

2023
ANNUAL REPORT

Delivering a Sustainable Future

For more than 125 years, Dow has been pursuing solutions for the world's toughest challenges by asking the right questions. Together, our purpose and ambition drive us to improve the sustainability and circularity of the markets we serve, positively contribute to the development and wellness of our communities, and embrace and cultivate an inclusive, diverse, equitable and accountable culture.

We believe materials science drives innovation, and Dow's innovation is built on creativity and collaboration – enabling us to create solutions that transform our world and deliver a more sustainable future.

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.

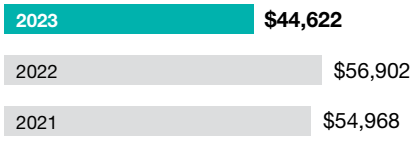
Values

- **Integrity**
- **Respect for People**
- **Protecting Our Planet**

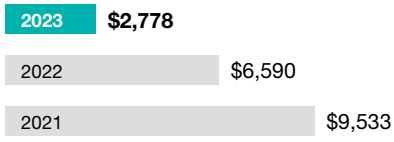
Financial Highlights

In millions, except per share amounts	2023	2022	2021
Net Sales	$44,622	$56,902	$54,968
Net Income	$660	$4,640	$6,405
Operating EBIT[1]	$2,778	$6,590	$9,533
Earnings per Common Share – Diluted	$0.82	$6.28	$8.38
Operating EPS[1]	$2.24	$6.25	$8.98
Cash Provided by Operating Activities – Continuing Operations	$5,164	$7,486	$7,069
Free Cash Flow[1]	$2,808	$5,663	$5,568

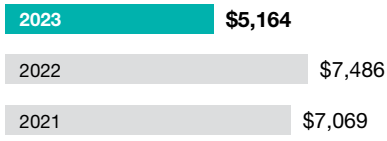
Net Sales
(dollars in millions)



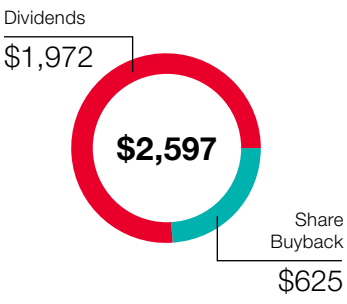
Operating EBIT[1]
(dollars in millions)



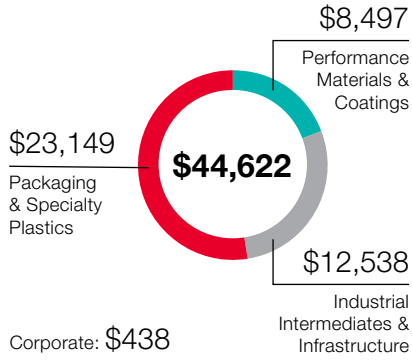
Cash Provided by Operating Activities – Continuing Operations
(dollars in millions)



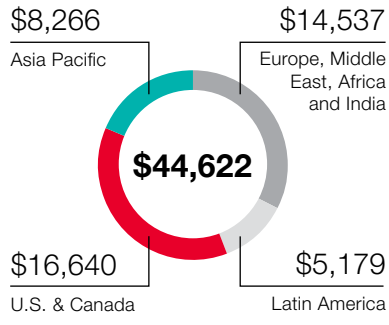
2023 Shareholder Remuneration
(dollars in millions)



2023 Sales by Operating Segment
(dollars in millions)



2023 Sales by Geography
(dollars in millions)



[1] Non-GAAP measure. For definitions and reconciliation to the most directly comparable U.S. GAAP measure, see supplemental information in the Appendix and located at investors.dow.com under Financial Reporting. See the Appendix for a full list of financial definitions.

Certain statements in this report, other than purely historical information, including estimates, projections, statements relating to business plans, objectives and expected operating results, and the assumptions upon which those statements are based, 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. In this context, forward-looking statements often address expected future business and financial performance, financial conditions and other matters, and often contain words 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. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which may cause actual results to differ materially from the forward-looking statements. Dow Inc. undertakes no obligation to update or revise any forward-looking statements, whether because of new information, future events or otherwise, except as required by securities and other applicable laws. References to "Dow" or the "Company" mean Dow Inc. and its consolidated subsidiaries, unless otherwise expressly noted.



Foundational to our success is the strength of our people and our culture, with a deep commitment to safety and wellbeing, delivering for our customers and fostering a culture of equity, inclusion and continuous learning.

Dear Stakeholders,

Over the course of our long history, Dow has remained steadfast in our commitment to differentiated innovation for our customers, a strong culture of diversity, equity and inclusion, and safe and reliable operations. We achieve this through accountability and disciplined execution.

In 2023, Team Dow once again rose to the occasion, executing with discipline and progressing our Decarbonize & Grow and Transform the Waste strategies, while continuing to advance our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world.

EXECUTING WITH FINANCIAL AND OPERATIONAL DISCIPLINE

In the face of continued challenging global macroeconomic activity, we executed with discipline. We leveraged our competitive strengths to manage costs and adapt the business to evolving market and geopolitical conditions and customer needs.

In 2023, our diverse, global portfolio, leading cost positions across key value chains and cost-advantaged assets positioned us well to navigate the bottom of the economic cycle. We completed our $1 billion in targeted cost savings in the year. As a result of our intentional actions, we delivered net sales of $44.6 billion, net income of $660 million, GAAP earnings per share of $0.82 and operating EBIT of $2.8 billion.

With a continued focus on cash generation, we implemented actions to improve working capital and delivered cash flow from operations of $5.2 billion and free cash flow of $2.8 billion, which resulted in cash flow conversion[1] of 96% of operating EBITDA on a trailing 12-month basis.

Our cash flow profile, combined with a strong balance sheet, provides significant financial flexibility as we execute on our capital allocation priorities to allow us to capture growth across the economic cycle:

- CapEx was $2.4 billion and operating return on invested capital (ROIC)[1] was 6.4% as we maintained our focus on safe and reliable operations, while investing in our Decarbonize & Grow and Transform the Waste strategies.
- Our balance sheet is the strongest it's been in 40 years, supported by strong investment-grade credit ratings with no substantive debt maturities due until 2027.
- We also took additional derisking actions to reduce pension liabilities, including annuitization and risk transfer of some pension liabilities.
- In 2023, we returned $2.6 billion to shareholders. This included $2 billion in dividends and $625 million in shares repurchases. Since Spin, we have returned approximately 90% of our cumulative operating net income[1] to shareholders, well above our 65% target across the economic cycle.

ADVANCING OUR STRATEGIES TO DECARBONIZE & GROW AND TRANSFORM THE WASTE

In 2023, we continued to make progress on our Decarbonize & Grow and Transform the Waste strategies, which by 2030 position us to deliver more than $3 billion in underlying earnings and commercialize 3 million metric tons of circular and renewable solutions annually, while reducing Scope 1 and 2 greenhouse gas (GHG) emissions by 5 million metric tons.

[1] Non-GAAP measure – see the Appendix for a full list of financial definitions.

Decarbonize & Grow

During the year, we continued to progress our near-term growth investments across our operating segments, which will deliver $400-$500 million in underlying EBITDA, with the goal of achieving a cumulative $2 billion EBITDA earnings improvement by mid-decade.

- We started operation of our FCDh unit in Plaquemine, Louisiana. Leveraging breakthrough technology, the unit expands our capacity at lower capital and cost intensity while reducing energy usage and GHG emissions relative to conventional PDH units.
- We achieved the start-up of a new MDI distillation and pre-polymers facility at our manufacturing site in Freeport, Texas. The new facility replaces our existing capacity in La Porte, Texas, and expands supply by an additional 30% at the site to support high-value demand growth in polyurethane systems while also reducing our GHG emissions by more than 45% compared to the La Porte asset.

We also achieved a significant milestone for our Fort Saskatchewan Path2Zero project in Canada with our Board of Directors approving a final investment decision in the fourth quarter. Partner agreements and subsidies are secured, and construction is on track to begin next year.

The facility will decarbonize 20% of our global ethylene capacity while growing polyethylene supply by 15%. Building off the success of our Texas-9 cracker, which has generated 15% ROIC since start-up, we expect bottom-line returns equal to or greater than these levels, generating more than $1 billion of incremental EBITDA over the cycle by 2030.

Transform the Waste

Through collaboration and our capital-efficient approach, we are leveraging a robust pipeline of strategic partnerships across the value chain to enable waste management transformation through mechanical recycling, advanced recycling and bio-based solutions, which will also allow us to become a major off-taker of circular feedstocks.

We achieved key milestones, including the mechanical completion of the Valoregen and Mura recycling facilities in the fourth quarter.

- Valogren's 15 kiloton per annum (KTA) mechanical recycling plant in France is expected to process up to 70 KTA of plastic waste by 2025. Dow will be the primary off-taker of post-consumer recycled material to support our REVOLOOP™ brand, which serves high-end technical packaging applications.
- The start-up of Mura's first-of-its-kind 20 KTA advanced recycling plant in the U.K. is the first step of our longer-term plans to launch up to 600 KTA of global capacity by 2030.

With demand for circular materials expected to well exceed supply through the end of the decade, we anticipate our differentiated approach and partnership with innovative technologies will result in more than $500 million in incremental earnings by 2030 as we commercialize 3 million metric tons of circular and renewable solutions annually.

ADVANCING A CULTURE OF SAFETY, WELLBEING AND INCLUSION

Foundational to our success is the strength of our people and our culture, with a deep commitment to safety and wellbeing, delivering for our customers and fostering a culture of equity, inclusion and continuous learning.

I'm proud that we continue to be recognized externally as a leader in inclusion, diversity and equity, including advancing to #7 on the DiversityInc Top 50 Companies for Diversity list, and in the fourth quarter we were named by Great Place to Work® and FORTUNE as one of the World's Best Workplaces™ in 2023.

I would like to thank Team Dow for their passion, discipline and commitment to delivering for one another, our customers, partners, communities and shareholders. It is because of each Dow colleague that I remain confident in our strategy to deliver a sustainable future for the world through our materials science expertise while also driving long-term shareholder value.

Best regards,



Jim Fitterling
Chair and Chief Executive Officer, Dow Inc.

2023 Financial Highlights



Net sales of
$44.6B



Delivered
operating EBIT of
$2.8B



Generated
$5.2B
in cash flow from operations



Returned
$2.6B
to shareholders through dividends and share buybacks



Achieved
96%
cash flow conversion of operating EBITDA

Dow's Leadership Team

As of January 1, 2024

Dow leadership continually challenges our company to build on its long-standing strengths and develop new paths to value. Together, they inspire a passionate Team Dow to make a difference every day – serving our customers, delivering for shareholders and helping shape the innovations that lead to a more sustainable and resilient world.

INDUSTRY-LEADING DIVERSITY AMONG LEADERSHIP TEAM

We believe that the diverse experiences as well as gender, ethnic and cultural backgrounds of our corporate leadership drive better decision-making and innovation, which, in turn, positively impacts value creation and performance. Since 2017, our representation of both women and U.S. ethnic minorities among our leadership team has increased, with each group increasing from 9% in 2017 to 50% in 2023.



U.S. Ethnic Minorities



Gender Diversity

Gender and ethnic diversity of our leadership team are best-in-class and significantly outpace our industry peers[1,2]



Jim Fitterling
Chair and Chief Executive Officer
White/Man/LGBTQ+



Jeff Tate
Chief Financial Officer
Black/Man



Lisa Bryant
Chief Human Resources Officer
Black/Woman



Neil Carr
President, Europe, Middle East, Africa and India
White/Man



Karen S. Carter
President, Packaging & Specialty Plastics
Black/Woman



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



Lauren James
Senior Vice President, Corporate Development
White/Woman



Melanie Kalmar
Corporate Vice President, Chief Information Officer and Chief Digital Officer
White/Woman



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



John Sampson
Senior Vice President, Operations, Manufacturing and Engineering
Black/Man



A.N. Sreeram
Senior Vice President, Research & Development and Chief Technology Officer
Asian/Man



Amy E. Wilson
General Counsel and Corporate Secretary
White/Woman

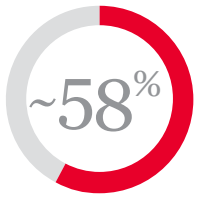
[1] For a detailed list of our industry peers, see the Definitions section of the Appendix.
[2] Based on third-party benchmarking data.



U.S. Ethnic Minorities



Gender Diversity



Women or U.S. Ethnic Minorities

Dow's Board continues to outpace the S&P 500 on U.S. ethnic minority diversity[1]

Dow's Board of Directors

As of January 1, 2024

We are committed to maintaining a Board of Directors that is representative of society and is best equipped to help steward Dow's strategy, performance and risk management. In addition to gender and ethnic diversity, our Board brings relevant skills, including capital allocation; financial acumen; technology expertise; operational experience; and environmental, social and governance expertise to help our company compete, innovate and deliver.



Jim Fitterling
Chair and Chief Executive Officer, Dow Inc.
White/Man/LGBTQ+



Richard K. Davis
Lead Director, Dow Inc. Former Executive Chairman and Chief Executive Officer, U.S. Bancorp
White/Man



Samuel R. Allen
Former Chairman and Chief Executive Officer, Deere & Company
White/Man



Gaurdie E. 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



Jerri DeVard
Former Executive Vice President and Chief Customer Officer, Office Depot, Inc.
Black/Woman



Debra L. Dial
Former Senior Vice President, Chief Accounting Officer and Controller, AT&T Inc.
White/Woman



Jeff M. Fettig
Former Chairman and Chief Executive Officer, Whirlpool Corporation
White/Man



Jacqueline C. Hinman
Chief Executive Officer and Director, Atlas Technical Consultants; Former Chairman, President and Chief Executive Officer, CH2M HILL Companies[2]
White/Woman



Luis Alberto Moreno
Managing Director, Allen & Co LLC; Former President, Inter-American Development Bank
Latino/Man



Jill S. Wyant
President and Chief Executive Officer, Madison Air
White/Woman



Daniel W. Yohannes
Former U.S. Ambassador to the Organisation for Economic Co-operation and Development
Black/Man

A BALANCED BOARD LEADERSHIP STRUCTURE

- Together, the chair and independent lead director provide effective leadership and management accountability, while ensuring board independence and alignment with long-term interests of shareholders.
- As lead director, Mr. Davis leverages his experience in corporate governance and public company management to execute clearly defined and expansive responsibilities.

More information on Dow's corporate governance, including Dow's Corporate Governance Guidelines, Board Committee Charters and Code of Conduct, is available at investors.dow.com.

Board Committees

Audit | Compensation and Leadership Development | Corporate Governance | Environment, Health, Safety & Technology | Committee Chair

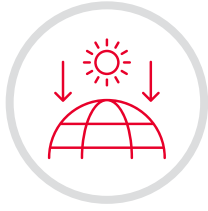
[1] Based on third-party benchmarking data.
[2] As of January 8, 2024.

2023 Highlights

As a leading materials science company, we have a unique opportunity to contribute to more sustainable solutions for people and the planet. Guided by our purpose and fueled by the passion of Team Dow, we are making strides to protect the climate as we decarbonize and grow, advance a circular economy, cultivate a thriving team and community, and drive accountability and best-in-class performance. These environmental, social and governance priorities are key to creating long-term value for our company, shareholders and society.



Achieved **highest Customer Experience (CX) satisfaction score** since inception of our annual CX survey in 2018



Started operation of our FCDh technology in Louisiana to produce propylene with **~20% lower emissions** vs. conventional PDH technology



Expanded access to renewable power to **>1,000 megawatts**, exceeding our goal of **750 megawatts** by 2025



Announced collaboration with New Energy Blue to **transform agricultural residue** in the form of corn stover into **bio-based ethylene** used to make plastics



Launched **reduced-carbon, bio-based and circular Propylene Glycol DEC, REN and CIR** with ISCC PLUS certification in Europe



Launched SURLYN™ REN and CIR Ionomers, produced using **bio and circular feedstocks** at U.S. Gulf Coast assets



$335MM in global certified diverse spend[1] in **17 countries** and **5 continents**



75% of Dow employees volunteered at least once in the past year in the communities where they live and work



Enhanced **diversity self-identification capabilities** to improve the employee experience



Invested **$34.1MM** in corporate + foundation + in-kind contributions



Redefined best-in-class Employee Resource Group participation with **~61% Team Dow participation**



Improved global representation of women to **29.8%** and U.S. ethnic minority representation to **28.1%**



Percentage of **U.S. ethnic minority Board and executive team members** continues to outpace industry peers



Enhanced disclosures for Board of Directors qualifications, enterprise risk management and leadership succession planning

[1] Includes $253MM with diverse suppliers and ~$82MM with primary small business certifications.

