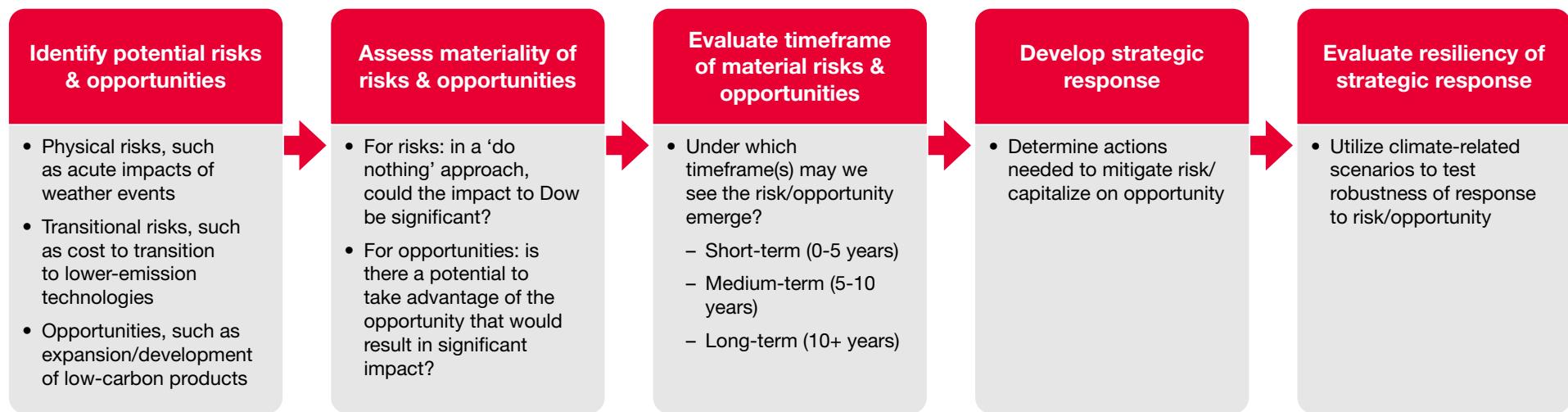
Dow's ERM process is responsible for identifying significant or major risks to the company and creating action plans to mitigate risks, including climate risks. On an annual basis, the ERM process screens risks from a broad range of inputs, both internal and external to Dow. All risks are reviewed and categorized based on potential impact and likelihood of a significant event occurring. Each risk is assigned to a member of Dow's Executive Leadership Team and, if needed, to an internal subject matter expert accountable for mitigation plans.



Dow Disclosures – TCFD Disclosure Report

The results of the annual ERM process are reviewed with Dow's ELT – a diverse, cross-functional team representing all of Dow's businesses, functions and geographic regions. Key risks that have specified mitigation actions are reviewed more regularly in leadership team meetings. In addition, risks can be re-evaluated based on several factors including changes in the external and macroeconomic environment, concerns identified by senior leaders or Dow's Board, or through detection in Dow's internal work processes. The Audit Committee has oversight of the ERM process and reviews it annually. Specific risks are also reviewed with the Environment, Health, Safety & Technology Committee, Corporate Governance Committee and/or the full Board.

Describe the organization's processes for managing climate-related risks.



Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

Potential climate-related risks are integrated into the ERM process. Climate-related risks, including both physical and transition risks, are assessed in multiple ERM risk categories including, but not limited to, portfolio management; strategy, business and market choices; external factors including macroeconomic, industry, geopolitical and regulatory trends; operations and safety; financial performance, including investor and rating agency perspectives; and regulatory and compliance actions. Climate-related risks are assigned to Dow's CST, which is accountable for monitoring climate-related risks and developing and implementing mitigation plans.

Category Metrics: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities

Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

Dow utilizes several metrics to track performance and inform on our progress toward addressing our climate and sustainability risks and opportunities. These include disclosures of our Scope 1, 2 and 3 GHG emissions as well as additional metrics related to energy intensity, renewable power and energy, freshwater intake intensity and the alignment of our innovation and product portfolios to our sustainability priorities. Where appropriate, we also report on our progress against defined targets for these metrics.



Dow Disclosures – TCFD Disclosure Report

Scope 1, 2 and 3 GHG Emissions

Scope 1 and 2 GHG emissions are collected and accounted for in accordance with the World Resources Institute/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition). Scope 3 emissions data are prepared according to the GHG Protocol's Corporate Accounting Standard and the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, as well as the WBCSD's Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain. For more information on GHG emissions see [305-1 Direct \(Scope 1\) GHG emissions](#), [305-2 Energy indirect \(Scope 2\) GHG emissions](#) and the [GHG Protocol Disclosure Report – Scope 1 Emissions by GHG](#).

Overall, Scope 1 emissions decrease slightly in 2021 relative to 2020 which is in line with normal year over year operating fluctuations and supported by energy reduction projects such as flare gas reduction and other energy efficiency projects. The current actions in flight will enable reduction of net emissions in the medium to longer term.

Dow's Scope 2 emissions were reduced by approximately 400,000 metric tons CO₂e (6.4% reduction) in 2021 when compared to 2020 as a result of Dow's efforts to source cleaner sources of energy to support our sites.

When compared to 2020, increases in 2021 Scope 3 emissions were driven by two primary factors. First, some variations were due to differences in Dow's products or operations. Most significantly, Dow increased its sales of fuel additives, which resulted in an increase in category 3.11, Use of Sold Products, by approximately four million tons of CO₂e. Second, as part of our work to continuously improve the accuracy and comprehensiveness of our scope 3 accounting, several improvements were implemented in this reporting cycle.² We expect our Scope 3 emissions methodology and values to continue to evolve as we enhance and further standardize our approach and refine our estimates with more specific and primary data. We are working to establish transparent approaches and to define scope 3 targets that will allow us to demonstrate clear progress on our Scope 3 emissions reductions. For additional information see [GRI 305-3 Other indirect \(Scope 3\) GHG emissions](#).

Description	Baseline year	Baseline Value	2021	2020	2019 ¹	Target Year
Scope 1	2020	28.49	28.29	28.49	27.20	2030 ⁵
Scope 2 – Market	2020	6.07 ¹	5.68	6.07 ¹	6.58 ^{1,2,3}	2030 ⁵
Scope 3	NA ⁴	NA ⁴	77.64	69.26	93.94	NA ⁴

¹ For consistency and comparability, 2019 and 2020 values were updated using the work potential method vs the energy content method for steam energy accounting.

² A correction was made to an emission factor used for electricity purchases.

³ A correction was made to the quantity of steam purchased and consumed.

⁴ Dow is actively working to set a scope 3 target/baseline while also working to enhance our processes and value chain engagement to ensure transparent reporting and identification of emission reduction opportunities.

⁵ Reduce net annual carbon emissions by five million metric tons versus our 2020 baseline (Scope 1 + 2).

Energy Intensity

See also: [GRI 302-1 Energy Consumption](#) and [GRI 302-3 Energy Intensity](#)

Energy intensity is calculated using total energy consumption (GRI 302-1 Energy consumption within the organization) divided by production volume. We have evolved our production volume to total valued production which includes byproducts and coproducts and has been applied to all years reported.

As noted in 302-1, the methodology was updated for total energy consumption and changes are being applied prospectively; prior year periods will not be revised. Therefore, energy intensity values are presented consistent with the approach in 302-1 where the 2021 energy intensity values have been calculated using the values from the new and historical methods for energy consumption. This approach enables comparisons to prior year data. Overall, energy intensity for 2021 was flat when compared to 2020.



Dow Disclosures – TCFD Disclosure Report

Description (GJ/Metric Ton of Production)	2021 (New Method) ¹	2021 (Old Method) ²	2020 ²	2019 ¹
Energy Intensity (Scope 1&2)	10.85	12.06	11.86	12.31

¹ Value for the total energy consumption (numerator) used new methodology as described in 302-1

² Value for the total energy consumption (numerator) used the historical methodology as described in 302-1

Freshwater Intake Intensity at Key Water-Stressed Sites

This metric is aligned with the physical risk of climate change and changing weather patterns. The changing patterns in supply and demand for water in a climate change impacted world have posed challenges for certain manufacturing assets, such as extended droughts in certain locations and low river levels, impacting ability to ship products. We have developed a methodology to evaluate water risk at Dow sites. We have also engaged in developing optimization tools to understand the relationship between water and our climate adaptation strategy. This metric was adopted in recognition of the criticality of virgin fresh water as a shared resource in water-stressed basins and to ensure that water does not become a constraint on community prosperity.

Dow's six KWSS, which all comply with ISO 14001-2015 standards, include: Freeport, Texas (Brazos River); Seadrift, Texas (Guadalupe River); Bahia Blanca, Argentina (Purchased freshwater); Terneuzen, The Netherlands (Rivers Rhine and Meuse); Böhlen, Germany (River Weisse Elster and Lake Witznitz) and Tarragona, Spain (Purchased freshwater supply source from Ebro River diversion).

Dow has set a target to reduce freshwater intake intensity at KWSS by 20% from its 2015 baseline.¹

The freshwater intake intensity metric is calculated by taking the sum of virgin freshwater withdrawal associated with Dow manufacturing at the KWSS divided by production volume. Dow has set a target to reduce freshwater intake intensity at KWSS by 20% from its 2015 baseline. In 2021, Dow updated its freshwater intensity metric to only account for freshwater intake associated with Dow production (and not transferred to industrial park [iPark] tenants) and improved the calculation of large variations associated with water reservoirs. In addition, the production volume used in this metric uses total valued production which includes products produced by the company, as well as byproducts and coproducts generated from the production, which is in line with other intensity metrics at Dow.

Baseline Year	Baseline Value	2021	2020	2019 ¹	Target Year	Target Value
2015	6.6	4.5	6.1	6.7	2025	5.3

¹ As indicated below – the freshwater intake intensity calculation has changed from previously reported numbers.

The freshwater intake intensity shows a reduction in 2021. A water conservation project was implemented at Freeport, Texas, which also benefited from the installation of certain higher efficiency assets. Increase in rainfall at major sites and weather freeze events resulting in unplanned shutdowns, impacting both water withdrawal and production, account for the remaining decrease which are beyond Dow's control.

Renewable Power and Energy Metrics (%)

A key element of Dow's climate action plan to reduce Scope 2 emissions is to increase access to renewable power to support our sites. Dow's access to renewable power has expanded to over 900 MW, surpassing Dow's 2025 Sustainability Goal of obtaining 750 MW of its power demand from renewable sources. Tracking renewable power as a percentage of power purchased is a metric that can indicate progress against this pillar of our plan. As Dow also operates combined heat and power (CHP) plants to support our sites, we are also providing the percentage of renewable power we purchase as a portion of the total power consumed. Lastly, we provide the metric on renewable energy (renewable power and steam we purchase) as a percent of energy consumed, which includes fuel purchases to run our operations and self-generate power and steam, consumption of process off-gas for energy-related activities, purchased electricity and purchased steam.



Dow Disclosures – TCFD Disclosure Report

Description	2021	2020	2019 [†]
% renewable power, of power purchased	27%	25%	22%
% renewable power, of power consumed	15%	14%	13%
% renewable energy, of energy consumed	2%	2%	2%

Dow's products and services are a key component of Dow's climate strategy as they provide an opportunity to enable the transition to a low-carbon economy. Dow has two metrics to track progress that assess our innovation and product portfolios. These are evolving metrics and we will continue to advance our approach to ensure progress and transparency.

- **R&D Portfolio alignment to sustainability (%):** Our innovation portfolio and its alignment to our climate and other sustainability priorities is critical for achieving our sustainability goals. We have developed and implemented an approach that documents the primary alignment of each innovation project to Dow's sustainability priorities. The approach uses a rigorous and well-defined process that includes training, review and approval of the data, as well as an annual evaluation to drive improvement. 2021 was the second year for the evaluation approach and we will continue to evolve to ensure alignment of innovation with our sustainability priorities.

Description	2021 ¹	2020 ²	2019 [†]
% R&D portfolio alignment to sustainability	>85%	>80%	

¹ Innovation projects are aligned to Dow's sustainability focus areas and provide a sustainability benefit over incumbent approaches (2021).

² Innovation projects are aligned to Dow's sustainability focus areas: climate protection, circular economy, stop the waste and safer materials (2020).