2023 Awards & Recognitions

Named for 4th year to the **JUST 100** list and earned top spot for Communities in the Chemical Sector

Recognized with 5 **R&D 100** awards, marking the 12th consecutive year on the list

Named one of the **World's Most Admired Companies by FORTUNE** for 2nd consecutive year

Won a trio of **Sustainability, Environmental Achievement & Leadership (SEAL)** Business Sustainability Awards

Earned 100% on the **Human Rights Campaign Foundation's Corporate Equality Index** for 18th consecutive year

Named among the **Civic 50's** most community-minded companies and Materials Sector Leader for 3rd consecutive year

Named for the 4th consecutive year to the **People 100 Companies That Care** list

Certified as a **Great Place to Work** in 13 countries and ranked on 10 national Best Workplaces lists, including the **FORTUNE 100 Best Companies to Work For®** list in the U.S. for 3rd consecutive year

Named a **CDP Supplier Engagement Leader** for 2nd year for addressing climate change

Named to the **Dow Jones Sustainability World Index** for 23rd year

Received a top score on the **Disability Equality Index®** and recognized as one of the **"Best Places to Work for Disability Inclusion"** for 7th consecutive year



GREAT PLACE TO WORK® AND FORTUNE NAMED DOW ONE OF THE WORLD'S BEST WORKPLACES™

LIVING OUR AMBITION



INNOVATIVE

Received a record-setting **9 Edison awards** – more than any company ever in a single year



CUSTOMER-CENTRIC

Recognized at annual U.S. Customer Experience Awards with **3 Gold winners**, including top-scoring entry for "Digital Transformation"



INCLUSIVE

Advanced to #7 on the DiversityInc Top 50 Companies for Diversity list



SUSTAINABLE

Recognized with **2 Business Intelligence Group (BIG) Sustainability Awards**

Named to **15 specialty lists**, including #4 on Top Companies for Executive Diversity, #4 on Top Companies for People with Disabilities and one of the Top Companies for Supplier Diversity

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended **December 31, 2023**
or
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____to_____



Commission File Number	Exact Name of Registrant as Specified in its Charter, Principal Office Address and Telephone Number	State of Incorporation or Organization	I.R.S. Employer Identification No.
001-38646	**Dow Inc.** 2211 H.H. Dow Way, Midland, MI 48674 989 636-1000	Delaware	30-1128146
001-03433	**The Dow Chemical Company** 2211 H.H. Dow Way, Midland, MI 48674 989 636-1000	Delaware	38-1285128

Securities registered pursuant to Section 12(b) of the Act:

Registrant	Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Dow Inc.	Common Stock, par value $0.01 per share	DOW	New York Stock Exchange
The Dow Chemical Company	0.500% Notes due March 15, 2027	DOW/27	New York Stock Exchange
The Dow Chemical Company	1.125% Notes due March 15, 2032	DOW/32	New York Stock Exchange
The Dow Chemical Company	1.875% Notes due March 15, 2040	DOW/40	New York Stock Exchange
The Dow Chemical Company	4.625% Notes due October 1, 2044	DOW/44	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Dow Inc. ☑ Yes ☐ No
The Dow Chemical Company ☑ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Dow Inc. ☐ Yes ☑ No
The Dow Chemical Company ☐ Yes ☑ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Dow Inc. ☑ Yes ☐ No
The Dow Chemical Company ☑ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Dow Inc.	☑ Yes	☐ No
The Dow Chemical Company	☑ Yes	☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

	Large accelerated filer		Accelerated filer		Non-accelerated filer		Smaller reporting company		Emerging growth company	
Dow Inc.		☑		☐		☐		☐		☐
The Dow Chemical Company		☐		☐		☑		☐		☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Dow Inc.	☐
The Dow Chemical Company	☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Dow Inc.	☑
The Dow Chemical Company	☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Dow Inc.	☐
The Dow Chemical Company	☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Dow Inc.	☐
The Dow Chemical Company	☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Dow Inc.	☐ Yes	☑ No
The Dow Chemical Company	☐ Yes	☑ No

As of June 30, 2023, the aggregate market value of the common stock of Dow Inc. held by non-affiliates of Dow Inc. was approximately $37.4 billion based on the last reported closing price of $53.26 per share as reported on the New York Stock Exchange.

Dow Inc. had 702,293,433 shares of common stock, $0.01 par value, outstanding at December 31, 2023. The Dow Chemical Company had 100 shares of common stock, $0.01 par value, outstanding at December 31, 2023, all of which were held by the registrant’s parent, Dow Inc.

The Dow Chemical Company meets the conditions set forth in General Instruction I(1)(a) and (b) for Form 10-K and therefore is filing this form in the reduced disclosure format.

DOCUMENTS INCORPORATED BY REFERENCE

Dow Inc.: Portions of Dow Inc.'s Proxy Statement for the 2024 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of Dow Inc.'s fiscal year ended December 31, 2023.

The Dow Chemical Company: None.

Dow Inc. and Subsidiaries
The Dow Chemical Company and Subsidiaries

ANNUAL REPORT ON FORM 10-K
For the fiscal year ended December 31, 2023

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This Annual Report on Form 10-K is a combined report being filed by Dow Inc. and The Dow Chemical Company and its consolidated subsidiaries ("TDCC" and together with Dow Inc., "Dow" or the "Company"). This Annual Report on Form 10-K reflects the results of Dow and its consolidated subsidiaries. As a result of the parent/subsidiary relationship between Dow Inc. and TDCC, and considering that the financial statements and disclosures of each company are substantially similar, the companies are filing a combined report for this Annual Report on Form 10-K. The information reflected in this report is equally applicable to both Dow Inc. and TDCC, except where otherwise noted. Each of Dow Inc. and TDCC is filing information in this report on its own behalf and neither company makes any representation to the information relating to the other company.

CAUTIONARY STATEMENT REGARDING 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; any global and regional economic impacts of a pandemic or other public health-related risks and events on Dow's business; any sanctions, export restrictions, supply chain disruptions or increased economic uncertainty related to the ongoing conflicts between Russia and Ukraine and in the Middle East; 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, including the completion and success of its integrated ethylene cracker and derivatives facility in Alberta, Canada; 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 public sentiment and political leadership; increased concerns about plastics in the environment and lack of a circular economy for plastics at scale; 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 conflicts between Russia and Ukraine and in the Middle East; weather events and natural disasters; disruptions in Dow's information technology networks and systems, including the impact of cyberattacks; 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 of this Annual Report on Form 10-K titled "Risk Factors." 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 Inc. and TDCC assume 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.

ITEM 1. BUSINESS

THE COMPANY

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 of 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. The Company's principal executive offices are located at 2211 H.H. Dow Way, Midland, Michigan 48674.

Available Information

The Company's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, are available free of charge at *www.dow.com/investors*, as soon as reasonably practicable after the reports are electronically filed or furnished with the U.S. Securities and Exchange Commission ("SEC"). The SEC maintains a website that contains these reports as well as proxy statements and other information regarding issuers that file electronically. The SEC's website is *www.sec.gov*. Dow's website and its content are not deemed incorporated by reference into this report.

Except as otherwise indicated by the context, the term "Union Carbide" means Union Carbide Corporation and the term "Dow Silicones" means Dow Silicones Corporation, both wholly owned subsidiaries of the Company.

ABOUT DOW

Dow is one of the world’s leading materials science companies, serving customers in high-growth markets such as packaging, infrastructure, mobility and consumer applications. The Company's global breadth, asset integration and scale, focused innovation, leading business positions and commitment to sustainability enables the Company to achieve profitable growth and help deliver a sustainable future. Dow operates manufacturing sites in 31 countries and employs approximately 35,900 people. In 2023, Dow delivered sales of approximately $45 billion. Learn more about Dow's ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world by visiting *www.dow.com*.

BUSINESS SEGMENTS AND PRODUCTS

The Company 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. Corporate contains the reconciliation between the totals for the operating segments and the Company's totals. The Company did not aggregate any operating segments when determining its reportable segments. See Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and Note 24 to the Consolidated Financial Statements for additional information concerning the Company’s operating segments.

PACKAGING & SPECIALTY PLASTICS

The Packaging & Specialty Plastics operating segment consists of two highly integrated global businesses: Hydrocarbons & Energy and Packaging and Specialty Plastics. The segment employs the industry’s broadest polyolefin product portfolio, supported by the Company’s proprietary catalyst and manufacturing process technologies. These differentiators, plus collaboration at the customer’s design table, enable the segment to deliver more reliable, durable, higher-performing solutions designed for recyclability and enhanced plastics circularity and sustainability. The segment serves customers, brand owners and ultimately consumers in key markets including food and specialty packaging; industrial and consumer packaging; health and hygiene; caps, closures and pipe applications; consumer durables; mobility and transportation; and infrastructure.

The Company's unique advantages compared with its competitors include: extensive low-cost feedstock positions around the world; unparalleled scale, global footprint and market reach; world-class manufacturing sites in every geographic region; deep customer and brand owner understanding; portfolio of higher-value functional polymers, such as polyolefin elastomers, semiconductive and jacketing compound solutions and wire and cable insulation; and market-driven application development and technical support.

The segment remains agile by participating in the entire ethylene-to-polyethylene chain integration, enabling the Company to manage market swings with industry-leading feedstock and derivative flexibility, and therefore optimize returns while reducing long-term earnings volatility. The Company's unrivaled value chain ownership is further strengthened by its Pack Studio locations in every geographic region, which help customers and brand owners deliver faster and more efficient packaging product commercialization through a global network of laboratories, technical experts and testing equipment.

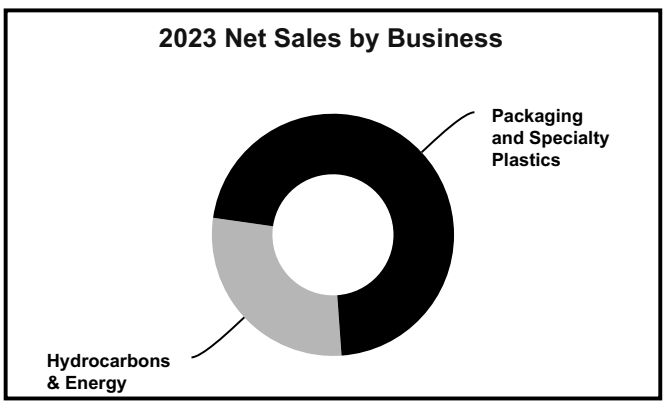
Hydrocarbons & Energy

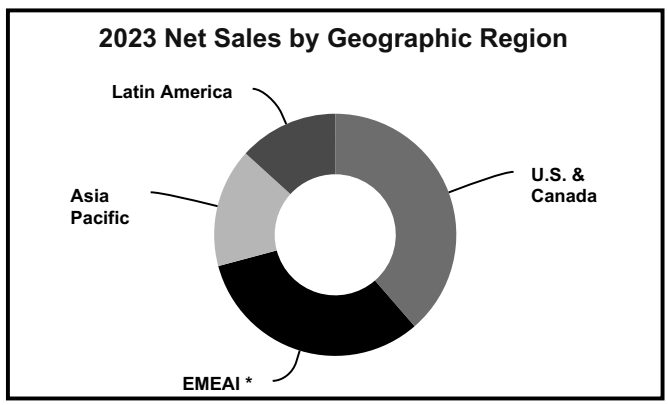
Hydrocarbons & Energy is a leading global producer of ethylene, a key chemical building block that the Company consumes primarily within the Packaging & Specialty Plastics segment. Ethylene is transferred to downstream derivative businesses at market-based prices, which are generally equivalent to prevailing market prices for large volume purchases. In addition to ethylene, the business is a leading producer of propylene and aromatics products that are used to manufacture materials consumers use every day. The business also produces and procures the power, steam and feedstocks used by the Company's manufacturing sites.

Packaging and Specialty Plastics

Packaging and 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 is a recognized leader in the production, marketing and innovation of polyethylene. The business is also a leader in other ethylene derivatives, such as polyolefin elastomers, ethylene vinyl acetate and ethylene propylene diene monomer ("EPDM") rubber serving mobility and transportation, consumer, wire and cable and construction end-markets. Market growth is expected to be driven by major shifts in population demographics; improving socioeconomic status in emerging geographic regions; consumer and brand owner demand for increased functionality including sustainable offerings through lower-carbon and circular solutions; global efforts to reduce food waste; growth in telecommunications networks; global development of electrical transmission and distribution infrastructure; and renewable energy applications such as wind power and solar (photovoltaic).

Details on Packaging & Specialty Plastics' 2023 net sales, by business and geographic region, are as follows:





* Europe, Middle East, Africa and India ("EMEAI")

Products
Major applications/market segments and products are listed below by business:

Business	*Applications/Market Segments*	*Major Products*	*Key Raw Materials*	*Key Competitors*
Hydrocarbons & Energy	Purchaser of feedstocks; production of cost competitive hydrocarbon monomers utilized by Dow's derivative businesses; and energy, principally for use in Dow's global operations	Ethylene, propylene, benzene, butadiene, octene, aromatics co-products, power, steam, other utilities	Butane, condensate, ethane, naphtha, natural gas, propane	Chevron Phillips Chemical, ExxonMobil, INEOS, LyondellBasell, SABIC, Shell, Sinopec
Packaging and Specialty Plastics	Adhesives; automotive; caps, closures and pipe applications; construction; cosmetics; electrical transmission and distribution; food and supply chain packaging; footwear; health and hygiene; housewares; industrial specialty applications using polyolefin elastomers, ethylene copolymers, and EPDM; irrigation pipe; mobility; photovoltaic encapsulants; sporting goods; telecommunications infrastructure; toys and infant products	Acrylics, bio-based plasticizers, copolymer, elastomers, ethylene copolymer resins, EPDM, ethylene vinyl acetate ("EVA"), methacrylic acid copolymer resins, polyethylene ("PE"), high-density polyethylene ("HDPE"), low-density polyethylene ("LDPE"), linear low-density polyethylene ("LLDPE"), polyolefin plastomers, resin additives and modifiers, semiconductive and jacketing compound solutions and wire and cable insulation	Aliphatic solvent, butene, ethylene, hexene, octene, propylene	Borealis, ExxonMobil, INEOS, Lanxess, LyondellBasell, Nova, SABIC

Joint Ventures:
This segment includes a portion of the Company's share of the results of the following joint ventures:

- EQUATE Petrochemical Company K.S.C.C. (“EQUATE”) - a Kuwait-based company that manufactures ethylene, polyethylene and ethylene glycol, and manufactures and markets monoethylene glycol, diethylene glycol and polyethylene terephthalate resins; owned 42.5 percent by the Company.
- The Kuwait Olefins Company K.S.C.C. (“TKOC”) - a Kuwait-based company that manufactures ethylene and ethylene glycol; owned 42.5 percent by the Company.
- Map Ta Phut Olefins Company Limited (“Map Ta Phut”) - a Thailand-based company that manufactures propylene and ethylene; the Company has an effective ownership of 32.77 percent (of which 20.27 percent is owned directly by the Company and aligned with the Industrial Intermediates & Infrastructure segment and 12.5 percent is owned indirectly through the Company’s equity interest in Siam Polyethylene Company Limited, an entity that is part of The SCGC-Dow Group and aligned with the Packaging & Specialty Plastics segment).
- Sadara Chemical Company ("Sadara") - a Saudi Arabian company that manufactures chlorine, ethylene, propylene and aromatics for internal consumption and manufactures and sells polyethylene, ethylene oxide and propylene oxide derivative products, and isocyanates; owned 35 percent by the Company. The Company is responsible for marketing a majority of Sadara products outside of the Middle East zone through the Company’s established sales channels. As part of this arrangement, the Company purchases and sells Sadara products for a marketing fee. In 2021, Dow and the Saudi Arabian Oil Company agreed to and began transitioning the marketing rights and responsibilities for Sadara’s finished products to levels more consistent with each partner’s equity ownership, which is being implemented through 2026. This transition will not impact equity earnings but is expected to reduce the Company's sales of Sadara products over the five year period.

This segment also includes the Company's share of the results of the following joint ventures:

- The Kuwait Styrene Company K.S.C.C. - a Kuwait-based company that manufactures styrene monomer; owned 42.5 percent by the Company.
- The SCGC-Dow Group - a group of Thailand-based companies (consisting of Siam Polyethylene Company Limited; Siam Polystyrene Company Limited; Siam Styrene Monomer Company Limited; and Siam Synthetic Latex Company Limited) that manufactures polyethylene, polystyrene, styrene, latex and specialty elastomers; owned 50 percent by the Company.

Current and Future Investments

The Company has announced investments that are being progressed over the next several years and are expected to enhance competitiveness. These include:

- Construction of the world's first net-zero Scope 1 and 2 CO_2 equivalent ("CO_2e") emissions integrated ethylene and derivatives complex in Alberta, Canada. This project is expected to deliver 2 million metric tons of organic growth in attractive, high-end markets while decarbonizing 20% of Dow's global ethylene capacity.
- Construction of a world-scale polyethylene unit on the U.S. Gulf Coast based on Dow's proprietary process technologies, to meet consumer-driven demand in specialty packaging, health and hygiene, and industrial and consumer packaging applications.
- Ongoing collaboration with Mura Technology ("Mura") to help solve the global plastics waste issue and advance circularity via circular feedstocks, which are converted into recycled plastics. Mura plans to construct a new facility at Dow's Böhlen site in Germany, the latest in a series of planned facilities across the United States and Europe to rapidly scale advanced recycling of plastics, and the first expected to be based at a Dow site.
- Plans to construct a clean hydrogen plant in Europe where by-products from core production processes would be converted into hydrogen and CO_2. The hydrogen plant would allow Dow's Terneuzen manufacturing site to reduce CO_2e emissions by approximately 1.4 million metric tons per year. Project completion and deployment is expected to occur after 2030.