- **Sustainability-driven revenue opportunities:** Dow's materials science solutions enable several markets and applications where sustainability is the key growth driver. Often characterized by a double-digit compound annual growth rate, these applications are fueled by commitments of consumers, private sector and governments to support the transition to a lower-carbon and more circular economy. Some examples of new or growing markets that are driven by sustainability include, but are not limited to: green buildings and climate change adaptation, e-mobility, renewable energy generation, recycling and food preservation. Dow's businesses identify products in their portfolios that help enable such applications and report respective revenues at a market segment level. The table below supplies the 2021 aggregated ratio:

Description	2021 ¹	2020	2019 [†]
Revenue from products that enable sustainability-driven markets	43%		
Revenue from products that address world challenges		48%	48%

¹ The definition of this metric has been updated for 2021 and is not able to be applied to prior years. In 2021 we collected revenue from products that enable sustainability-driven markets. In 2020 and 2019, we captured revenue from products that address world challenges.

Dow's products sold into sustainability-driven applications are crucial building blocks (see [Innovating low-carbon materials and technologies](#)); however, they often have similar characteristics to competing products or a business-as-usual level of performance. Work is underway to start reporting separately revenues of those products that are better for the planet and people across their life cycle compared with incumbent solutions. Examples include low-carbon materials, products with recycled and bio-content, solutions enabling recycling, biodegradable products and materials that are safer than incumbents.



Sustainability Accounting Standards Board (SASB) Disclosure Report

Dow Disclosures – SASB Disclosure Report

Accounting Metrics

Greenhouse Gas Emissions

RT-CH-110a.1. Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations

See disclosure [GRI 305-1 Direct \(Scope 1\) GHG emissions](#).

RT-CH-110a.2. Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets and an analysis of performance against those targets

In 2020, Dow set a target to be carbon neutral by 2050. Dow's Protect the Climate goals include reducing net annual carbon emissions by 5 million metric tons by 2030 vs. 2020 baseline, which represents a 15% reduction. In 2021, we outlined a path to decarbonize our production processes (Scope 1 and 2 GHG emissions), utilizing a phased approach in which end-of-life capacity is replaced with higher-efficiency, lower-emissions assets. In the short term, energy reduction and optimization projects will provide continuous progress toward our carbon-neutral ambitions. For analysis of performance against the Scope 1 emissions reduction targets, see TCFD disclosure Metrics-b.

Air Quality

RT-CH-120a.1. Air emissions of the following pollutants: (1) NOx (excluding N₂O), (2) SOx, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)

See disclosure [GRI 305-7 Nitrogen oxides \(NOx\), sulfur oxides \(SOx\) and other significant air emissions](#).

Energy Management

RT-CH-130a.1. (1) Total energy consumed, (2) percentage grid-electricity, (3) percentage renewable, (4) total self-generated energy

See disclosure [GRI 302-1 Energy consumption within the organization](#).

Water Management

RT-CH-140a.1. (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress

See disclosures [GRI 303-1 Interactions with water as a shared resource](#) and [GRI 303-3 Water withdrawal](#).

RT-CH-140a.2. Number of incidents of non-compliance associated with water quality permits, standards and regulations

Dow had five incidents of non-compliance associated with water quality permits, standards and regulations in 2021.

RT-CH-140a.3. Description of water management risks and discussion of strategies and practices to mitigate those risks

See disclosures [GRI 303-1 Interactions with water as a shared resource](#) and [GRI 303-3 Water withdrawal](#).

Hazardous Waste Management

RT-CH-150a. Amount of hazardous waste generated; percentage recycled

See disclosure [GRI 306-2 Management of significant waste-related impacts](#).



Dow Disclosures – SASB Disclosure Report

Community Relations

RT-CH-210a.1. Discussion of engagement processes to manage risks and opportunities associated with community

See disclosure [GRI 102-43 Approach to stakeholder engagement](#).

Workforce Health & Safety

RT-CH-320a.1. (1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees

See disclosure [GRI 403-9 Work-related injuries](#).

RT-CH-320a.2. Description of efforts to assess, monitor and reduce exposure of employees and contract workers to long-term (chronic) health risks

See disclosure [GRI 403-3 Occupational health services](#).

Product Design for Use-phase Efficiency

RT-CH-410a.1. Revenue from products designed for use-phase resource efficiency

See [TCFD metrics – Dow Products and Services Revenue from Sustainable Products disclosure](#).

Safety & Environmental Stewardship of Chemicals

RT-CH-410b.1. (1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment

Dow tracks sales of products containing hazardous substances and ensures that all products are managed and used in line with their hazard profile. 100% of Dow products outlined in the SASB-identified categories undergo human and environmental toxicological risk assessments. Many of Dow's products in the noted categories are basic building block chemistries that are used in closed, industrial processes to lower overall risk of exposure before being converted via chemical reaction to non-hazardous products.

RT-CH-410b.2. Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact

See disclosure [GRI 416-103 and the narrative on the Safer Materials focus area](#).

Genetically Modified Organisms

RT-CH-410c.1. Percentage of products by revenue that contain genetically modified organisms (GMOs)

Dow does not manufacture any materials directly from genetically modified organisms (GMOs). However, Dow may use purchased raw materials derived from plant material, and that plant-based material may be genetically modified.



Dow Disclosures – SASB Disclosure Report

Management of the Legal & Regulatory Environment

RT-CH-530a.1. Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry

Dow is actively engaged in public policy areas in pursuit of innovation that changes how an industry works to make a profound impact on global and social challenges, including sustainability. Dow's global public policy advocacy covers a wide range of specific topics in geographies where we do business. Dow makes available our top public policy priorities globally, and by geographic region, at: [Public Policy | Legal | Dow Corporate](#)

Relevant Risks & Opportunities

Dow views the policy priorities described within our policies linked above as both potential risks to Dow, but also opportunities for positive and constructive engagement with key stakeholders.

Managing Risks and Opportunities & Risk Management Strategy

Dow will advocate for positive outcomes in our key policy priorities as part of a holistic risk management strategy, and as a way to create opportunities for business success. Our advocacy positions are found contained within our public policies linked above.

See disclosure [GRI 102-30 Effectiveness of risk management processes](#) and the [TCFD Risk Disclosures](#).

Operational Safety, Emergency Preparedness & Response

RT-CH-540a.1. Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR) and Process Safety Incident Severity Rate (PSISR)

See disclosure [GRI 306-3 \(2016\) Significant Spills](#).

RT-CH-540a.2. Number of Transport Incidents

Dow's 2025 Sustainability Goals include the following targets:

- Dow will demonstrate a 50% improvement in a Transportation Stewardship Index through progress in incident-free performance, leading-edge programs to influence logistics and raw material suppliers, and risk reduction across the value chain.
- Dow will strive to eliminate severe transportation incidents that impact people, property and the environment in the communities through which our products, raw materials and intermediates flow.

Here is our current progress:

Description	2015 (Baseline)	2021
Transportation Stewardship %	0%	74%

Activity Metrics

Production by Reportable Segment

RT-CH-000.A. Activity Metrics

Not reported



World Economic Forum (WEF) Stakeholder Capitalism Metrics Disclosure Report

Dow Disclosures – WEF Disclosure Report

Pillar 1 – Governance: Core Metrics & Disclosures

Governing Purpose

Setting purpose: The company's stated purpose, as the expression of the means by which a business proposes solutions to economic, environmental and social issues. Corporate purpose should create value for all stakeholders, including stockholders.

See the [Vision, Strategy & Business chapter](#).

Quality of Governing Body

Governance body composition

See disclosures [GRI 102-22 Composition of highest governing body and its committees](#) and [405-1 Diversity of governance bodies and employees](#).

Stakeholder Engagement

Material issues impacting stakeholders

See disclosures [GRI 102-21 Consulting stakeholders on economic, environmental and social topics](#), [GRI 102-43 Approach to stakeholder engagement](#) and [GRI 102-47 List of material topics](#).

Ethical Behavior

Anti-corruption

See disclosures [GRI 102-17 Mechanisms for advice and concerns about ethics](#) and [102-25 Conflicts of Interest](#).

Protected ethics advice and reporting mechanisms

See disclosure [GRI 102-17 Mechanisms for advice and concerns about ethics](#).

Risk and Opportunity Oversight

Integrating risk and opportunity into business process

See disclosure [GRI 102-15 Key impacts, risks and opportunities](#).

Pillar 2 – Planet: Core Metrics & Disclosures

Climate Change

Greenhouse gas emissions

See disclosures [GRI 305-1 Direct \(Scope 1\) GHG emissions](#), [305-2 Energy indirect \(Scope 2\) GHG emissions](#) and [GRI 305-3 Other indirect \(Scope 3\) GHG emissions](#).

TCFD implementation

See [TCFD disclosures](#).



Dow Disclosures – WEF Disclosure Report

Nature Loss

Land use and ecological sensitivity

Not reported

Freshwater Availability

Water consumption and withdrawal in water-stressed areas

See disclosures [GRI 303-1 Interactions with water as a shared resource](#) and [GRI 303-3 Water withdrawal](#).

Pillar 3 – People: Core Metrics & Disclosures

Dignity and Equality

Diversity and inclusion (%)

See disclosure [GRI 405-1 Diversity of governance bodies and employees](#).

Pay equity (%)

See disclosure [GRI 405-2 Ratio of basic salary and remuneration of women to men](#).

Wage level (%)

See disclosures [GRI 102-38 Annual total compensation ratio](#) and [GRI 102-39 Percentage increase in annual total compensation ratio](#).

Risk for incidents of child, forced or compulsory labor

Dow is strongly committed to working toward the environmental and social sustainability of our value chains. Dow operates in full accordance with the United Nations Guiding Principles on Businesses and Human Rights. These guiding principles provide a framework for governments and companies that are committed to protecting human rights around the world.

Every supplier adheres to Dow's Supplier Code of Conduct ([Supplier Code of Conduct | Public Policy | Corporate](#)³), which contains stipulations related to labor, including:

- No Forced and Compulsory Labor: Suppliers will not use forced or involuntary labor, including prison labor, indentured labor, bonded labor or slave labor.
- No Child Labor: Suppliers will comply with all applicable child labor laws.

The Code of Conduct is updated periodically to maintain the highest standards.

Dow maintains an active due diligence program that includes supplier meetings, questionnaires and audits to ensure that we are appropriately addressing compliance. Dow also collaborates with industry groups and NGOs to ensure supplier sustainability and advance transparency on labor issues, including Together for Sustainability and the Responsible Minerals Initiative.

Health and Well-being

Health and safety (%)

See disclosure [GRI 403-9 Work-related injuries](#).



Dow Disclosures – WEF Disclosure Report

Skills for the Future

Training provided (#, \$)

See disclosure [GRI 404-1 Average hours of training per year per employee.](#)

Pillar 4 – Prosperity: Core Metrics & Disclosures

Employment and Wealth Generation

Absolute number and rate of employment

See disclosure [GRI 405-1 Diversity of governance bodies and employees.](#)

Economic contribution

See disclosures [GRI 201-1 Direct economic value generated and distributed](#) and [201-4 Financial assistance received from government](#).

Financial investment contribution

In 2021, CapEx was \$1.5B and our Operating ROIC reached 22%. We also returned over \$3B to stockholders in the form of dividends and share repurchases. For additional information, see Dividends and Share Repurchase Program (pages 54-55) in the Dow Inc. Annual Report on [Form 10-K](#) for the year ending December 31, 2021, filed with the SEC on February 4, 2022.

Innovation of Better Products and Services

Total R&D expenses

The total cost related to research and development was \$857MM for the year ending December 31, 2021.

Community and Social Vitality

Total tax paid

See disclosure [GRI 201-1 Direct economic value generated and distributed – Payments to governments.](#)



Analyst Data Summary

For additional information in the year-over-year values, please review the [2021 ESG Disclosures](#).