The Company's ambition includes becoming the most sustainable materials science company, with a strategy to advance the well-being of humanity by helping lead the transition to a sustainable planet and society. This includes lowering energy and greenhouse gas emissions and further enabling a shift to a circular economy for plastics by focusing on resource efficiency and integrating recycled content and renewable feedstocks into its production processes. As part of that strategy, Dow announced the following investments that have been completed or are still being progressed in 2023:

- In 2022, Dow commissioned the retrofit of its first UNIFINITY™ Fluidized Catalytic Dehydrogenation ("FCDh") technology for cost-advantaged propylene and in 2023 has been optimizing operations of this new technology. The FCDh unit, located at one of Dow's mixed-feed crackers in Plaquemine, Louisiana, will ultimately enable production of approximately 150,000 metric tons of additional on-purpose propylene at full run-rate. The breakthrough propylene manufacturing technology, which Dow will license through Univation Technologies, LLC, a wholly owned subsidiary of the Company, can reduce capital outlay by up to 25 percent while lowering energy usage and CO_2e emissions by up to 20 percent. This project was originally announced in 2019.
- Dow previously signed an agreement with French recycling company Valoregen to contribute to building the largest single hybrid recycling site in France, to be owned and operated by Valoregen. The project's 15,000 metric ton mechanical recycling line reached mechanical completion in the fourth quarter of 2023 and the advanced recycling line is expected to start-up in the first half of 2024. This will mark an important step in bringing together mechanical recycling (which processes certain plastic waste into secondary products) and newer, advanced recycling processes (which breaks down mixed, hard-to-recycle plastics into their original naphtha-like liquid form to manufacture new virgin-like polymers). Dow will be the main recipient of Valoregen's post-consumer resins ("PCR"), which it will use to develop new plastic products marketed under Dow's REVOLOOP™ product range. It will also support the development of Valoregen's recycling technology capabilities.
- The first Mura plant in the UK commenced commissioning of its 20,000 metric tons advanced recycling facility in the fourth quarter of 2023 and plans to produce feedstocks in the first half of 2024. Dow will be the main recipient of the product produced at this site.
- Dow announced a joint development agreement with X-energy, a nuclear energy innovation company which will help Dow advance its greenhouse gas emissions reduction goals through the development and deployment of X-energy's advanced small modular nuclear technology at an industrial site in North America. In 2023, Dow selected its Seadrift Operations manufacturing site in Texas for its proposed advanced small modular reactor ("SMR") nuclear project. The project will be focused on providing the Seadrift site with safe, reliable, zero emissions power and steam as existing energy and steam assets near their end-of-life.
- Continued collaboration with Hanseatic Energy Hub GmbH ("HEH") as a minority stakeholder and is working with HEH's current members to advance Germany's capabilities to import supplies of liquified natural gas, bio-liquified natural gas and synthetic natural gas through the construction of an import terminal. The HEH consortium is planning to build, own, and operate an import terminal for liquified gases on Dow's Stade, Germany industrial park. The zero emission terminal will be co-located with Dow's facilities in Stade. Dow is

making land available for the construction of the terminal as well as infrastructure services, off-gas heat, site services and mutual harbor use rights.

- Dow and privately-held New Energy Blue have reached a long-term supply agreement to produce bio-based ethylene from renewable agricultural residues. This is the first agreement in North America to generate plastic sourced materials from corn stover (stalks and leaves), and is the Company's first agreement in North America to utilize agriculture residues for plastic production. Under the terms of the deal, Dow will support the design of New Energy Freedom, a new facility in Iowa that is expected to process corn stover and produce commercial quantities of second-generation ethanol and clean lignin, with nearly half of the ethanol to be turned into bio-based ethylene feedstock reducing CO_2e emissions from plastic production, and using it in recyclable applications across transportation, footwear, and packaging.
- Dow and Reciclar S.A. joined forces to build an efficient model for plastic recycling in Argentina that will produce more than 6,500 tons of post-consumer plastic resin. This collaboration agreement with Reciclar S.A. will last three years and aims to improve the capacity of Reciclar S.A. to process waste on a larger scale and produce high-quality post-consumer plastic materials under the REVOLOOP™ brand.
- Dow has signed several renewable and cleaner power agreements which are expected to reduce Scope 2 emissions by more than 600,000 metric tons of CO_2e per year.

INDUSTRIAL INTERMEDIATES & INFRASTRUCTURE

The Industrial Intermediates & Infrastructure operating segment consists of two customer-centric global businesses - Industrial Solutions and Polyurethanes & Construction Chemicals - that develop 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 produce and market ethylene oxide and propylene oxide derivatives that are aligned to market segments as diverse as appliances, coatings, furniture and bedding, construction, mobility and automotive, electronics, surfactants for cleaning and sanitization, infrastructure and oil and gas. The businesses' global scale and reach, world-class technology, research and development capabilities and materials science expertise enable the Company to be a premier solutions provider offering customers value-added sustainable solutions to enhance comfort, energy efficiency, product effectiveness and durability.

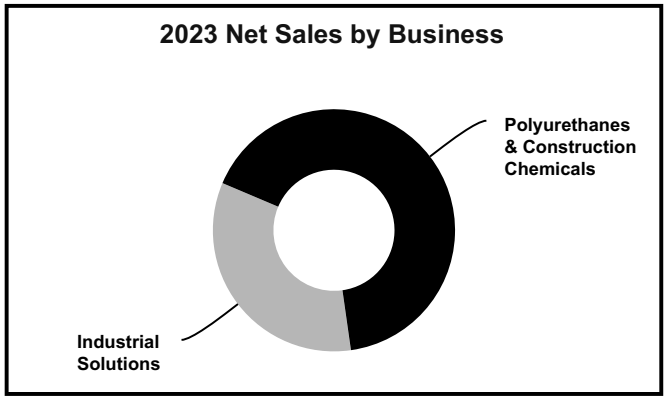
Industrial Solutions

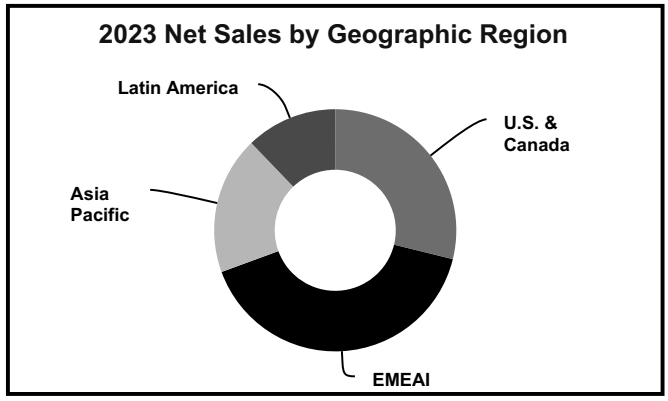
Industrial Solutions provides a broad portfolio of solutions that enable and improve the manufacture of consumer and industrial goods and services. The business' solutions minimize friction and heat in mechanical processes; manage the oil and water interface; deliver ingredients for maximum effectiveness; facilitate dissolvability; enable product identification; decarbonize oil and gas products; reduce energy and water use in textiles; and provide the foundational building blocks for the development of chemical technologies. The business supports manufacturers across a large variety of end-markets, notably coatings, detergents and cleaners, crop protection, pharmaceuticals, electronics, oil and gas, inks and textiles. The business is a leading producer of purified ethylene oxide, ethyleneamines and ethanolamines.

Polyurethanes & Construction Chemicals

Polyurethanes & Construction Chemicals consists of three businesses: Polyurethanes, Chlor-Alkali & Vinyl ("CAV") and Construction Chemicals. The Polyurethanes business is the world's largest producer of propylene oxide, propylene glycol and polyether polyols, and a leading producer of aromatic isocyanates and fully formulated polyurethane systems for rigid, semi-rigid and flexible foams, as well as coatings, adhesives, sealants, elastomers and composites that serve energy efficiency, consumer comfort, industrial and enhanced mobility market sectors. The CAV business provides chlorine and caustic soda supply and markets caustic soda, a valuable co-product of the chlor-alkali manufacturing process, and ethylene dichloride and vinyl chloride monomer. The CAV business' assets are predominantly in Western Europe and Latin America and largely produce materials for internal consumption. The Construction Chemicals business provides cellulose ethers, redispersible latex powders, and acrylic emulsions used as key building blocks for differentiated building and construction materials across many market segments and applications ranging from roofing and flooring to gypsum-, cement-, concrete- and dispersion-based building materials. Both Polyurethanes and Construction Chemicals deliver sustainable products aligned toward green building markets yielding reduced environmental impacts and lower product intensity compared to traditional offerings.

Details on Industrial Intermediates & Infrastructures' 2023 net sales, by business and geographic region, are as follows:





Products

Major applications/market segments and products are listed below by business:

Business	*Applications/Market Segments*	*Major Products*	*Key Raw Materials*	*Key Competitors*
Industrial Solutions	Broad range of products for specialty applications, including pharmaceuticals, agriculture crop protection offerings, aircraft deicing, solvents for coatings, heat transfer fluids for concentrated solar power, construction, solvents for electronics processing, food preservation, fuel markers, industrial and institutional cleaning, infrastructure applications, lubricant additives, paper, transportation and utilities; products for energy markets including exploration, production, transmission, refining, mining and gas processing to optimize supply, improve efficiencies and manage emissions	Butyl glycol ethers, VERSENE™ Chelants, UCAR™ Deicing Fluids, ethanolamines, ethylene oxide ("EO"), ethyleneamines, UCON™ Fluids, DOWANOL™ glycol ethers, DOWTHERM™ Heat Transfer Fluids, higher glycols, isopropanolamines, low-VOC solvents, methoxypolyethylene glycol, methyl isobutyl, polyalkylene glycol, CARBOWAX™ SENTRY™ Polyethylene Glycol, TERGITOL™, TRITON™ and ECOFAST™ Pure Surfactants, demulsifiers, drilling and completion fluids, heat transfer fluids, rheology modifiers, scale inhibitors, shale inhibitors, specialty amine solvents, surfactants, water clarifiers, frothing separating agents	Ammonia, butene, ethylene, phenol, propylene	BASF, Eastman, Hexion, Huntsman, INEOS, LyondellBasell, SABIC, Sasol, Shell
Polyurethanes & Construction Chemicals	Aircraft deicing fluids; alumina, pulp and paper; appliances; automotive; bedding; building and construction; flooring; footwear; heat transfer fluids; hydraulic fluids; infrastructure; mobility; packaging; textiles and transportation; construction; caulks and sealants; cement-based tile adhesives; concrete solutions; elastomeric roof coatings; industrial non-wovens; plasters and renders; roof tiles and siding; sport grounds and tape joint compounds	Aniline, caustic soda, ethylene dichloride ("EDC"), methylene diphenyl diisocyanate (“MDI”), polyether polyols, propylene glycol ("PG"), propylene oxide ("PO"), polyurethane systems, toluene diisocyanate (“TDI”), vinyl chloride monomer ("VCM"), AQUASET™ Acrylic Thermosetting Resins, DOW™ Latex Powder, RHOPLEX™ and PRIMAL™ Acrylic Emulsion Polymers, WALOCEL™ Cellulose Ethers	Aniline, benzene, carbon monoxide, caustic soda, cell effluent, cellulose, chlorine, electric power, ethylene, hydrogen peroxide, propylene, styrene	Arkema, Ashland, BASF, Covestro, Eastman, Huntsman, Wanhua

Joint Ventures

This segment includes a portion of the Company's share of the results of EQUATE, TKOC, Map Ta Phut and Sadara.

Current and Future Investments

The Company expects to make investments over the next several years to enhance competitiveness in its Polyurethanes & Construction Chemicals and Industrial Solutions businesses. The investments will include alkoxylation capacity expansions and finishing capabilities; investments to support growth in polyurethane systems; and efficiency improvements around the world.

In 2023, the Company benefited from the completion of an integrated MDI distillation and prepolymers facility along the U.S. Gulf Coast to increase distillation capabilities by 30 percent versus prior levels, which is expected to improve integrated margins for the portfolio. Also, in the past year, the Company further progressed and scaled key projects aligned to longer-term sustainability goals across the world leading propylene glycol franchise including propylene glycol RDC (lower carbon) featuring DECARBIA™ bio-based technology from second generation bio-based raw material, and propylene glycol CIR (circular) featuring RENUVA™ recycled content from post-consumer waste streams.

In 2023, the Industrial Solutions business completed investments on the U.S. Gulf Coast and in Europe to expand capacity of specialty amines and alkoxylation chemistries to serve fast growing energy transition, pharmaceutical, home care, cleaning, and agriculture end-markets.

In 2023, the Company progressed the following:

- Successful startup and operation of hydrogen to peroxide to propylene glycol pilot plant with Evonik at its site in Hanau, Germany. In contrast to the traditional process, where propylene is used to make propylene oxide, which is converted to propylene glycol through hydrolysis, the pilot plant will leverage the HYPROSYN® process, which uses a novel catalytic system to generate propylene glycol directly from propylene and hydrogen peroxide. The integration of all key reaction stages in a single reactor eliminates the need of additional investments in propylene oxide capacity and lowers capital requirements. The process also enables a reduced environmental footprint.
- Expansion of propylene glycol capacity at its existing joint venture facility in Map Ta Phut, Thailand by 80,000 tons per year – bringing total capacity to 250,000 tons per year. The additional capacity will support customer growth across Asia Pacific and India and is expected to come online in 2024.
- Expansion of alkoxylation capacity in the United States and Europe. These investments build on previously announced capacity expansions, increasing the Company's global alkoxylation capacity by 70 percent versus the 2020 baseline, collectively. The additional capacity is needed to support increasing demand across a wide range of fast-growing end-markets where the Company is delivering 10 percent to 15 percent annual growth rates, from home and personal care to industrial and institutional cleaning solutions and pharmaceuticals. The investments are backed by supply agreements with customers, including leading consumer brands, and are expected to come online in the United States and Europe in 2024 and 2025, respectively.
- Dow and Orion Chemicals Orgaform together with Eco-mobilier, H&S Anlagentechnik and The Vita Group have inaugurated a pioneering mattress recycling plant as part of the RENUVA™ program. This is a major step forward for the recovery and recycling of polyurethane foam and a significant advancement to close the loop for end-of-life mattresses. At full capacity, the plant will process up to 200,000 mattresses per year to address growing mattress waste.

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 segment consists of two global businesses: Coatings & Performance Monomers and Consumer Solutions. These businesses primarily utilize the Company's acrylics-, cellulosics- and silicone-based technology platforms to serve 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. Both businesses employ materials science capabilities, global reach and unique products and technology combining chemistry platforms to deliver differentiated, market-driven and sustainable innovations to customers.

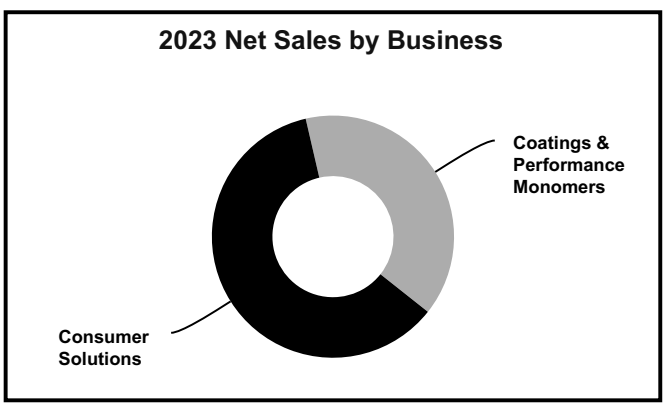
Coatings & Performance Monomers

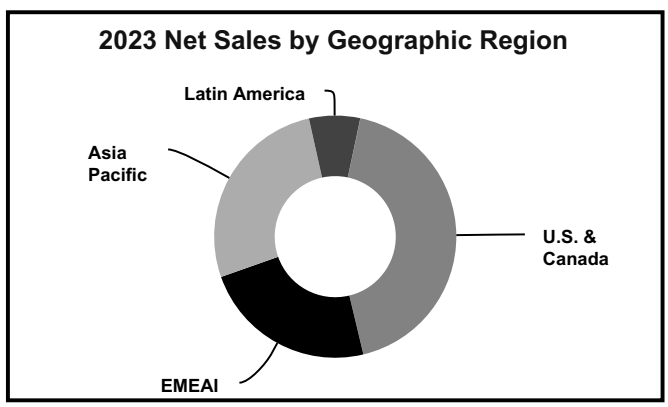
Coatings & Performance Monomers consists of two businesses: Coating Materials and Performance Monomers. The Coating Materials business makes critical ingredients and additives that help advance the performance of paints and coatings. The business offers innovative and sustainable products to accelerate paint and coatings performance across diverse market segments, including architectural paints and coatings, as well as industrial coatings applications used in maintenance and protective industries, wood, metal packaging, traffic markings, thermal paper and leather. These products enhance coatings by improving hiding and coverage characteristics, enhancing durability against nature and the elements, lowering or eliminating volatile organic compounds (“VOC”) content, reducing maintenance and improving ease of application. The Performance Monomers business manufactures acrylics-based building blocks needed for the production of coatings, textiles, adhesives and home and personal care products.