Environmental				
GHG Emissions	Unit	2021	2020 ¹	2019 ^{2,3}
Scope 1 GHG Emissions	Millions of metric tons CO ₂ e	28.29	28.49	27.20
Scope 1 GHG Emissions – Excluding Emissions Associated with the Production of Power and Steam Not Consumed by the Company	Millions of metric tons CO ₂ e	22.55	22.93	21.79
Scope 2 GHG Emissions – Market Based	Millions of metric tons CO ₂ e	5.68	6.07 ³	6.58 ^{3,4,5}
Scope 2 GHG Emissions – Location Based	Millions of metric tons CO ₂ e	3.94	3.95 ³	4.66 ^{3,5}
Scope 1 + Scope 2 GHG Emissions Total	Millions of metric tons CO₂e	33.97	34.56	33.78
Scope 1 + Scope 2 GHG Emissions – Excluding Emissions Associated with the Production of Power and Steam Not Consumed by the Company	Millions of metric tons CO ₂ e	28.20	29.00	28.37
Scope 1 + Scope 2 GHG Intensity (Emissions/Revenue)	Metric tons of CO ₂ e per USD	0.00062	0.00090	0.00079
Scope 1 + Scope 2 GHG Intensity (Emissions/Production) – Excluding Emissions Associated with the Production of Power and Steam Not Consumed by the Company	Metric tons CO ₂ e/metric tons of production	0.53	0.55	0.53
Scope 3 GHG Emissions Total	Millions of metric tons CO₂e	77.64	69.26	93.94
Category 1: Purchased Goods & Services	Millions of metric tons CO ₂ e	39.65	38.17	60.05
Category 2: Capital Goods	Millions of metric tons CO ₂ e	1.97	1.76	2.78
Category 3: Fuel- & Energy-Related Activities	Millions of metric tons CO ₂ e	5.22	4.75	8.27
Category 4: Upstream Transportation & Distribution ⁶	Millions of metric tons CO ₂ e	2.01	4.14	4.09
Category 5: Waste Generated in Operations	Millions of metric tons CO ₂ e	1.04	1.75	1.56
Category 6: Business Travel	Millions of metric tons CO ₂ e	0.0045	0.0051	0.032

¹ Values listed in the analyst summary table not included in the body of this report are as reported in the 2019 Sustainability Report unless otherwise noted.

² Values listed in the analyst summary table not included in the body of this report are as reported in the 2020 Sustainability Report unless otherwise noted.

³ In 2021, our purchased steam energy calculation was updated to use the work potential method. Previous reporting utilized the energy content method. Prior year values have been updated in this report to reflect the work potential method.

⁴ A correction was made to an emission factor used for electricity purchases.

⁵ A correction was made to the quantity of steam purchased and consumed.

⁶ Emissions from Category 9: Downstream Transportation & Distribution have been realigned to Category 4: Upstream Transportation & Distribution to comply with the GHG Protocol.



Environmental				
	Unit	2021	2020 ¹	2019 ²
Category 7: Employee Commuting	Millions of metric tons CO ₂ e	0.05	0.05	0.09
Category 8: Upstream Leased Assets	Millions of metric tons CO ₂ e	0.01	0.02	0.02
Category 9: Downstream Transportation & Distribution ³	Millions of metric tons CO ₂ e	-	-	-
Category 10: Processing of Sold Products ⁴	Millions of metric tons CO ₂ e	-	-	-
Category 11: Use of Sold Products	Millions of metric tons CO ₂ e	11.13	6.44	3.18
Category 12: End-of-Life Treatment of Sold Products	Millions of metric tons CO ₂ e	11.96	7.27	9.03
Category 13: Downstream Leased Assets ⁵	Millions of metric tons CO ₂ e	0	0	0
Category 14: Franchises ⁵	Millions of metric tons CO ₂ e	0	0	0
Category 15: Investments	Millions of metric tons CO ₂ e	4.59	4.92	4.84
Other Emissions				
Ozone-Depleting Substances	Metric tons as CFC-11e	1.52	2.88 ⁶	2.10 ⁶
NOx	Metric tons	18,068	18,133 ⁷	19,236 ⁷
SOx	Metric tons	2,048	2,242	2,774
VOC	Metric tons	8,004	7,495	7,635
Chemicals to Air and Water	Metric tons	15,256	13,910	13,959
Priority Compounds to Air and Water	Metric tons	225	209	294
Energy				
Energy Intensity (Scope 1 and 2)	GJ/Metric ton of production	10.85 (new method) ⁸ 12.06 (old method) ⁹	11.86	12.31

¹ Values listed in the analyst summary table not included in the body of this report are as reported in the 2019 Sustainability Report unless otherwise noted.² Values listed in the analyst summary table not included in the body of this report are as reported in the 2020 Sustainability Report unless otherwise noted.³ Emissions from Category 9: Downstream Transportation & Distribution have been realigned to Category 4: Upstream Transportation & Distribution to comply with the GHG Protocol.⁴ Dow is currently developing a methodology to report this category in the future.⁵ Dow does not currently have any downstream leased assets or franchises; therefore, these categories are not relevant for Scope 3 accounting.⁶ Historical numbers updated to reflect more complete data.⁷ An update to the calculation methodology at one of Dow's largest silicon sites resulted in an increase in historical NOx emissions vs. the reported value in the 2020 ESG report.⁸ Value for the total energy consumption (numerator) used new methodology as described in [302-1 Energy consumption within the organization](#).⁹ Value for the total energy consumption (numerator) used the historical methodology as described in [302-1 Energy consumption within the organization](#).



Environmental					
	Unit	2021		2020 ¹	2019 ²
Total Energy Consumption	Million Gigajoules (GJ)	574.78 (new method)	638.68 (old method)	630.23	629.07
Purchased Fuels	Million GJ	317.07 ⁴	392.71	394.42	372.50
Off-gas from Feedstock	Million GJ	262.67	250.93	241.35	260.77
Purchased Electricity	Million GJ	38.51	38.51	37.49	38.38
Purchased Steam ³	Million GJ	5.14	5.14	5.23	5.96
Power and Steam Sold ³	Million GJ	-48.62	-48.62	-48.25	-48.55 ⁵
Purchased Electricity from Renewable Sources – Total	Megawatts (MW)	901		844	543
Wind	MW	535		375	375
Hydro	MW	168		147	147
Biomass	MW	2		0	17
Landfill Gas	MW	3		3	3
Solar	MW	193		319	0.5
Purchased Renewable Power – Consumption – Total	Million GJ	10.67		9.46	8.76
Wind	Million GJ	4.48		4.40	4.36
Hydro	Million GJ	5.05		4.69	4.22
Biomass	Million GJ	0.07		0	0.13
Landfill Gas	Million GJ	0.05		0.05	0.05
Solar	Million GJ	1.02		0.32	0.002
Purchased Steam from Renewable Sources – Consumption – Biomass Total⁴	Million GJ	0.52		0.51	0.45

¹ Values listed in the analyst summary table not included in the body of this report are as reported in the 2019 Sustainability Report unless otherwise noted.

² Values listed in the analyst summary table not included in the body of this report are as reported in the 2020 Sustainability Report unless otherwise noted.

³ In 2021, our purchased steam energy calculation was updated to use the work potential method. Previous reporting utilized the energy content method. Prior year values have been updated in this report to reflect the work potential method.

⁴ 2021 data excludes purchased fuels resold and used as feedstock.

⁵ Updated with more refined information.



Environmental				
	Unit	2021	2020 ¹	2019 ²
Total Water Withdrawal – All Sites	Megaliters	2,951,786	3,087,446	3,077,857
Surface Water	Megaliters	1,699,905	1,831,697	1,928,351
Groundwater	Megaliters	34,440	35,672	36,231
Seawater	Megaliters	1,092,075	1,101,371	997,485
Produced Water	Megaliters	174	174	173
Third-Party Water ³	Megaliters	125,192	118,532	115,617
Freshwater Withdrawals – All Sites Total	Megaliters	1,834,178	1,962,804	2,080,198
Other Water Withdrawals – All Sites Total	Megaliters	1,117,608	1,124,643	997,658
Total Water Withdrawal – Key Water-Stressed Sites	Megaliters	1,260,831	1,333,885	1,268,031
Surface Water	Megaliters	119,698	187,160	247,130
Groundwater	Megaliters	614	358	515
Seawater	Megaliters	1,086,112	1,095,556	991,862
Produced Water	Megaliters	0	0	0
Total Third-Party Water	Megaliters	54,137	50,811	28,524
Third-Party Groundwater	Megaliters	0	0	
Third-Party Surface Water	Megaliters	28,778	27,713	
Third-Party – Produced Water Fresh Water	Megaliters	0	0	
Third-Party – Seawater Fresh Water	Megaliters	0	0	
Third-Party – Seawater Non-Fresh Water	Megaliters	25,359	23,098	
Freshwater Withdrawals – Key Water-Stressed Sites – Total	Megaliters	149,360	215,231	276,169

¹ Values listed in the analyst summary table not included in the body of this report are as reported in the 2019 Sustainability Report unless otherwise noted.² Values listed in the analyst summary table not included in the body of this report are as reported in the 2020 Sustainability Report unless otherwise noted.³ Purchased steam and condensate are not included as most facilities are equipped with condensate return.⁴ Data collected in 2019 contains all purchased water including from non-freshwater sources. Methodology changes that allowed for visibility of source of third-party water started in 2020.



Environmental				
	Unit	2021	2020 ¹	2019 ²
Other Water Withdrawals – Key Water-Stressed Sites – Total	Megaliters	1,111,471	1,118,654	991,862
Freshwater Intake Intensity, Key Water-Stressed Sites	Ib. of water per lb. of production	4.5	6.1	6.7
Water Consumption – All Areas	Megaliters	442,768	463,117	461,678
Water Consumption – Key Water-Stressed Sites	Megaliters	189,125	200,083	190,205
Total Water Discharge – All Sites	Megaliters	132,510	125,601	129,443
Surface Water	Megaliters	59,742	59,121	55,386
Groundwater	Megaliters	0	0	0
Seawater	Megaliters	57,569	53,284	60,688
Produced Water	Megaliters	0	0	0
Third-Party Water	Megaliters	15,199	13,196	13,170
Total Water Discharge – Key Water-Stressed Sites	Megaliters	46,936	43,229	47,275
Surface Water	Megaliters	965	988	942
Groundwater	Megaliters	0	0	0
Seawater	Megaliters	44,511	40,608	44,367
Produced Water	Megaliters	0	0	0
Third-Party Water	Megaliters	1,460	1,633	1,966
Total Waste	Millions of Metric Tons	1.41	1.38	1.43
Hazardous Waste	Millions of Metric Tons	0.64	0.67	0.72

¹ Values listed in the analyst summary table not included in the body of this report are as reported in the 2019 Sustainability Report unless otherwise noted.

² Values listed in the analyst summary table not included in the body of this report are as reported in the 2020 Sustainability Report unless otherwise noted.



Social				
Employee General	Units	2021	2020	2019 ¹
Employees	Number	35,694	35,758	36,527
Overall Employee Satisfaction	Percent favorable	71	74	69
Employee Resource Group Participation	Percent	52.4	48.9	42.1
People Leader Participation in Employee Resource Groups	Percent	97	98	88
Employee Resource Groups	Number	10	10	10
Average Training Hours per Employee	Number	40.7	62.0	63.5
Percentage of Employees Eligible to Receive Performance Reviews	Percent	96.3	95.3	92.8
Board Diversity				
% Female	Percent	33 ¹	27 ²	27 ³
% U.S. Ethnic Minority	Percent	33 ¹	27 ²	27 ³
Employee Diversity				
% Female	Percent	28.9	28.1	27.8
New Employee Hires, % Female	Percent	35	34	33
% U.S. Ethnic Minority Representation	Percent	26.0	25.1	24.3
New Employee Hires, % U.S. Ethnic Minority	Percent	31	42	39
Global Female Pay to Male Base Pay ^{4,5}	Percent	0.97:100	0.98:100	-
U.S. Minority Pay to Non-Minority Base Pay ⁵	Percent	0.97:100	0.98:100	-
Compensation				
Annual Total Compensation (CEO pay/median employee compensation)	Ratio	260	141	145
Base Salary Adjustments for Median Employee, Year over Year	Percent	3	3	-
CEO Direct Compensation Change, Year over Year	Percent	5.9	13.6	-
Community				
Total Charitable Cash and In-Kind Donations	\$ (in MM)	32.4	34	34

¹ As of June 1, 2022.² As of June 1, 2021.³ As of June 1, 2020.⁴ Gender is evaluated globally excluding Germany.⁵ In 2019, historical pay equity studies compared like-for-like jobs (equal pay for equal work). In 2020 we transitioned to assessing the pay gap, comparing pay regardless of the work performed.