Consumer Solutions

Consumer Solutions consists of two businesses: Performance Silicones & Specialty Materials and Silicone Feedstocks & Intermediates. The Performance Silicones & Specialty Materials business delivers an unmatched portfolio of performance-enhancing materials to meet the diverse needs of customers in fast-growing markets, including building and infrastructure; consumer and electronics; industrial and chemical processing; mobility and transportation; home care; and personal care. It focuses resources on delivering valuable differentiation via market-driven innovations and sustainable solutions, which address lower-carbon footprint and circularity goals while enabling continued growth. The Silicone Feedstocks & Intermediates business focuses on maximizing productivity and optimizing margins by leveraging Dow’s scale and global reach. It is charged with producing silicon metal, siloxanes and intermediates, which are key materials to manufacture differentiated downstream silicone products.

Details on Performance Materials & Coatings' 2023 net sales, by business and geographic region, are as follows:





Products
Major applications/market segments and products are listed below by business:

Business	*Applications/Market Segments*	*Major Products*	*Key Raw Materials*	*Key Competitors*
Coatings & Performance Monomers	Acrylic binders for architectural paints and coatings, industrial coatings and paper; adhesives; dispersants; impact modifiers; inks and paints; opacifiers and surfactants for both architectural and industrial applications; plastics additives; processing aids; protective and functional coatings; rheology modifiers	ACOUSTICRYL™ Liquid-Applied Sound Damping Technology; acrylates; ACRYSOL™ Rheology Modifiers; AVANSE™ Acrylic Binders; EVOQUE™ Pre-Composite Polymer; foam cell promoters; FORMASHIELD™ Acrylic Binder; high-quality impact modifiers; MAINCOTE™ Acrylic Epoxy Hybrid; methacrylates; processing aids; RHOPLEX™ Acrylic Resin; TAMOL™ Dispersants; FASTRACK™ Road Marking Resins; vinyl acetate monomers; weatherable acrylic capstock compounds for thermoplastic and thermosetting materials	Acetic acid, acetone, acrylic acid, ammonia, butanol, butyl acrylate, methanol, methyl methacrylate, propylene, styrene	Arkema, BASF, Celanese, Evonik, LyondellBasell, Wacker Chemie
Consumer Solutions	Personal care and home care; mobility and transportation; building and infrastructure; consumer and electronics; industrial and chemical processing	Adhesives and sealants; antifoams and surfactants; coatings and controlled release; coupling agents and crosslinkers; fluids, emulsions and dispersions; formulating and processing aids; granulation and binders; oils; polymers and emollients; opacifiers; reagents; resins, gels and powders; rheology modifiers; rubber; solubility enhancers; aerospace composites; surfactants and solvents; encapsulants for solar photovoltaic applications; ACUSOL™ Prime 1 Polymer; AMPLIFY™ Si PE 1000 Polymer System; bio-based, readily biodegradable SunSpheres™ BIO SPF Booster; DOWSIL™ Silicone Products; SILASTIC™ Silicone Elastomers; SYL-OFF™ Silicone Release Coatings	Methanol, platinum, silica, silicon metal	Elkem, Momentive, Shin-Etsu, Wacker Chemie

Current and Future Investments
In 2023, several key growth capital projects around the globe were brought online to meet customer needs in fast-growing markets. These include:

- Debottlenecking of silicone key intermediates enabling downstream growth globally across multiple end-markets, such as building and infrastructure, mobility and transportation, and consumer and electronics.
- Capacity expansions in EMEAI to meet demand growth for sustainable silicone solutions in the personal care industry.
- Capacity expansions in Asia Pacific to meet growing demand for mobility and transportation end-markets.
- Incremental capacity expansion in the United States to accelerate growth in targeted applications within consumer and electronics as well as the building and infrastructure end-markets.

The Company continues to make incremental investments in lower-capital, higher-return projects in the silicones and coatings franchises to further enhance competitiveness. The investments aim to expand manufacturing capacity and increase product mix offerings of silicone intermediates and high-performance silicones to accelerate the downstream business growth. By leveraging global scale and a broad innovation portfolio, the Company is well-positioned to deliver differentiated solutions and sustainable materials in key end-markets, including building and infrastructure, electronics, industrial, mobility, and home and personal care.

CORPORATE
Corporate includes certain enterprise and governance activities (including insurance operations, environmental operations, etc.); non-business aligned joint ventures; non-business aligned litigation expenses; and discontinued or non-aligned businesses.

RAW MATERIALS

The Company operates in an integrated manufacturing environment. Basic raw materials are processed through many stages to produce a number of products that are sold as finished goods at various points in those processes. The major raw material stream that feeds the production of the Company's finished goods is hydrocarbon-based raw materials. The Company purchases hydrocarbon-based raw materials including ethane, propane, butane, naphtha and condensate as feedstocks. These raw materials are used in the production of both saleable products and energy. The Company also purchases and sells certain monomers, primarily ethylene and propylene, to balance internal production and internal consumption. The Company purchases natural gas, primarily to generate electricity, and purchases electric power to supplement internal generation. In addition, the Company produces a portion of its electricity needs in Louisiana and Texas; Alberta, Canada; The Netherlands; the United Kingdom; and Germany.

The Company's primary source of these raw materials are natural gas liquids ("NGLs"), which are derived from natural gas and crude oil production, and naphtha, which is produced during the processing and refining of crude oil. Given recent advancements in shale gas, shale oil and conventional drilling techniques, the Company expects these raw materials to be in abundant supply. The Company's suppliers of these raw materials include regional, international and national oil and gas companies.

The Company purchases raw materials on both short- and long-term contracts. The Company had adequate supplies of raw materials in 2023 and expects to continue to have adequate supplies of raw materials in 2024.

INDUSTRY SEGMENTS AND GEOGRAPHIC REGION RESULTS

See Note 24 to the Consolidated Financial Statements for information regarding net sales, Operating EBIT and total assets by segment, as well as net sales and long-lived assets by geographic region.

SIGNIFICANT CUSTOMERS AND PRODUCTS

All products and services are marketed primarily through the Company’s sales force, although in some instances more emphasis is placed on sales through distributors. In 2023, no significant portion of the Company's sales was dependent upon a single customer.

PATENTS, LICENSES AND TRADEMARKS

The Company continually applies for and obtains U.S. and foreign patents and has a substantial number of pending patent applications throughout the world. At December 31, 2023, the Company owned approximately 3,900 active U.S. patents and 25,000 active foreign patents as follows:

Remaining Life of Patents Owned at Dec 31, 2023	*United States*	*Rest of World*
Within 5 years	600	3,700
6 to 10 years	1,300	8,000
11 to 15 years	1,600	11,600
16 to 20 years	400	1,700
Total	3,900	25,000

The Company’s primary purpose in obtaining patents is to protect the results of its research for use in operations and licensing. The Company is party to a substantial number of patent licenses, including intellectual property cross-license agreements and other technology agreements, and also has a substantial number of trademarks and trademark registrations in the United States and in other countries, including the “Dow in Diamond” trademark. Although the Company considers that its patents, licenses and trademarks in the aggregate constitute a valuable asset, it does not regard its business as being materially dependent on any single or group of related patents, licenses or trademarks.

PRINCIPAL PARTLY OWNED COMPANIES

The Company's principal nonconsolidated affiliates at December 31, 2023, including direct and indirect ownership interest for each, are listed below:

Principal Nonconsolidated Affiliate	*Country*	*Ownership Interest*	*Business Description*
EQUATE Petrochemical Company K.S.C.C.	Kuwait	42.50 %	Manufactures ethylene, polyethylene and ethylene glycol, and manufactures and markets monoethylene glycol, diethylene glycol and polyethylene terephthalate resins
The Kuwait Olefins Company K.S.C.C.	Kuwait	42.50 %	Manufactures ethylene and ethylene glycol
The Kuwait Styrene Company K.S.C.C.	Kuwait	42.50 %	Manufactures styrene monomer
Map Ta Phut Olefins Company Limited [1]	Thailand	32.77 %	Manufactures propylene and ethylene
Sadara Chemical Company [2]	Saudi Arabia	35.00 %	Manufactures chlorine, ethylene, propylene and aromatics for internal consumption and manufactures and sells polyethylene, ethylene oxide and propylene oxide derivative products, and isocyanates
The SCGC-Dow Group:			
Siam Polyethylene Company Limited	Thailand	50.00 %	Manufactures polyethylene
Siam Polystyrene Company Limited	Thailand	50.00 %	Manufactures polystyrene
Siam Styrene Monomer Company Limited	Thailand	50.00 %	Manufactures styrene
Siam Synthetic Latex Company Limited	Thailand	50.00 %	Manufactures latex and specialty elastomers

1. The Company's effective ownership of Map Ta Phut is 32.77 percent, of which the Company directly owns 20.27 percent and indirectly owns 12.50 percent through its equity interest in Siam Polyethylene Company Limited.
2. The Company is responsible for marketing the majority of Sadara products outside of the Middle East zone through the Company's established sales channels. Under this arrangement, the Company purchases and sells Sadara products for a marketing fee. In March 2021, Dow and the Saudi Arabian Oil Company agreed to transition the marketing rights and responsibilities for Sadara's finished products to levels more consistent with each partner's equity ownership. This transition began in July 2021 and is being implemented through 2026.

See Note 10 to the Consolidated Financial Statements for additional information regarding nonconsolidated affiliates.

SUSTAINABILITY STRATEGY

Dow believes a sustainable future is attainable, but only if everyone comes together to drive forward science- and technology-based solutions to address global challenges. Dow is collaborating across value chains and using its materials science to scale business solutions and deliver transformational change that leads to a more circular, lower-carbon, more resource-efficient society and a healthier planet. By constantly innovating and improving how the Company sources, designs, manufactures and delivers material solutions, Dow is helping its customers make a positive contribution to society and the environment, while opening new paths for business growth.

Dow's sustainability efforts are focused on three areas that are critical to the Company's business and where Dow believes it can use its science, global reach and partnerships to make a positive impact. These focus areas guide Dow's business decisions and sustainability framework.

Climate Protection – Dow is committed to protecting the planet by combating climate change, including contributing to lower CO_2e emissions and conserving and restoring natural resources, such as native habitats and freshwater, within its operations and value chains.

Circular Economy – Dow is taking a leading role in driving a more circular economy by designing for circularity, building new business models for circular materials, and partnering in an industrial ecosystem to end plastic pollution.

Safer Materials – Dow is innovating new materials that offer more favorable health and environmental profiles over their life cycles than incumbent solutions.

To accelerate the Company's sustainability commitments, Dow has implemented and continues to expand on its multi-decade targets intended to put the Company on a path to achieve carbon neutrality and reduce plastic waste, which include the following:

- By 2030, Dow will reduce its net annual Scope 1 and 2 CO_2e emissions by 5 million metric tons compared with its 2020 baseline, representing a 15 percent reduction from 2020 and a 30 percent reduction in greenhouse gas emissions since 2005.
- By 2030, Dow will transform plastic waste and other forms of alternative feedstock to commercialize 3 million metric tons of circular and renewable solutions annually. To do this, Dow is expanding its efforts to build industrial ecosystems to collect, reuse or recycle plastic waste and address waste management gaps. Dow is also working to close the loop by helping its customers design for recyclability and increasing its use of feedstocks from recycled and renewable sources.
- By 2050, Dow intends to be carbon neutral (Scope 1+2+3, as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, plus product benefits).

The Company's progress in achieving these targets is reviewed regularly by management and with the Environment, Health, Safety & Technology Committee of the Dow Inc. Board of Directors ("Board").

Additional discussion of matters pertaining to the environment, including actions related to the Company's sustainability strategy, is included in Part I, Item 1A. Risk Factors; Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations; and Notes 1 and 14 to the Consolidated Financial Statements. In addition, detailed information on the Company's performance regarding environmental matters and goals, including the Company's annual INtersections Report, is accessible through the Science & Sustainability webpage at *www.dow.com/sustainability.* Dow's website and its content are not deemed incorporated by reference into this report.

HUMAN CAPITAL

Dow’s ambition – to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world – starts with people. Dow employees create innovative and sustainable materials science solutions to advance the world. Every answer starts with asking the right questions, which is why the diverse, dedicated Dow team collaborates with customers and other stakeholders to find solutions to the world's toughest challenges. The Company's values of Respect for People, Integrity and Protecting Our Planet are fundamental beliefs that are ingrained in each action taken, can never be compromised and are the foundation of the Company's Code of Conduct.

The Company is dedicated to employee health and safety and is invested in fostering a culture of inclusion and continuous learning while supporting its employees through its Total Rewards plans and programs to ensure all Dow employees are respected, valued and encouraged to make their fullest contribution.

Safety, Employee Health and Well-Being

A commitment to safety and employee health is ingrained in Dow’s culture and central to how the Dow team works. Dow uses a comprehensive, integrated operating discipline management system that includes policies, requirements, best practices and procedures associated with health and safety. In 2023, the Company achieved an Occupational Safety and Health Administration Total Recordable Injury and Illness Rate of 0.18, based upon the number of incidents per 200,000 work hours for employees and contractors globally. This measure, along with a consistent set of globally applied, as well as locally defined, leading indicators of safety performance, are cornerstones of Dow's worker protection program. The Company maintains a robust, globally tracked near-miss program for situations that did not result in an injury, but could have been high consequence had circumstances been slightly different. This data is reviewed regularly by management and the Environment, Health, Safety & Technology Committee of the Board, is visible to all employees and is built into digital dashboards that include actual injury information for every Dow location around the world.

As part of the Company's total worker health strategy, employees have access to occupational health services at no cost through on-site, Company-managed clinics at its manufacturing locations or an offsite provider overseen by Dow Occupational Health. In addition to access for occupational health needs, the Company also has a comprehensive well-being strategy, which is framed across four dimensions – physical, mental, community and financial well-being – for an approach that is holistic, global, employee centered and outcome-driven. Key ambitions across the four dimensions focus on elements such as workplace stress, psychological safety, resiliency, workload, healthy eating and activities, and social community and inclusion opportunities.

Dow maintains active Crisis Management Teams at the corporate level and in each region where the Company operates to ensure appropriate plans are in place in the event of natural disasters or other emergencies.

Inclusion, Diversity & Equity

At Dow, inclusion, diversity and equity ("ID&E") is a business imperative evidenced by inclusion serving as a core pillar of the Company's ambition statement. A strategic and intentional focus on ID&E not only enhances the employee experience and satisfaction, but it also supports innovation, customer experience and understanding of the communities the Company serves. In 2023, Dow advanced to #7 in the DiversityInc Top 50 Companies for Diversity and for the third year in a row was named to the *Fortune* 100 Best Companies to Work For® list. These are significant accomplishments that represent only two of the many awards the Company received related to its efforts in ID&E.

Dow's strategic ID&E efforts are directed by its Chief Inclusion Officer and Office of Inclusion, which supports implementation throughout Dow's businesses, functions and regions. Three Inclusion Councils drive the ID&E strategy from the top of the Company down and across the enterprise:

- The President's Inclusion Council defines and supports Dow's ID&E strategy from the top.
- A Senior Leaders' Inclusion Council influences change through senior and mid-level business, geographic and functional leaders.
- A Joint Inclusion Council collaborates to drive maximum employee engagement through Employee Resource Group ("ERG") leadership.

Dow's 10 ERGs are representative of the Company's diverse workforce and help foster an inclusive workplace. Dow's ERGs are organized around historically underrepresented groups including women, people of color, LGBTQ+ individuals, people with disabilities and veterans, as well as groups both for professionals who are new to the Company and those who are 50 years or older. Senior leaders serve as executive sponsors for each ERG. In addition, Dow has a Paid Time Off Policy which provides employees time off to volunteer and engage in ERG activities. In 2023, 61 percent of Dow's workforce and 98 percent of Dow people leaders participated in at least one ERG.

Inclusion and diversity metrics, including ERG participation, global representation of women and U.S. ethnic minority representation in the United States, are published internally on a quarterly basis, are embedded in the same scorecard where Dow's financial and safety results are measured and are directly connected to leaders' annual performance and compensation. This data is reviewed regularly by management and with the Compensation and Leadership Development Committee of the Board.

Global pay disparity studies have been conducted at Dow for over 20 years to assess fair treatment between genders and between U.S. ethnic minorities and non-minorities and to ensure Dow's pay practices are being implemented as intended. As part of Dow's ID&E efforts, the Company will continue to conduct annual pay gap studies and actively engage with an external partner to further develop and continue to apply best practices.