Social

Health & Safety	2021	2020	2019 ¹
Number of Global Dow Health Clinics	58	58	60
Large Manufacturing Sites Participating in External Safety Audits (total of 9 sites)	7	-	-
Fatalities – Employee	0	0	0
Fatalities – Contractor	0	1	1
Fatalities – Employees and Contractors	0	1	1
High-Consequences Work-Related Injuries Incident Count (excl. Fatalities) – Employee	1	0	0
High-Consequences Work-Related Injuries Incident Count (excl. Fatalities) – Contractor	0	1	1
High-Consequences Work-Related Injuries Incident Count (excl. Fatalities) – Employee and Contractor	1	1	1
High-Consequences Work-Related Injuries Incident Rate (excl. Fatalities) – Employee	0.003	0	0
High-Consequences Work-Related Injuries Incident Rate (excl. Fatalities) – Contractor	0	0.003	0.003
High-Consequences Work-Related Injuries Incident Rate (excl. Fatalities) – Employee and Contractor	0.001	0.001	0.001
Recordable Work-Related Injuries Incident Count – Employee	49	45	68
Recordable Work-Related Injuries Incident Count – Contractor	50	41	59
Recordable Work-Related Injuries Incident Count – Combined Employees and Contractors	99	86	127
Recordable Work-Related Injuries Incident Rate – Employee	0.12	0.11	0.16
Recordable Work-Related Injuries Incident Rate – Contractor	0.16	0.14	0.16
Recordable Work-Related Injuries Incident Rate – Combined Employees and Contractors	0.14	0.12	0.16
Total Recordables (Illness) – Employees	7	1	22 ¹
Total Recordables (Illness) – Contractors	0	1	0 ¹
Total Recordables (Illness) – Employees and Contractors	7	2	22 ¹
Number of Significant Process Safety Containment Events	26	29	25

¹ Total recordables updated to be in line with Dow and OSHA criteria for illness/occupational hearing loss determination. Additionally, hearing loss events have been reclassified from injury classifications to ill health to align with GRI standard.



United Nations Sustainable Development Goals (SDGs)

SDGs That Are an Opportunity for Dow to Lead

Dow has the global reach, expertise and connections to drive significant solutions and to lead or make a large impact with these SDGs. These SDGs align with the World Business Council for Sustainable Development's chemical sector SDG roadmap.



SDGs That Are an Opportunity to Engage and Contribute

These SDGs are areas where Dow can engage and make positive contributions but is not positioned or expected to take the lead. Dow can support through visible actions and partnerships.



SDGs That Present Business Opportunities and Risks

Some goals present a business opportunity or risk, and it is important that our commercial teams understand the sustainable development-driven changes coming to the markets they serve. In some cases, these changes may lead to product deselection. In others, new and growing markets present opportunities for innovative Dow products to enable sustainable development.



RISKS



SDGs That Dow Currently Negatively Impacts

A few SDGs represent areas where the current impact of Dow's products or operations could be inconsistent with the achievement of the goal. Our three focus areas of Climate Protection, Circular Economy and Safer Materials are well-aligned to drive measurable reductions in our impacts and these areas are all aligned with opportunities for Dow to lead.





Non-GAAP Financial Measures

Reconciliation of “Income (loss) from continuing operations, net of tax” to “Operating EBITDA”

TWELVE MONTHS ENDED DECEMBER 31 In millions (Unaudited)	2021 As Reported	2020 As Reported	2019 Pro Forma
Income (loss) from continuing operations, net of tax (GAAP)	\$6,405	\$1,294	\$(1,717)
+ Provision for income taxes on continuing operations	\$1,740	\$777	\$470
Income (loss) from continuing operations before income taxes	\$8,145	\$2,071	\$(1,247)
- Interest income	\$55	\$38	\$81
+ Interest expense and amortization of debt discount	\$731	\$827	\$933
+ Pro forma adjustments			\$65
- Significant items	\$(712)	\$145	\$(4,682)
Operating EBIT (non-GAAP)	\$9,533	\$2,715	\$4,352
Depreciation and amortization	\$2,842	\$2,874	\$2,938
Operating EBITDA (non-GAAP)	\$12,375	\$5,589	\$7,290

Reconciliation of “Cash provided by operating activities - continuing operations” to “Free cash flow” and “Cash flow conversion”

TWELVE MONTHS ENDED DECEMBER 31 In millions (Unaudited)	2021 As Reported	2020 As Reported	2019 Pro Forma
Cash provided by operating activities – continuing operations (GAAP)	\$7,069	\$6,252	\$5,713
Capital expenditures	\$(1,501)	\$(1,252)	\$(1,961)
Free cash flow (non-GAAP) ¹	\$5,568	\$5,000	\$3,752
Operating EBITDA (non-GAAP)	\$12,375	\$5,589	\$7,290
Cash flow conversion (Operating EBITDA to cash flow from operations) (non-GAAP) ¹	57.1%	111.9%	78.4 %

¹ Free cash flow for the year ended December 31, 2021 reflects a \$1 billion elective pension contribution.



Reconciliation of “Net income (loss) available for Dow Inc. common stockholders” to “Operating net income from continuing operations available for Dow Inc. common stockholders”

TWELVE MONTHS ENDED DECEMBER 31 In millions (Unaudited)	2021 As Reported	2020 As Reported	2019 Pro Forma
Net income (loss) available for Dow Inc. common stockholders (GAAP)	\$6,311	\$1,225	\$(1,359)
- Income from discontinued operations, net of tax	\$(459)	\$(8)	\$432
+ Pro forma adjustments	\$(459)	\$(8)	\$52
Pro forma net income (loss) from continuing operations available for Dow Inc. common stockholders	\$94	\$69	\$(1,739)
- Significant items, after tax	\$(459)	\$(8)	\$(4,373)
Operating net income from continuing operations available for Dow Inc. common stockholders (non-GAAP)	\$67	\$77	\$2,634

Reconciliation of Operating return on capital (ROC)

TWELVE MONTHS ENDED DECEMBER 31 In millions (Unaudited)	2021 As Reported	2020 As Reported	2019 Pro Forma
Operating net income from continuing operations available for Dow Inc. common stockholders (non-GAAP)	\$6,770	\$1,233	\$2,634
Net income attributable to noncontrolling interests	\$94	\$69	\$74
Gross interest expense	\$790	\$892	\$1,013
Imputed interest expense – operating leases	\$67	\$77	\$91
Tax on gross interest expense	\$(211)	\$(294)	\$(239)
Operating net operating profit from continuing operations after tax (non-GAAP)	\$7,510	\$1,977	\$3,573
Average total capital from continuing operations (non-GAAP)	\$33,481	\$32,785	\$39,016
Operating return on capital (non-GAAP) ¹	22.4%	6.0%	9.2 %

¹ This measure of return excluded from income significant items which Dow did not consider part of ongoing operations.



Non-GAAP Financial Measures

This document includes financial information that does not conform to U.S. GAAP and is considered non-GAAP measures. Management uses these measures internally for planning, forecasting and evaluating the performance of the company's segments, including allocating resources. Dow's management believes that these non-GAAP measures best reflect the ongoing performance of the company during the periods presented and provide more relevant and meaningful information to investors as they provide insight with respect to ongoing operating results of the company and a more useful comparison of year-over-year results. These non-GAAP measures supplement the company's U.S. GAAP disclosures and should not be viewed as alternatives to U.S. GAAP measures of performance. Furthermore, such non-GAAP measures may not be consistent with similar measures provided or used by other companies. Non-GAAP measures included in this release are defined below.

Operating EBIT is defined as earnings (i.e., "Income (loss) from continuing operations before income taxes") before interest, excluding the impact of significant items. Pro forma operating EBIT is defined as pro forma earnings (i.e., "Pro Forma income (loss) from continuing operations before income taxes") before interest, excluding the impact of significant items.

Operating EBITDA is defined as earnings (i.e., "Income (loss) from continuing operations before income taxes") before interest, depreciation and amortization, excluding the impact of significant items. Pro forma operating EBITDA is defined as pro forma earnings (i.e., "Pro Forma income (loss) from continuing operations before income taxes") before interest, depreciation and amortization, excluding the impact of significant items.

Cash Flow Conversion is defined as "Cash flows from operating activities - continuing operations" divided by Operating EBITDA. Management believes Cash Flow Conversion is an important financial metric as it helps the company determine how efficiently it is converting its earnings into cash flow.

Free Cash Flow is defined as "Cash flow from operating activities - continuing operations," less capital expenditures. Under this definition, Free Cash Flow represents the cash generated by Dow from operations after investing in its asset base. Free Cash Flow, combined with cash balances and other sources of liquidity, represents the cash available to fund obligations and provide returns to stockholders. Free Cash Flow is an integral financial measure used in the company's financial planning process.

Net Debt is defined as total gross debt minus "Cash and cash equivalents" and "Marketable securities."

Operating ROC is defined as net operating profit after tax (excluding significant items) divided by total average capital, also referred to as ROIC.



Cautionary Statement about Forward-Looking Statements

Certain statements in this report are "forward-looking statements" within the meaning of the federal securities laws, including Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements often address expected future business and financial performance, financial condition, and other matters, and often contain words or phrases such as "anticipate," "believe," "estimate," "expect," "intend," "may," "opportunity," "outlook," "plan," "project," "seek," "should," "strategy," "target," "will," "will be," "will continue," "will likely result," "would" and similar expressions, and variations or negatives of these words or phrases.

Forward-looking statements are based on current assumptions and expectations of future events that are subject to risks, uncertainties and other factors that are beyond Dow's control, which may cause actual results to differ materially from those projected, anticipated or implied in the forward-looking statements and speak only as of the date the statements were made. These factors include, but are not limited to: sales of Dow's products; Dow's expenses, future revenues and profitability; the continuing global and regional economic impacts of the coronavirus disease 2019 ("COVID-19") pandemic and other public health-related risks and events on Dow's business; any sanction, export restrictions, supply chain disruptions or increased economic uncertainty related to the ongoing conflict between Russia and Ukraine; capital requirements and need for and availability of financing; unexpected barriers in the development of technology, including with respect to Dow's contemplated capital and operating projects; Dow's ability to realize its commitment to carbon neutrality on the contemplated timeframe; size of the markets for Dow's products and services and ability to compete in such markets; failure to develop and market new products and optimally manage product life cycles; the rate and degree of market acceptance of Dow's products; significant litigation and environmental matters and related contingencies and unexpected expenses; the success of competing technologies that are or may become available; the ability to protect Dow's intellectual property in the United States and abroad; developments related to contemplated restructuring activities and proposed divestitures or acquisitions such as workforce reduction, manufacturing facility and/or asset closure and related exit and disposal activities, and the benefits and costs associated with each of the foregoing; fluctuations in energy and raw material prices; management of process safety and product stewardship; changes in relationships with Dow's significant customers and suppliers; changes in consumer preferences and demand; changes in laws and regulations, political conditions or industry development; global economic and capital markets conditions, such as inflation, market uncertainty, interest and currency exchange rates, and equity and commodity prices; business or supply disruptions; security threats, such as acts of sabotage, terrorism or war including the ongoing conflict between Russia and Ukraine; weather events and natural disasters; disruptions in Dow's information technology networks and systems; and risks related to Dow's separation from DowDuPont Inc. such as Dow's obligation to indemnify DuPont de Nemours, Inc. and/or Corteva, Inc. for certain liabilities.

Where, in any forward-looking statement, an expectation or belief as to future results or events is expressed, such expectation or belief is based on the current plans and expectations of management and expressed in good faith and believed to have a reasonable basis, but there can be no assurance that the expectation or belief will result or be achieved or accomplished. A detailed discussion of principal risks and uncertainties which may cause actual results and events to differ materially from such forward-looking statements is included in the section titled "Risk Factors" contained in the company's Annual Report on Form 10-K for the year ended December 31, 2021 and its subsequent reports on Form 10-Q and Form 8-K. These are not the only risks and uncertainties that Dow faces. There may be other risks and uncertainties that Dow is unable to identify at this time or that Dow does not currently expect to have a material impact on its business. If any of those risks or uncertainties develops into an actual event, it could have a material adverse effect on Dow's business. Dow assumes no obligation to update or revise publicly any forward-looking statements whether because of new information, future events, or otherwise, except as required by securities and other applicable laws.