Total Rewards

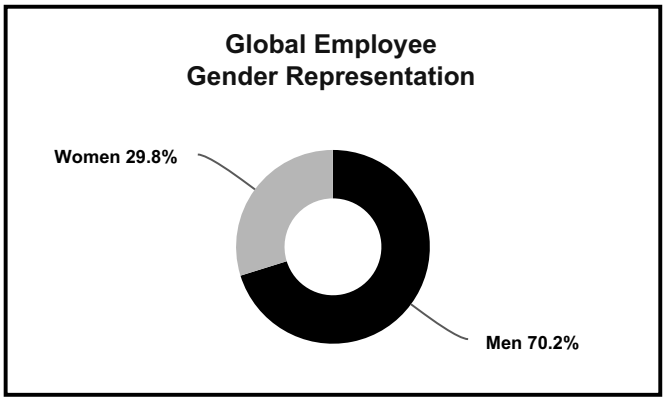
To achieve Dow's ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company in the world, the Company invests in its people, who are at the heart of the Company, through its Total Rewards plans and programs. The Total Rewards plans and programs are structured to attract, retain and motivate Dow's employees. Dow's Total Rewards are designed to support all aspects of its employees – their compensation, future, health, life and career. The Company is committed to aligning its strategy and culture with the needs of its employees and optimizing the investment Dow makes in Total Rewards.

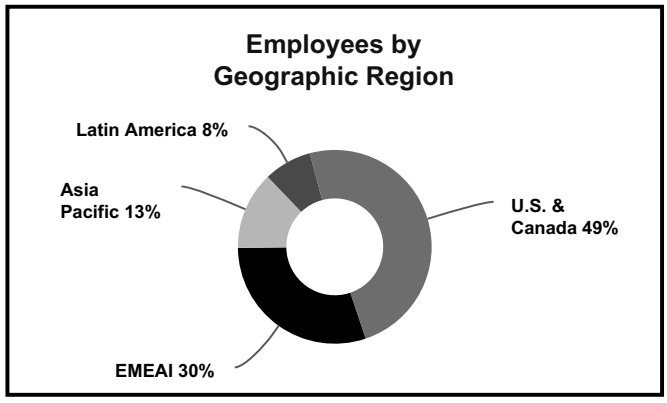
As a global company with a diverse team, Dow aims to ensure employees have access to resources that allow them to meet their unique needs. That is why Dow has established three guiding principles that define its Total Rewards strategy: 1) ensuring programs are market competitive, while leading peer companies in equitable and inclusive offerings; 2) providing employees with offerings that align with their preferences; and 3) offering programs that promote fulfilling career and life experiences. Dow adapts its programs for geography-specific requirements, as well as cultural standards and expectations.

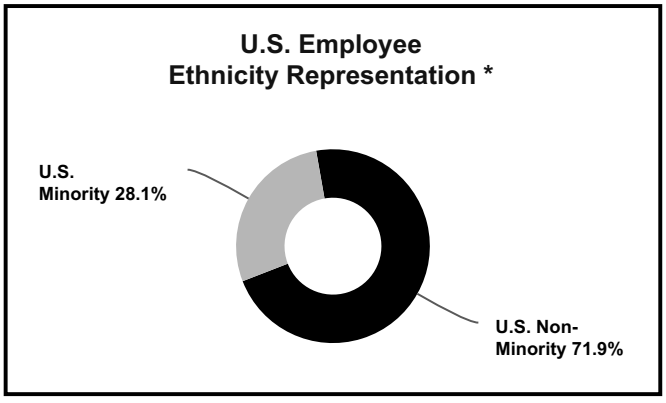
Employee Engagement, Learning and Development

Throughout an employee's career, the Company supports development through a blend of learning approaches including in-person and virtual trainings, digital learning platforms, on-the-job training and a series of leadership development programs. Annually, all employees have the opportunity to provide feedback on employee experience and offer insights into how to improve Dow's working culture through a global employee opinion survey. A key component of the survey is an opportunity for employees to provide feedback on the effectiveness of their direct leader. In 2023, 72 percent of employees responded to the annual survey. The feedback received through this annual survey and additional quarterly checkpoint surveys is used to drive actions to improve the overall Dow experience for employees across the Company, as well as to support continuous improvement in leader effectiveness.

At December 31, 2023, the Company permanently employed approximately 35,900 people on a full-time basis.







* U.S. ethnic minorities include employees who self-identify as American Indian or Alaskan Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or other Pacific Islander, or two or more races. Employees who self-identify as White are considered U.S. Non-Minority.

Additional information regarding Dow's human capital measures can be found in the Company's annual INtersections Report, as well as Dow's U.S. Equal Employment Opportunity Report (EEO-1), accessible through the Inclusion and Diversity webpage at *www.dow.com/diversity*. Dow's website and its content are not deemed incorporated by reference into this report.

OTHER ACTIVITIES

The Company engages in property and casualty insurance and reinsurance primarily through its Liana Limited subsidiaries.

EXECUTIVE OFFICERS OF THE REGISTRANT

Set forth below is information related to the Company's executive officers as of January 31, 2024:

Name, Age	*Present Position with Registrant*	*Year Elected as Executive Officer of Dow Inc.*	*Other Business Experience since January 1, 2019*
Lisa Bryant, 48	Chief Human Resources Officer	2022	**DOW INC.:** Chief Human Resources Officer since November 2022. **TDCC:** Chief Human Resources Officer since November 2022; Senior Global Human Resources Director for Finance, Legal, Public Affairs, and Government Affairs from May 2020 to November 2022; North America Human Resources Director from February 2019 to May 2020; Global Human Resources Director for Marketing & Sales from April 2017 to February 2019; Global Human Resources Director for Coatings, Monomers & Plastics Additives from March 2015 to February 2019.
Karen S. Carter, 53	President, Packaging & Specialty Plastics	2019	**DOW INC.:** President, Packaging & Specialty Plastics since November 2022; Chief Human Resources Officer and Chief Inclusion Officer from April 2019 to November 2022. **TDCC:** President, Packaging & Specialty Plastics since November 2022; Chief Human Resources Officer from October 2018 to November 2022; Chief Inclusion Officer from July 2017 to November 2022.
Andrea L. Dominowski, 49	Controller and Vice President of Controllers	2024	**DOW INC.:** Controller and Vice President of Controllers effective February 1, 2024. **TDCC:** Controller and Vice President of Controllers effective February 1, 2024. Global Business Director for Silicone Feedstocks & Intermediates from August 2020 to February 2024. Regional Finance Director for North America from January 2018 to August 2020.
Ronald C. Edmonds, 66	Controller and Vice President of Controllers and Tax	2019	**DOW INC.:** Controller and Vice President of Controllers and Tax from April 2019 to February 1, 2024. **TDCC:** Controller and Vice President since November 2009; Vice President of Tax from January 2016 to February 1, 2024.
Jim Fitterling, 62	Chair and Chief Executive Officer	2018	**DOW INC.:** Chair since April 2020; Chief Executive Officer since August 2018. **TDCC:** Chair since April 2020; Chief Executive Officer since July 2018.
Mauro Gregorio, 61	President, Performance Materials & Coatings	2020	**DOW INC.:** President, Performance Materials & Coatings since February 2020; Business President, Performance Materials & Coatings from April 2019 to February 2020. **TDCC:** President, Performance Materials & Coatings since February 2020; Business President, Consumer Solutions from January 2016 to February 2020.
Jane M. Palmieri, 54	President, Industrial Intermediates & Infrastructure	2020	**DOW INC.:** President, Industrial Intermediates & Infrastructure since February 2020. Business President, Polyurethanes and Chlor-Alkali & Vinyl from April 2019 to February 2020. **TDCC:** President, Industrial Intermediates & Infrastructure since February 2020; Business President, Polyurethanes and Chlor-Alkali & Vinyl from April 2018 to February 2020.
John M. Sampson, 63	Senior Vice President, Operations, Manufacturing & Engineering	2021	**DOW INC.:** Senior Vice President, Operations, Manufacturing & Engineering since October 2020. **OLIN CORPORATION:** Executive Vice President, Business Operations from April 2019 to September 2020; Vice President, Business Operations from October 2015 to April 2019.
A. N. Sreeram, 56	Senior Vice President of Research & Development and Chief Technology Officer	2019	**DOW INC.:** Senior Vice President of Research & Development and Chief Technology Officer since April 2019. **TDCC:** Chief Technology Officer since October 2015; Senior Vice President of Research & Development since August 2013.
Jeffrey L. Tate, 54	Chief Financial Officer	2023	**DOW INC.:** Chief Financial Officer since November 2023. **LEGGETT & PLATT INCORPORATED:** Executive Vice President and Chief Financial Officer from September 2019 to June 2023. **TDCC:** Chief Financial Officer since November 2023. Vice President and Business Finance Director, Packaging & Specialty Plastics from August 2017 to August 2019.
Amy E. Wilson, 53	General Counsel and Corporate Secretary	2018	**DOW INC.:** General Counsel and Corporate Secretary since April 2019; Secretary from August 2018 to April 2019. **TDCC:** General Counsel since October 2018; Corporate Secretary since February 2015.

ITEM 1A. RISK FACTORS

The factors described below represent the Company's principal risks.

CLIMATE CHANGE - RELATED RISKS

Climate Change: 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.

The Company is subject to increasing climate-related risks and uncertainties, many of which are outside of its control. Climate change may result in more frequent and damaging severe weather and weather-related events, potential changes in precipitation patterns and extreme variability in weather patterns. These short- and long-term weather and weather-related events can disrupt the operations of the Company as well as those of its customers, partners and vendors due to damage to local infrastructure and other property damage limiting site access, and causing water scarcity and lack of access to high-quality water, among other factors. These risks and uncertainties may also directly or indirectly impact decisions to invest in the construction and/or renovation of new or existing manufacturing sites and other Company facilities and locations.

The transition to lower greenhouse gas emissions technology, the effects of carbon pricing and changes in public sentiment, regulations, taxes, public mandates or requirements and increases in climate-related lawsuits, insurance premiums and implementation of more robust disaster recovery and business continuity plans could increase costs to maintain or resume the Company's operations or achieve its sustainability commitments in the expected timeframes, which would negatively impact the Company's results of operations.

In 2020, the Company announced commitments to reduce its net annual Scope 1 and 2 CO_2e emissions by an additional 5 million metric tons, or 15 percent compared with its 2020 baseline, by 2030 (the 2020 baseline represents a 15 percent reduction in greenhouse gas emissions since 2005) and its intention to be carbon neutral by 2050 (Scope 1+2+3, as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, plus product benefits). In November 2023, the Board approved the final investment decision to build the world's first net-zero Scope 1 and 2 CO_2e emissions integrated ethylene cracker and derivatives facility in Alberta, Canada, a key element for the Company to achieve its 2030 greenhouse gas emissions reduction commitment.

The commitments reflect the Company's current plans and targets and are not guarantees that it will be able to achieve them. The execution and achievement of the Company's commitments within projected cost estimates and expected timeframes, including the success of the Company's integrated ethylene cracker and derivatives facility in Alberta, Canada, are subject to risks and uncertainties which include, but are not limited to: advancement, availability, development and affordability of technology necessary to achieve these commitments; unforeseen design, operational and technological difficulties; availability and cost of necessary materials and components; adapting products to customer preferences and customer acceptance of sustainable supply chain solutions; changes in public sentiment and political leadership; and the Company's ability to comply with changing regulations, taxes, mandates or requirements related to greenhouse gas emissions or other climate-related matters, including prescriptive reporting of climate-related matters. In addition, standards for tracking and reporting on sustainability matters have not been harmonized, continue to evolve and may change over time, which could result in significant revisions to the Company's performance metrics, commitments or reported progress in achieving such commitments. Given the focus on sustainable investing, if the Company fails to meet its climate change commitments within the committed timeframe, coupled with its significant investments to meet those commitments, and adopt policies and practices to enhance sustainability, the Company's reputation and its customer and other stakeholder relationships could be negatively impacted, reducing demand for the Company's products, and it may be more difficult for the Company to compete effectively or gain access to financing on acceptable terms when needed, which could negatively impact the Company's financial condition, results of operations and cash flows.

PANDEMIC - RELATED RISKS

Public Health Crisis: A public health crisis or global outbreak of disease could have a negative effect on the Company's manufacturing operations, supply chain and workforce, creating business disruptions that could have a substantial negative impact on the Company's results of operations, financial condition and cash flows.

A public health crisis, including a pandemic similar in nature to coronavirus disease 2019, could impact all geographic regions where Dow products are produced and sold. The global, regional and local spread of a public health crisis could result in, and in the past has resulted in, significant global mitigation measures, including government-directed quarantines, social distancing and shelter-in-place mandates, travel restrictions and/or bans,

mask and vaccination mandates, restrictions on large gatherings and restricted access to certain corporate facilities and manufacturing sites. Business disruptions and market volatility resulting from a public health crisis could have a substantial negative impact on the Company's results of operations, financial condition and cash flows. The adverse impact of a pandemic could include, and in the past has included, without limitation, fluctuations in the Company's stock price due to market volatility; a decrease in demand for certain Company products; price declines; reduced profitability; supply chain disruptions impeding the Company's ability to ship and/or receive product; temporary idling or permanent closure of select manufacturing facilities and/or manufacturing assets; asset impairment charges; interruptions or limitations to manufacturing operations imposed by local, state or federal governments; reduced market liquidity and increased borrowing costs; workforce absenteeism and distraction; labor shortages; customer credit concerns; increased cybersecurity risk and data accessibility disruptions due to remote working arrangements; workforce reductions and fluctuations in foreign currency markets. Additional risks may include, but are not limited to: shortages of key raw materials; potential impairment in the carrying value of goodwill; additional asset impairment charges; increased obligations related to the Company's pension and other postretirement benefit plans; and tax valuation allowance; and may also have the effect of heightening many of the other risks described in this "Risk Factors" section.

MACROECONOMIC RISKS

Financial Commitments and Credit Markets: Market conditions could reduce the Company's flexibility to respond to changing business conditions or fund capital needs.

Adverse economic conditions, such as high interest rates, could reduce the Company's flexibility to respond to changing business and economic conditions or to fund capital expenditures or working capital needs. The economic environment could result in a contraction in the availability of credit in the marketplace and reduce sources of liquidity for the Company. This could result in higher borrowing costs.

Global Economic Considerations: The Company operates in a global, competitive environment which gives rise to operating and market risk exposure.

The Company sells its broad range of products and services in a competitive, global environment, and competes worldwide for sales on the basis of product quality, price, technology and customer service. Increased levels of competition could result in lower prices or lower sales volume, which could have a negative impact on the Company's results of operations. Sales of the Company's products are also subject to extensive federal, state, local and foreign laws and regulations; trade agreements; import and export controls; taxes; and duties and tariffs. The imposition of additional regulations, controls, taxes and duties and tariffs or changes to bilateral and regional trade agreements could result in lower sales volume, which could negatively impact the Company's results of operations.

Economic conditions around the world, and in certain industries in which the Company does business, also impact sales price and volume and affect the efficacy of the Company's supply chain. For example, market uncertainty and an economic downturn driven by inflationary pressures have recently reduced demand for the Company's products, resulting in decreased sales volume. Adverse economic conditions also caused supply chain constraints. These factors have had a negative impact on the Company's results of operations. Additionally, political tensions; war, including the ongoing conflicts in the Middle East and between Russia and Ukraine with the related sanctions and export restrictions; terrorism; epidemics; pandemics; or political instability in the geographic regions or industries in which the Company sells its products could also reduce demand for the Company's products and result in decreased sales volume or supply chain disruptions, which could have a negative impact on the Company's results of operations.

In February 2022, Russia invaded Ukraine resulting in the United States, Canada, the European Union and other countries imposing economic sanctions on Russia. Dow suspended purchases of feedstocks and energy from Russia and has significantly reduced its operations and product offerings in the country. Dow has also stopped all investments in Russia and is only supplying limited essential goods to Russia. These actions have not had and are not expected to have a material impact on the Company's financial condition or results of operations. However, the fluidity and continuation of the conflict may result in additional economic sanctions and other impacts which could have a negative impact on the Company's financial condition, results of operations and cash flows. These include decreased sales; supply chain and logistics disruptions; volatility in foreign exchange rates and interest rates; inflationary pressures on and availability of raw materials and energy, most notably in Europe; and heightened cybersecurity threats. Further, the intensity and duration of the conflict in the Middle East and potential expansion of the hostilities in the region are difficult to predict and could disrupt the Company's supply chain operations, which could have a negative impact on the Company's results of operations.

In addition, volatility and disruption of financial markets could limit customers' ability to obtain adequate financing to maintain operations, which could result in a decrease in sales volume and have a negative impact on the Company's results of operations. The Company's global business operations also give rise to market risk exposure related to changes in inflation, foreign currency exchange rates, including the impact of foreign currency exchange rates resulting from highly inflationary economies such as Argentina, interest rates, commodity prices and other market factors such as equity prices. To manage such risks, the Company enters into hedging and other investment transactions, where deemed appropriate, pursuant to established guidelines and policies. If the Company fails to effectively manage such risks, it could have a negative impact on its results of operations.

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.

While the Company has frozen its defined benefit plans and other postretirement benefit plans in the United States, the Company continues to sponsor these plans as well as defined benefit pension plans and other postretirement benefit plans in a number of other countries (together with U.S. plans, the "plans"). The assets of the Company's funded plans are primarily invested in fixed income securities, equity securities of U.S. and foreign issuers and alternative investments, including investments in real estate, private equity and absolute return strategies. Changes in the market value of plan assets, investment returns, discount rates, mortality rates and regulations may affect the funded status of the Company's plans and could cause volatility in the net periodic benefit cost, future funding requirements of the plans and the funded status of the plans. A significant increase in the Company's obligations or future funding requirements could have a negative impact on the Company's results of operations and cash flows for a particular period and on the Company's financial condition.

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.

The balance of supply relative to demand within the industry may be significantly impacted by the addition of new capacity, especially for basic commodities where capacity is generally added in large increments as world-scale facilities are built. This may result in excess capacity which can disrupt regional industry supply and demand balances, particularly in Europe, Middle East, Africa and India ("EMEAI") and Asia Pacific, resulting in downward pressure on prices and decreased operating rates, which could negatively impact the Company's results of operations.

LEGAL AND REGULATORY RISKS

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.

The Company is subject to extensive federal, state, local and foreign laws, regulations, rules and ordinances relating to pollution, protection of the environment, climate change, greenhouse gas emissions, and the generation, storage, handling, transportation, treatment, disposal and remediation of hazardous substances and waste materials. In addition, the Company may have costs related to environmental remediation and restoration obligations associated with past and current sites as well as related to its past or current waste disposal practices or other hazardous materials handling. Although management will estimate and accrue liabilities for these obligations, it is reasonably possible that the Company's ultimate cost with respect to these matters could be significantly higher, which could negatively impact the Company's financial condition and results of operations. Costs and capital expenditures relating to environmental, health or safety matters are subject to evolving regulatory requirements and depend on the timing of the promulgation and enforcement of specific standards which impose the requirements. Moreover, changes in environmental regulations could inhibit or interrupt the Company's operations, or require modifications to its facilities. Accordingly, environmental, health or safety regulatory matters could result in significant unanticipated costs or liabilities. For additional information, see Part II, Item 7. Other Matters, Environmental Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations.

Health and Safety: Increased concerns regarding the safe use of chemicals and plastics in commerce and their potential impact on the environment have resulted in more restrictive regulations and could lead to new regulations.

Concerns regarding the safe use of chemicals and plastics in commerce and their potential impact on health and the environment reflect a growing trend in societal demands for increasing levels of product safety and environmental protection. These concerns could manifest themselves in stockholder proposals, preferred purchasing, delays or failures in obtaining or retaining regulatory approvals, delayed product launches, lack of

market acceptance and continued pressure for more stringent regulatory intervention and litigation. These concerns could also influence public perceptions, the viability or continued sales of certain of the Company's products, its reputation and the cost to comply with regulations. In addition, terrorist attacks and natural disasters have increased concerns about the security and safety of chemical production and distribution. These concerns could have a negative impact on the Company's results of operations.

Local, state, federal and foreign governments continue to propose new regulations related to the security of chemical plant locations and the transportation of hazardous chemicals, which could result in higher operating costs.

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.
Certain of the claims and lawsuits facing the Company purport to be class actions and seek damages in very large amounts. All such claims are contested. With the exception of the possible effect of the asbestos-related liability of Union Carbide Corporation ("Union Carbide") as described below, it is the opinion of the Company's management that the possibility is remote that the aggregate of all such claims and lawsuits will have a material adverse impact on the Company's consolidated financial statements.

Union Carbide is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. At December 31, 2023, Union Carbide's total asbestos-related liability, including future defense and processing costs, was $867 million ($947 million at December 31, 2022).

Plastic Waste: Increased concerns regarding plastic waste in the environment, resulting in the demand for substitute materials; brand owners selectively reducing their use of plastic products; a lack of plastic waste collection and recycling infrastructure and a failure to develop circular plastic materials or a circular economy for plastics; and/or the development of new or more restrictive regulations and rules related to plastic waste and related emissions could reduce demand for the Company's plastic products and could negatively impact the Company's financial results.
Plastics have faced increasing public scrutiny due to low recycling rates and the presence of plastic waste in the environment, including the world's oceans and rivers, and pollution associated with the manufacture of plastics. Accordingly, regulators, manufacturers, brand owners and consumers are driving demand for materials made with recycled content, bio-based materials and materials made with low or zero carbon emission options, and local, state, federal and foreign governments are proposing and implementing regulations to address the global plastic waste challenge, including, but not limited to, extended producer responsibility fees, recycled content mandates, taxes on plastics at the national level and bans on non-essential items. Further, an intergovernmental negotiation committee is in the process of negotiating an international legally binding instrument to end plastic pollution.

Dow is one of the world's largest plastics producers and sells plastic products that continue to enable increasing quality and standards of living and offer significant greenhouse gas reductions compared with alternative solutions. In order to both maintain the benefits of plastics, meet growing demand for circular and renewable plastics and advance efforts to end plastic pollution in the environment, the Company is partnering with other organizations to bring the waste back into the circular economy. The Company's Transform the Waste target (announced in October 2022) aims to transform plastic waste and other forms of waste to commercialize 3 million metric tons of circular and renewable solutions by 2030. Further, the Company has committed to reducing its net annual greenhouse gas emissions and intends to be carbon neutral by 2050 (Scope 1+2+3, as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, plus product benefits).

Without the expansion of proper waste collection and recycling infrastructure and the development of a circular economy for plastics at scale, along with increased pressure to reduce the use of plastics, the Company could experience reduced demand for its polyethylene products, which could negatively impact the Company's financial condition, results of operations and cash flows.

OPERATIONAL AND STRATEGIC RISKS
Company Strategy: Implementing certain elements of the Company's strategy could negatively impact its financial results.
The Company currently has manufacturing operations, sales and marketing activities, and joint ventures in emerging geographic regions. Activities in these geographic regions are accompanied by uncertainty and risks including: navigating different government regulatory environments; relationships with new, local partners; project

funding commitments and guarantees; expropriation, military actions, war, terrorism and political instability; sabotage; uninsurable risks; suppliers not performing as expected resulting in increased risk of extended project timelines; and determining raw material supply and other details regarding product movement.

Additionally, disruptions to supply chains, distribution chains and/or public and private infrastructure and services, including those caused by industry capacity constraints, material availability, global logistics delays, and third party service and material providers; and constraints arising from, among other things, the transportation capacity of ocean shipping containers; global labor availability constraints; and/or disruptions to the Company's site operations caused by tenant and neighboring manufacturing operations, as well as the Company's ability to attract and retain a talented workforce, could materially and adversely impact the Company's business operations.

If the manufacturing operations, supply chains, sales and marketing activities are not reliable and/or the implementation of the Company's projects is not successful, it could adversely affect the Company's financial condition, cash flows and results of operations.

Cybersecurity Threat: Disruption of the Company's information technology, data security, and other operating or third-party systems, including disruption of the ability to safely and reliably operate the Company's facilities; the risk of loss of the Company's proprietary information including trade secrets, know-how or other sensitive business information; and the risk of loss or security of the private data of the Company, its customers and its employees could negatively impact the Company's business strategy, results of operations, financial condition and reputation.
The Company relies on various information systems, including information systems operated by third-parties, to support safe, efficient and reliable business and operating processes and activities and to safeguard its proprietary information assets, including trade secrets, know-how and other sensitive, business critical information. These systems are critical to the Company's process to accurately report financial results for management and external reporting purposes and to ensure compliance with financial reporting, legal and tax requirements in the United States and around the world. These systems may also be used to collect and process sensitive customer and personal employee data the Company may be legally required to protect.

Increased global cybersecurity vulnerabilities, threats and more sophisticated and targeted cyberattacks continue to pose risks to the Company's products, systems and networks, and the confidentiality, availability and integrity of the Company's data. These vulnerabilities also expose the Company's customers, suppliers and third-party service providers to loss. In addition, the Company is exposed to similar risks resulting from cyberattacks that are experienced by its suppliers and other vendors. As a result, cyberattacks, internal and external security breaches, and attacks and security breaches of third-party systems could disrupt the Company's operations, compromise Dow's proprietary and confidential, business critical information, jeopardize the Company's ability to safeguard and maintain accurate data, including personal data, and harm the Company's reputation which could result in litigation, enforcement actions, including fines, penalties and disruption of the Company's right to operate in certain jurisdictions, and significant remediation costs. Additionally, the Company's use of artificial intelligence software may create additional risks related to the unintentional disclosure of proprietary, confidential, personal or otherwise sensitive information.

While the Company has a comprehensive cybersecurity program that is continuously reviewed, maintained and upgraded, cyberattacks by nation-state organizations, crime organizations and other hackers have become increasingly sophisticated, and it is possible for such attacks to remain undetected for an extended period of time. Such attacks could have a material negative impact on the Company's business strategy, results of operations, financial position and reputation. More information on the Company's processes for assessing, identifying and managing material risks from cybersecurity threats, including management's role and the Board's oversight of such processes, can be found in Item 1C. Cybersecurity.

Goodwill: An impairment of goodwill could negatively impact the Company's financial results.
At least annually, the Company assesses goodwill for impairment. If testing indicates that goodwill is impaired, the carrying value is written down based on fair value with a charge against earnings. Where the Company utilizes a discounted cash flow methodology in determining fair value, continued weak demand for a specific product line or business could result in an impairment. Accordingly, any determination requiring the write-off of a significant portion of goodwill could negatively impact the Company's results of operations. See Note 11 to the Consolidated Financial Statements for additional information regarding the Company's goodwill impairment testing.

Operational Event: A significant operational event could negatively impact the Company's results of operations.
As a diversified chemical manufacturing company, the Company's operations at each site, including maintenance of its facilities, the transportation of supplies and products, cyberattacks, pandemics and other public health-related events or severe weather conditions and other natural phenomena (such as freezing, drought, hurricanes, earthquakes, tsunamis, floods, etc.) could result in an unplanned event that could be significant in scale and could negatively impact operations, neighbors or the public at large, which could have a negative impact on the Company's results of operations.

Major hurricanes and other weather-related events have caused significant disruption in the Company's operations on the U.S. Gulf Coast, logistics across the region, and the supply of certain raw materials, which had an adverse impact on volume and cost for some of its products. Due to the Company's substantial presence on the U.S. Gulf Coast, similar severe weather conditions or other natural phenomena in the future could negatively impact the Company's results of operations. Other non-weather-related unplanned events have also caused disruptions in the Company's operations at various sites. While the Company has processes in place to minimize the risks and impacts of such events, such unplanned future events 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.
Purchased feedstock and energy costs account for a substantial portion of the Company's total production costs and operating expenses. The Company purchases hydrocarbon raw materials including ethane, propane, butane, naphtha and condensate as feedstocks and purchases certain monomers, primarily ethylene and propylene, to supplement internal production, as well as other raw materials. The Company also purchases natural gas, primarily to generate electricity, electric power to supplement internal generation, and steam.

Feedstock and energy costs generally follow price trends in crude oil and natural gas, which are sometimes volatile. Power prices often follow general energy trends, and are additionally subject to short-term surfeits and shortages related to, for example, intermittent wind and solar generation, and power generation and transmission outages. While the Company uses its feedstock flexibility and financial and physical hedging programs to help mitigate feedstock cost increases, the Company is not always able to immediately raise selling prices. Ultimately, the ability to pass on underlying cost increases is dependent on market conditions. Conversely, when feedstock and energy costs decline, selling prices generally decline as well. As a result, volatility in these costs could impact the Company's results of operations.

While the Company expects abundant and cost-advantaged supplies of natural gas liquids ("NGLs") in the United States to persist for the foreseeable future, if NGLs become significantly less advantaged than crude oil-based feedstocks, it could have a negative impact on the Company's results of operations and future investments. Also, if the Company's key suppliers of feedstock and energy are unable to provide the raw materials required for production, it could have a negative impact on the Company's results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Risk Management and Strategy
The Company has processes in place to identify, assess and monitor material risks from cybersecurity threats, which are part of the Company's overall enterprise risk management process and have been embedded in the Company's operating procedures, internal controls and information systems.

Dow's comprehensive cybersecurity and information security framework includes risk assessment and mitigation through a threat intelligence-driven approach, application controls, and enhanced security with ransomware defense. The framework leverages International Organization for Standardizations 27001/27002 standards for general information technology controls, International Society of Automation/International Electrotechnical Commission standards for industrial automation, the National Institute of Standards and Technology Cyber Security

Framework ("NIST CSF") for measuring overall readiness to respond to cyber threats, and Sarbanes-Oxley for assessment of internal controls.

Dow contracts with external firms to assess Dow's cybersecurity controls relative to its peers using the NIST CSF. Dow also has a third-party risk management program that assesses risks from vendors and suppliers. In addition, the Company maintains business continuity and disaster recovery plans as well as a cybersecurity insurance policy.

Dow has established cybersecurity and information security awareness training programs. Formal training on topics relating to the Company's cybersecurity, data privacy and information security policies and procedures is mandatory at least annually for all employees, contractors and third parties with access to the Company's network. Training is administered and tracked through online learning modules. Training topics include how to escalate suspicious activities including phishing, viruses, spams, insider threats, suspect human behaviors or safety issues. Based on role and location, some employees receive additional in-depth training to provide more comprehensive knowledge on potential risks related to their individual job responsibilities. Training is supplemented through regular Company communications with frequent updates to educate on the latest adversary trends and social engineering techniques.

Additionally, Dow engages in cyber crisis response simulations to assess Dow's ability to adapt to information and operational technology threats. Improper or illegitimate use of the Company's information system resources or violation of the Company's information security policies and procedures is subject to disciplinary action. Dow's security posture is supported by a comprehensive defense-in-depth strategy that relies on layers of technology including Multi-Factor Authentication and principles of Zero Trust to ensure that access to information and communication is vetted and secure.

Dow also utilizes internal and external audits and assessments, vulnerability testing, governance processes over outsourced service providers, active risk management and benchmarking against peers in the industry to validate Dow's security posture. The Company also engages external firms to measure Dow's NIST CSF maturity level.

No risks from cybersecurity threats, including those resulting from any previous cybersecurity incidents, have materially affected, or are reasonably likely to materially affect, the Company, including its business strategy, results of operations or financial condition.

Governance

Role of Management

Dow's Information Systems organization led by Dow's Chief Information and Digital Officer, is responsible for administration of the cybersecurity and information security framework and risk management, with oversight by the Audit Committee.

The Company's Chief Information and Digital Officer has formal education in information technology and extensive experience working in and leading Dow's information systems and technology function. The Chief Information and Digital Officer receives regular updates on cybersecurity matters, results of mitigation efforts and cybersecurity incident response and remediation.

The Company's management responsible for developing and executing Dow's cybersecurity policies is comprised of individuals with either formal education and degrees in information technology or cybersecurity, or with experience working in information technology and cybersecurity, including relevant industry experience in security related industries. Additionally, leaders in the Company's information technology function receive periodic training and education on cybersecurity related topics. Certain leaders also obtain industry certifications, such as Certified Information Systems Security Professional or Certified Information Security Manager.

The Company's Cyber Security Operations Center ("CSOC") serves as the central point for all cybersecurity incidents and reporting, including incidents that directly target employees or Dow internal information systems and incidents originating from third parties. The CSOC provides end-to-end operations for purposes of monitoring, detecting, alerting and responding to cybersecurity incidents. The CSOC evaluates each incident in terms of its impact on the Company's operations, ability to conduct business with customers and suppliers, brand reputation and health, safety or the environment, and the speed and degree to which the incident has been contained. The CSOC is also responsible for activating the containment and resolution efforts and third-party service providers are engaged where appropriate to support the Company through the resolution of the incident. The CSOC escalates incidents with significant impact and pervasiveness to the Company's Corporate Crisis Management Team for

further action. After initial identification, the CSOC monitors all cybersecurity incidents for changes in degree of impact or pervasiveness.

Role of the Board

Dow's Board recognizes the importance of cybersecurity in safeguarding the Company's sensitive data. The Board is responsible for overseeing overall risk management for the Company, including review and approval of the enterprise risk management approach and processes implemented by management to identify, assess, manage and mitigate risk, at least annually. The Board has delegated responsibility for oversight of the Company's cybersecurity and information security framework and risk management to the Audit Committee of the Board. The Audit Committee receives information and updates at least quarterly and actively engages with senior leaders, including the Chief Information and Digital Officer and Chief Information Security Officer, with respect to the effectiveness of the Company's cybersecurity and information security framework, data privacy, and risk management. In addition, the Audit Committee receives reports summarizing threat detection and mitigation plans, audits of internal controls, training and certification, and other cyber priorities and initiatives, as well as timely updates from senior leaders on material incidents relating to information systems security, including cybersecurity incidents. The Audit Committee includes members with significant experience and/or expertise in technology or cybersecurity, including information systems.

ITEM 2. PROPERTIES

The Company's corporate headquarters are located in Midland, Michigan. The Company's manufacturing, processing, marketing and research and development facilities, as well as regional purchasing offices and distribution centers are located throughout the world. The Company has investments in property, plant and equipment related to global manufacturing operations. Collectively, the Company operates 98 manufacturing sites in 31 countries. The following table includes the major manufacturing sites by operating segment, including consolidated variable interest entities:

Major Manufacturing Sites by Segment *Location*	*Packaging & Specialty Plastics*	*Industrial Intermediates & Infrastructure*	*Performance Materials & Coatings*
Bahia Blanca, Argentina	X		
Candeias, Brazil	X	X	
Canada:			
Fort Saskatchewan, Alberta	X		
Prentiss, Alberta	X		
Joffre, Alberta	X		
Zhangjiagang, China	X	X	X
Germany:			
Boehlen	X	X	
Leuna	X		
Schkopau	X	X	
Stade		X	
Terneuzen, The Netherlands	X	X	
Tarragona, Spain	X	X	
Map Ta Phut, Thailand		X	X
Barry, United Kingdom			X
United States:			
Carrollton, Kentucky			X
Hahnville, Louisiana	X	X	X
Plaquemine, Louisiana	X	X	
Midland, Michigan			X
Deer Park, Texas		X	X
Freeport, Texas	X	X	X
Orange, Texas	X		
Seadrift, Texas	X	X	
Texas City, Texas		X	X

Including the major manufacturing sites, the Company has manufacturing sites and holdings in all geographic regions as follows:

Manufacturing Sites by Region	
Asia Pacific	16 manufacturing sites in 10 countries
EMEAI [1]	35 manufacturing sites in 15 countries
Latin America	15 manufacturing sites in 4 countries
U.S. & Canada	32 manufacturing sites in 2 countries

1. Europe, Middle East, Africa and India.

Properties of the Company include facilities which, in the opinion of management, are suitable and adequate for their use and will have sufficient capacity for the Company's current needs and expected near-term growth. All of the Company's plants are owned or leased, subject to certain easements of other persons which, in the opinion of management, do not substantially interfere with the continued use of such properties or materially affect their value. No title examination of the properties has been made for the purpose of this report. Additional information with respect to the Company's property, plant and equipment and leases is contained in Notes 9, 13 and 15 to the Consolidated Financial Statements.

ITEM 3. LEGAL PROCEEDINGS

Asbestos-Related Matters of Union Carbide Corporation

Union Carbide Corporation ("Union Carbide"), a wholly owned subsidiary of the Company, is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide's premises, and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide subsidiary, Amchem Products, Inc.

For additional information, see Part II, Item 7. Other Matters, Asbestos-Related Matters of Union Carbide Corporation in Management's Discussion and Analysis of Financial Condition and Results of Operations, and Notes 1 and 14 to the Consolidated Financial Statements.

Environmental Proceedings

On May 17, 2021, the Company received a civil complaint from the State of Texas ("State") on behalf of the Texas Commission on Environmental Quality, filed in the 250th District Court of Travis County, Texas. The suit alleges environmental violations at the Company's Freeport, Texas, site involving several air emissions events, which allegedly occurred at the site between 2016 and 2021. The State is seeking monetary and injunctive relief to prevent recurrence. Discussions between the Company and the Texas Office of the Attorney General are ongoing.

On December 16, 2022, the U.S. Department of Justice filed a complaint and proposed consent decree on behalf of the EPA relating to environmental contamination at the Lower Passaic River Study Area Superfund Site in New Jersey. The EPA filed an amended complaint and proposed consent decree on January 17, 2024. The proposed consent decree includes a requirement that 85 settling defendants, including the Company's Essex Chemical Corporation subsidiary ("Essex"), make a collective payment of $150 million for the EPA's past and anticipated future response costs, with Essex's share of the group settlement costs being $1.15 million.

In June 2023, INEMA, the Bahia, Brazil, state environmental agency notified Dow Brasil Indústria e Comércio de Produtos Químicos Ltda of its intention to impose penalties relating to Dow's historic brine mining operations on Matarandiba Island, which INEMA alleges have contributed to environmental issues at the location. Discussions between Dow and the relevant government agencies are ongoing.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Dow Inc. is the direct parent company of The Dow Chemical Company and its consolidated subsidiaries, ("TDCC" and together with Dow Inc., "Dow" or the "Company"), owning all of the outstanding common shares of TDCC. The principal market for Dow Inc.'s common stock is the New York Stock Exchange, traded under the symbol “DOW.”

Dow Inc. has paid dividends on a quarterly basis and expects to continue to do so, subject to approval by the Dow Inc. Board of Directors ("Board"). Additional dividend information can be found in Note 16 to the Consolidated Financial Statements and Liquidity and Capital Resources in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

At December 31, 2023, there were 64,818 stockholders of record.

See Part III, Item 11. Executive Compensation for information relating to shares authorized for issuance under Dow Inc.'s equity compensation plans.

The Company grants stock-based compensation to employees and non-employee directors under stock incentive plans, in the form of stock options, stock appreciation rights, performance stock units and restricted stock units. See Note 19 to the Consolidated Financial Statements for additional information.

Issuer Purchases of Equity Securities

The following table provides information regarding purchases of Dow Inc. common stock by the Company during the three months ended December 31, 2023. The Company makes such purchases only during open windows subject to its insider trading policy.

Issuer Purchases of Equity Securities			*Total number of shares purchased as part of the Company's publicly announced share repurchase program*	*Approximate dollar value of shares that may yet be purchased under the Company's publicly announced share repurchase program* [1] *(In millions)*
Period	*Total number of shares purchased*	*Average price paid per share*		
October 2023	486,206	$ 48.06	486,206	$ 1,526
November 2023	2,074,955	$ 48.98	2,074,955	$ 1,425
December 2023	—	$ —	—	$ 1,425
Fourth quarter 2023	2,561,161	$ 48.81	2,561,161	$ 1,425

1. On April 13, 2022, the Board approved a share repurchase program authorizing up to $3.0 billion for the repurchase of the Company's common stock, with no expiration date.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

STATEMENT ON CURRENCY EXCHANGE RATES

The Company's global business operations give rise to market risk exposure related to changes in foreign currency exchange rates and international capital flows that may be affected by extensive regulations and controls, especially in developing or highly inflationary countries such as Argentina. In December 2023, the Argentina government devalued the Argentine peso, which resulted in pretax charges for foreign currency exchange losses and inventory valuation impacts of $177 million ($52 million related to Packaging & Specialty Plastics, $16 million related to Industrial Intermediates & Infrastructure and $109 million related to Corporate). The Company continues to monitor these situations and take appropriate actions as necessary to manage the financial impact pursuant to established guidelines and policies. If the Company is unable to manage certain exposures in a cost-effective manner it could have a significant negative impact on its future results of operations and cash flows. A detailed discussion of these and other principal risks and uncertainties, which may negatively impact the future results of the Company, are included in Part I, Item 1A. Risk Factors.

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ABOUT DOW

Dow is one of the world’s leading materials science companies, serving customers in high-growth markets such as packaging, infrastructure, mobility and consumer applications. The Company's global breadth, asset integration and scale, focused innovation, leading business positions and commitment to sustainability enables the Company to achieve profitable growth and help deliver a sustainable future. Dow operates manufacturing sites in 31 countries and employs approximately 35,900 people.

In 2023, the Company had annual sales of $45 billion, of which 37 percent were to customers in the U.S. & Canada; 33 percent were in Europe, Middle East, Africa and India ("EMEAI"); while the remaining 30 percent were to customers in Asia Pacific and Latin America.

In 2023, the Company and its consolidated subsidiaries did not operate in countries subject to U.S. economic sanctions and export controls as imposed by the U.S. State Department or in countries designated by the U.S. State Department as state sponsors of terrorism, including Cuba, Iran, the Democratic People's Republic of Korea (North Korea) and Syria. The Company has policies and procedures in place designed to ensure that it and its consolidated subsidiaries remain in compliance with applicable U.S. laws and regulations.

OVERVIEW

The following is a summary of the results for the Company for the year ended December 31, 2023:

The Company reported net sales in 2023 of $45 billion, down 22 percent from $57 billion in 2022, with decreases across all geographic regions and operating segments, and driven by a decrease in local price of 16 percent and a volume decrease of 6 percent.

Local price decreased 16 percent compared with 2022, with decreases in all operating segments and geographic regions, driven by slower global macroeconomic activity creating unfavorable supply and demand dynamics, industry supply additions and lower global energy and feedstocks costs. Local price decreased in Packaging & Specialty Plastics (down 16 percent), Industrial Intermediates & Infrastructure (down 14 percent) and Performance Materials & Coatings (down 15 percent).

Volume decreased 6 percent compared with 2022, with decreases in Packaging & Specialty Plastics (down 5 percent), Industrial Intermediates & Infrastructure (down 9 percent) and Performance Materials & Coatings (down 5 percent). Volume decreased in the U.S. & Canada (down 6 percent), EMEAI (down 9 percent), and Asia Pacific (down 4 percent), which was partially offset by an increase in Latin America (up 4 percent).

Currency impact on net sales was flat compared with 2022.

Restructuring and asset related charges - net were $528 million in 2023 primarily reflecting restructuring actions approved by the Board in January 2023. The restructuring charges consisted of severance and related benefit costs of $344 million and asset write-downs and write-offs of $191 million and were partially offset by other asset related credit adjustments of $7 million related to a prior restructuring program.

Equity in losses of nonconsolidated affiliates was $119 million in 2023, compared with earnings of $268 million in 2022, primarily due to declines at Sadara and the Kuwait joint ventures.

Sundry income (expense) - net for Dow Inc. and TDCC was expense of $280 million and $327 million, respectively, in 2023, compared with income of $727 million and $714 million, respectively, in 2022. Sundry income (expense) - net decreased primarily due to a non-cash settlement charge related to the Company's pension de-risking activities and higher foreign currency exchange losses, which included the impact of the December 2023 devaluation of the Argentine peso. Income from the successful and final resolution and recognition of a long-running patent infringement award was included in 2022.

Net income available for Dow Inc. and TDCC common stockholder(s) was $589 million and $556 million, respectively, in 2023, compared with $4,582 million and $4,583 million, respectively, in 2022. Earnings per share for Dow Inc. was $0.82 per share in 2023, compared with $6.28 per share in 2022.

In 2023, Dow Inc. declared and paid dividends to common stockholders of $2.80 per share ($1,972 million).

In 2023, Dow Inc. repurchased $625 million of the Company's common stock.

Other notable events and highlights from the year ended December 31, 2023 include:

- On January 25, 2023, the Board approved restructuring actions ("2023 Restructuring Program") to achieve the Company's structural cost improvement initiatives in response to the continued economic impact from the global recessionary environment and to enhance its agility and long-term competitiveness across the economic cycle. This program included a global workforce cost reduction program, decreased turnaround spending and actions that rationalized the Company’s manufacturing assets, which included asset write-down and write-off charges and related contract termination fees.
- On April 25, 2023, the Company announced that it had selected Linde as its industrial gas partner for the supply of circular hydrogen and nitrogen for its Fort Saskatchewan Path2Zero investment.
- On May 11, 2023, Dow Inc. announced Seadrift, Texas, as the location of its small modular nuclear reactor project as part of a joint development agreement with X-energy.
- On June 15, 2023, Fitch Ratings affirmed TDCC’s BBB+ long-term credit rating and announced a short-term credit rating upgrade to F1 from F2, and also revised its long-term outlook from positive to stable. On

August 22, 2023, Standard and Poor's affirmed TDCC's BBB and A-2 rating, and revised its outlook from positive to stable. These credit agencies' decisions were made as part of their annual review process and reflect the Company's supportive financial policies and strong operating performance.

- On June 19, 2023, Dow Inc. released its INtersections Progress Report, demonstrating how the Company's continued focus and actions align to its ambition and goal to deliver value growth; best-in-class performance; and innovative, sustainable solutions to address global challenges.
- On July 14, 2023, an incident occurred that included an explosion and subsequent fire at Dow's Louisiana Operations Glycol-2 unit in Plaquemine, Louisiana. There were no injuries reported from the incident and it was limited to the Glycol-2 unit with minimal disruption to other site operations. The Company completed a root cause investigation and is executing a plan to restore operations. The Company's estimated impact on pretax earnings from the incident is $100 million per quarter. The Glycol-2 unit is expected to resume operations in the second quarter of 2024.
- On October 24, 2023, the Company announced that Howard Ungerleider, President and Chief Financial Officer, had elected to retire in January 2024 after 33 years of service with Dow.
- On October 24, 2023, the Company announced that Jeffrey L. Tate had been named Chief Financial Officer.
- On November 28, 2023, the Company announced the Board declared Final Investment Decision on the Company's Fort Saskatchewan Path2Zero investment to build the world's first net-zero Scope 1 and 2 emissions integrated ethylene cracker and derivatives facility in Alberta, Canada.
- On December 18, 2023, the Company announced that Ronald C. Edmonds, Controller and Vice President of Controllers and Tax, had elected to retire in July 2024, after 31 years of service with Dow.
- On December 18, 2023, the Company announced that Andrea L. Dominowski had been named Controller and Vice President of Controllers effective February 1, 2024.
- Dow was named on the Top 100 Global Innovators™ list for the 12th consecutive year.
- Dow received a record-setting nine 2023 Edison Awards™ (five gold, three silver and one bronze), once again earning more awards than any other organization for the sixth consecutive year.
- Dow was named to the JUST 100 list, placing 55th overall, an 11-place improvement from last year, and securing the top spot for Communities in the Chemicals sector.
- Dow was named to Bloomberg’s 2022 Gender-Equality Index for the third consecutive year.
- Dow earned a spot in the S&P Global Sustainability Yearbook, recognizing the Company as a top industry performer.
- Dow was honored as a winner of a 2023 Artificial Intelligence Award for the development of technology that identifies and predicts corrosion failures in metal coatings.
- Dow received five 2023 BIG Innovation Awards from the Business Intelligence Group™, the most received in a single Business Intelligence Group™ Awards program by the Company.
- Dow was recognized with a 2023 CIO 100 Award for its successful Smart Search tool, powered by CAS.
- Dow was titled a Supplier Engagement Leader by CDP, a result of actions taken by the Company to address climate change.
- Dow advanced to seventh place on the 2023 DiversityInc Top 50 Companies for Diversity list making it the sixth consecutive year on the list. Dow was also included on 15 of DiversityInc's Specialty Lists including: Top Companies for Executive Diversity Councils, Top Companies for People with Disabilities, Top Companies for Black Executives, Top Companies for Latino Executives, Top Companies for Executive Women, Top Companies for Employee Resource Groups and Top Companies for Environmental, Social and Governance.
- Dow's EVOWASH™ Antifoam Agents and Readily Biodegradable Detergents and Dow's LuxSense™ Silicone Leather each received a SEAL (Sustainability, Environmental Achievement & Leadership) Sustainable Innovation Award. Dow's SYL-OFF™ EM-7920NF Emulsion Coating was a winner of the SEAL Sustainable Product Award.
- Dow received five awards (Overall Winner, three golds, one silver) at the annual U.S Customer Experience Awards.

- For the seventh consecutive year, Dow received a top score on the Disability Equality Index™, placing the Company among the Best Places to Work for Disability Inclusion™ for 2023.
- Dow Technology won the 2023 ICIS Innovation Award which recognizes companies that are paving the way in product, process, and sustainability innovations across the chemicals industry.
- Dow was named one of the 2023 PEOPLE® Companies that Care by Great Place to Work® and PEOPLE® for the fourth consecutive year.
- Dow was honored by Great Place to Work® and Fortune as one of the World's Best Workplaces. Dow was also certified as a Great Place to Work® in 13 countries and ranked on 10 national Best Workplaces lists, including the Fortune 100 Best Companies to Work For® list in the United States for the third consecutive year.
- Dow was named to the Dow Jones Sustainability World Index by S&P Dow Jones Indices, the world's leading index provider focused on providing essential sustainability intelligence.

In addition to the highlights above, the following events occurred subsequent to December 31, 2023:

- On January 19, 2024, Moody's Investors Service affirmed TDCC's Baa1 and P-2 rating, and affirmed its outlook of stable.
- On January 25, 2024, the Company published its Green Finance Framework and related Second Party Opinion on its website, to support the execution of its sustainability strategy.

RESULTS OF OPERATIONS

For comparison of results of operations for the fiscal years ended December 31, 2022 and 2021, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 1, 2023.

Net Sales

The following tables summarize net sales and sales variances by operating segment and geographic region from the prior year:

Summary of Sales Results In millions	*2023*	*2022*
Net sales	$ 44,622	$ 56,902

Sales Variances by Operating Segment and Geographic Region								
	2023				*2022*			
Percentage change from prior year	*Local Price & Product Mix*	*Currency*	*Volume*	*Total*	*Local Price & Product Mix*	*Currency*	*Volume*	*Total*
Packaging & Specialty Plastics	(16)%	— %	(5)%	(21)%	7 %	(3)%	— %	4 %
Industrial Intermediates & Infrastructure	(14)	(1)	(9)	(24)	11	(5)	(7)	(1)
Performance Materials & Coatings	(15)	(1)	(5)	(21)	21	(4)	(6)	11
Total	(16)%	— %	(6)%	(22)%	11 %	(4)%	(3)%	4 %
Total, excluding the Hydrocarbons & Energy business	(15)%	(1)%	(4)%	(20)%	10 %	(4)%	(5)%	1 %
U.S. & Canada	(15)%	— %	(6)%	(21)%	6 %	— %	1 %	7 %
EMEAI	(17)	—	(9)	(26)	18	(9)	(10)	(1)
Asia Pacific	(14)	(2)	(4)	(20)	6	(3)	—	3
Latin America	(17)	—	4	(13)	6	—	1	7
Total	(16)%	— %	(6)%	(22)%	11 %	(4)%	(3)%	4 %

2023 Versus 2022

The Company reported net sales of $44.6 billion in 2023, down 22 percent from $56.9 billion in 2022, with local price down 16 percent, volume down 6 percent, and currency flat. Net sales decreased by double digits in all operating segments and across all geographic regions, primarily driven by lower prices and demand due to slower global macroeconomic activity. Local price decreased in all operating segments and across all geographic regions driven by industry supply additions and lower global energy and feedstock costs. Local price decreased in Packaging & Specialty Plastics (down 16 percent), Industrial Intermediates & Infrastructure (down 14 percent) and Performance Materials & Coatings (down 15 percent). Volume decreased in all operating segments and geographic regions, except Latin America (up 4 percent). Volume decreased in Packaging & Specialty Plastics (down 5 percent), Industrial Intermediates & Infrastructure (down 9 percent) and Performance Materials & Coatings (down 5 percent). Excluding the Hydrocarbons & Energy business, sales decreased 20 percent.

Cost of Sales

Cost of sales ("COS") was $39.7 billion in 2023, compared with $48.3 billion in 2022. COS decreased in 2023 primarily due to lower raw material costs on lower volume, lower global energy and feedstock costs and the impact of structural cost improvements. COS as a percentage of net sales was 89.1 percent in 2023, compared with 84.9 percent in 2022.

Research and Development Expenses

Research and development ("R&D") expenses were $829 million in 2023, compared with $851 million in 2022. R&D expenses decreased in 2023 primarily due to the impact of structural cost improvements as well as lower performance-based compensation costs.

Selling, General and Administrative Expenses

Selling, general and administrative ("SG&A") expenses were $1,627 million in 2023, compared with $1,675 million in 2022. SG&A expenses decreased in 2023 primarily due to lower bad debt expense, the impact of structural cost improvements and lower performance-based compensation costs, which more than offset increases associated with the Company's restructuring implementation and efficiency actions and fringe benefit expenses tied to stock market changes.

Amortization of Intangibles

Amortization of intangibles was $324 million in 2023, compared with $336 million in 2022. Amortization of intangibles decreased primarily due to certain intangible assets becoming fully amortized. See Note 11 to the Consolidated Financial Statements for additional information on intangible assets.

Restructuring and Asset Related Charges - Net

2023 Restructuring Program

On January 25, 2023, the Board approved restructuring actions to achieve the Company's structural cost improvement initiatives in response to the continued economic impact from the global recessionary environment and to enhance its agility and long-term competitiveness across the economic cycle. These actions are expected to be substantially complete by the end of 2024.

As a result of these actions, in 2023 the Company recorded pretax restructuring charges of $535 million, consisting of severance and related benefit costs of $344 million and asset write-downs and write-offs of $191 million. The restructuring charges by segment were as follows: $1 million in Packaging & Specialty Plastics, $50 million in Industrial Intermediates & Infrastructure, $49 million in Performance Materials & Coatings and $435 million in Corporate. These charges were partially offset by other asset related credit adjustments of $7 million in Corporate related to a prior restructuring program. See Note 4 to the Consolidated Financial Statements for additional information.

Equity in Earnings (Losses) of Nonconsolidated Affiliates

The Company’s share of equity in losses of nonconsolidated affiliates was $119 million in 2023, compared with earnings of $268 million in 2022, with lower equity earnings at all principal joint ventures and primarily due to margin compression at Sadara and the Kuwait joint ventures as a result of lower local prices and demand.

Sundry Income (Expense) - Net
Sundry income (expense) – net includes a variety of income and expense items such as foreign currency exchange gains and losses, dividends from investments, gains and losses on sales of investments and assets, non-operating pension and other postretirement benefit plan credits or costs, losses on early extinguishment of debt and certain litigation matters.

TDCC
Sundry income (expense) - net for 2023 was expense of $327 million, compared with income of $714 million in 2022.

In 2023, sundry income (expense) - net included a $642 million non-cash settlement charge related to the purchase of nonparticipating group annuity contracts for certain pension plans (related to Corporate) and foreign currency exchange losses, including $109 million related to the December 2023 devaluation of the Argentine peso (related to Corporate). These were partially offset by non-operating pension and postretirement benefit plan credits, a $106 million gain associated with a legal matter with Nova Chemicals Corporation (related to Packaging & Specialty Plastics), and gains on the sales of assets and investments. See Notes 5, 14, 18 and 24, to the Consolidated Financial Statements for additional information.

In 2022, sundry income (expense) - net included a $321 million gain related to the successful and final resolution and recognition of a long-running patent infringement award (related to Packaging & Specialty Plastics), a $60 million gain related to an adjustment to the Dow Silicones breast implant liability (related to Corporate), non-operating pension and postretirement benefit plan credits and gains on the sales of assets and investments. These were partially offset by foreign currency exchange losses and an $8 million loss on the early extinguishment of debt (related to Corporate). See Notes 5, 13, 14, 18 and 24, to the Consolidated Financial Statements for additional information.

Dow Inc.
Sundry income (expense) - net for 2023 was expense of $280 million, compared with income of $727 million in 2022.

In 2023, in addition to the amounts previously discussed above for TDCC, sundry income (expense) - net included a $42 million net gain associated with agreements and matters with DuPont de Nemours, Inc. ("DuPont") and Corteva, Inc. ("Corteva") (related to Corporate).

In 2022, in addition to the amounts previously discussed above for TDCC, sundry income (expense) - net included a $4 million net gain associated with agreements entered into with DuPont and Corteva as part of the separation and distribution (related to Corporate).

Interest Expense and Amortization of Debt Discount
Interest expense and amortization of debt discount was $746 million in 2023, compared with $662 million in 2022. The increase in interest expense is primarily due to $1.5 billion of senior unsecured notes issued in the fourth quarter of 2022 and local country borrowings outside the United States in 2023. See Liquidity and Capital Resources in Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 13 to the Consolidated Financial Statements for additional information related to debt financing activity.

Provision for Income Taxes
The Company's effective tax rate fluctuates based on, among other factors, where income is earned, the level of income relative to tax attributes and the level of equity earnings, since most earnings from the Company's equity method investments are taxed at the joint venture level. The underlying factors affecting the Company's overall tax rate are summarized in Note 6 to the Consolidated Financial Statements.

The Company reported a tax credit of $4 million in 2023, resulting in an effective tax rate of negative 0.6 percent, compared with a tax provision of $1,450 million in 2022, resulting in an effective tax rate of 23.8 percent. The credit for income taxes and the lower effective tax rate in 2023 compared with 2022 were primarily due to a decrease in pretax income, changes to geographic mix of earnings, increases in tax basis in assets located in foreign jurisdictions, partially offset by changes in uncertain tax positions in various jurisdictions.

The Company continues to monitor and evaluate legislative developments related to the Global Anti-Base Erosion Proposal ("GloBE") established by the Organization of Economic Cooperation and Development's ("OECD") Pillar

Two framework. Several countries in which the Company operates have adopted those rules into their legislation and several others are expected to implement in the future. The Company continues to evaluate impacts as further guidance is released.

Net Income Attributable to Noncontrolling Interests
Net income attributable to noncontrolling interests was $71 million in 2023, compared with $58 million in 2022. See Notes 17 and 22 to the Consolidated Financial Statements for additional information.

Net Income Available for the Common Stockholder(s)
Dow Inc.
Net income available for Dow Inc. common stockholders was $589 million in 2023, compared with $4,582 million in 2022. Earnings per share of Dow Inc. was $0.82 per share in 2023, compared with $6.28 per share in 2022. See Note 7 to the Consolidated Financial Statements for details on Dow Inc.'s earnings per share calculations.

TDCC
Net income available for TDCC common stockholder was $556 million in 2023, compared with $4,583 million in 2022. TDCC's common shares are owned solely by Dow Inc.

SEGMENT RESULTS

The Company 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. Corporate contains the reconciliation between the totals for the operating segments and the Company's totals. The Company did not aggregate any operating segments when determining its reportable segments. The Company reports geographic information for the following regions: U.S. & Canada, EMEAI, Asia Pacific and Latin America. The Company transfers ethylene to its downstream derivative businesses at market prices. See Part I, Item 1. Business for further discussion of the Company's segments.

The Company’s measure of profit/loss for segment reporting purposes is Operating EBIT as this is the manner in which the Company's chief operating decision maker ("CODM") assesses performance and allocates resources. The Company defines Operating EBIT as earnings (i.e., "Income before income taxes") before interest, excluding the impact of significant items. Operating EBIT by segment includes all operating items relating to the businesses; items that principally apply to Dow as a whole are assigned to Corporate. See Note 24 to the Consolidated Financial Statements for reconciliations of these measures.

For comparison of segment results for the fiscal years ended December 31, 2022 and 2021, see Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 1, 2023.

PACKAGING & SPECIALTY PLASTICS

Packaging & Specialty Plastics In millions	*2023*	*2022*
Net sales	$ 23,149	$ 29,260
Operating EBIT	$ 2,700	$ 4,110
Equity earnings	$ 130	$ 359

Packaging & Specialty Plastics Percentage change from prior year	*2023*	*2022*
Change in Net Sales from Prior Period due to:		
Local price & product mix	(16)%	7 %
Currency	—	(3)
Volume	(5)	—
Total	(21)%	4 %

2023 Versus 2022

Packaging & Specialty Plastics net sales were $23,149 million in 2023, down 21 percent from net sales of $29,260 million in 2022, with local price down 16 percent, volume down 5 percent and currency flat. Local price decreased in Packaging and Specialty Plastics, in all geographic regions, primarily driven by lower polyethylene prices due to unfavorable industry supply and demand dynamics. Local price decreased in Hydrocarbons & Energy, in all geographic regions, as prices for co-products are generally correlated to Brent crude oil prices, which, on average, decreased 17 percent compared with 2022. Volume was flat in Packaging and Specialty Plastics, with an increase in Latin America offset by decreases in all other geographic regions. Volume decreased in Hydrocarbons & Energy, primarily in EMEAI and the U.S. & Canada, driven by lower sales of olefins and aromatics.

Operating EBIT was $2,700 million in 2023, down $1,410 million from Operating EBIT of $4,110 million in 2022. Operating EBIT decreased primarily due to lower selling prices, which was partially offset by lower raw material, energy and feedstock costs and the impact of structural cost improvements.

INDUSTRIAL INTERMEDIATES & INFRASTRUCTURE

Industrial Intermediates & Infrastructure In millions	*2023*	*2022*
Net sales	$ 12,538	$ 16,606
Operating EBIT	$ 124	$ 1,418
Equity losses	$ (276)	$ (91)

Industrial Intermediates & Infrastructure Percentage change from prior year	*2023*	*2022*
Change in Net Sales from Prior Period due to:		
Local price & product mix	(14)%	11 %
Currency	(1)	(5)
Volume	(9)	(7)
Total	(24)%	(1)%

2023 Versus 2022

Industrial Intermediates & Infrastructure net sales were $12,538 million in 2023, down 24 percent from $16,606 million in 2022, with local price down 14 percent, volume down 9 percent and an unfavorable currency impact of 1 percent. Local price decreased in both businesses and across all geographic regions, driven by unfavorable supply and demand dynamics. Volume in Industrial Solutions decreased in all geographic regions, driven primarily by industrial, coatings and agricultural applications as well as a significant unplanned event at the Louisiana Operations Glycol-2 unit in Plaquemine, Louisiana. Volume in Polyurethanes & Construction Chemicals decreased in all geographic regions, largely driven by lower demand, particularly in consumer durables and building and construction applications. Currency unfavorably impacted sales in both businesses, driven by Asia Pacific and EMEAI.

Operating EBIT was $124 million in 2023, down $1,294 million from Operating EBIT of $1,418 million in 2022. Operating EBIT decreased primarily due to lower selling prices and volume due to lower global demand and lower equity earnings at the Sadara and EQUATE joint ventures, which were partially offset by the impact of structural cost improvements.

PERFORMANCE MATERIALS & COATINGS

Performance Materials & Coatings In millions	*2023*	*2022*
Net sales	$ 8,497	$ 10,764
Operating EBIT	$ 219	$ 1,328
Equity earnings	$ 20	$ 10

Performance Materials & Coatings Percentage change from prior year	*2023*	*2022*
Change in Net Sales from Prior Period due to:		
Local price & product mix	(15)%	21 %
Currency	(1)	(4)
Volume	(5)	(6)
Total	(21)%	11 %

2023 Versus 2022

Performance Materials & Coatings net sales were $8,497 million in 2023, down 21 percent from net sales of $10,764 million in 2022, with local price down 15 percent, volume down 5 percent and an unfavorable currency impact of 1 percent. Local price decreased in both businesses and across all geographic regions. Consumer Solutions local price decreased primarily due to unfavorable supply and demand dynamics in upstream siloxanes. Local price decreased in Coatings & Performance Monomers primarily in acrylic monomers and architectural coatings and was driven by lower raw material prices and unfavorable supply and demand dynamics. Volume decreased in Consumer Solutions in all regions, except for Asia Pacific, which was flat, driven by lower demand for upstream siloxanes, industrial and chemical processing and personal care applications, partially offset by higher demand in building and construction applications. Volume decreased in Coatings & Performance Monomers in all geographic regions and was driven by lower demand in residential construction applications. The unfavorable currency impact was driven by Asia Pacific.

Operating EBIT was $219 million in 2023, down $1,109 million from Operating EBIT of $1,328 million in 2022. Operating EBIT decreased primarily due to lower selling prices and lower demand in both businesses, which were partially offset by lower raw material costs and the impact of structural cost improvements.

CORPORATE

Corporate In millions	*2023*	*2022*
Net sales	$ 438	$ 272
Operating EBIT	$ (265)	$ (266)
Equity earnings (losses)	$ 7	$ (10)

2023 Versus 2022

Net sales for Corporate, which primarily relate to the Company's insurance operations, were $438 million in 2023, up from net sales of $272 million in 2022.

Operating EBIT was a loss of $265 million in 2023, compared with a loss of $266 million in 2022. Improvements in insurance operations and equity earnings were offset by increased environmental costs.

OUTLOOK

Operating Segments & End-Market Expectations

In 2024, Dow is expected to maintain its commitment to financial and operational discipline while navigating dynamic market conditions. While the Company expects softness in industrial and durable goods demand to continue in the first quarter, early positive signals in areas including construction, automotive and consumer electronics are encouraging. The Company's strong balance sheet and cash generation provide flexibility to cover all capital allocation priorities as the Company progresses through the economic cycle and advances its Decarbonize & Grow and Transform the Waste strategies. A cost-advantaged footprint, leadership in attractive end-markets, and strategic growth investments position the Company well to create long-term value.

In Packaging & Specialty Plastics, moderately improving macroeconomic conditions are expected to support demand growth, notably in higher-value functional polymers and flexible food and specialty packaging. Integrated margins are expected to improve in the second half of the year on industry operating rate recoveries. The Company’s feedstock flexibility and advantaged regional footprint will continue to position the segment well to navigate market dynamics throughout the year. In-region presence and superior derivative flexibility will allow the segment to continue to optimize price and volume mix.

In Industrial Intermediates & Infrastructure, market fundamentals are expected to remain pressured for propylene oxide, polyols, isocyanates, construction chemicals and derivatives, largely driven by recent industry capacity additions. Resilient demand is expected in food and pharma end-markets, and the Company will benefit from its multi-year growth project that will expand propylene glycol production at its Map Ta Phut site, which is expected to come online in 2024. Additionally, the Glycol-2 unit at Dow's Louisiana Operations in Plaquemine, Louisiana, is expected to resume operations in the second quarter of 2024. Recent and soon-to-be-completed investments in specialty amines and alkoxylation capacity are expected to serve resilient consumer demand in home care, pharmaceuticals and energy transition. While sales are expected to be relatively flat, the Company will focus on capturing volume growth in key markets.

In Performance Materials & Coatings, performance silicone products are well-positioned to deliver volume growth in key markets. Volume growth is expected in feedstocks and intermediates as well as modest price increases, driven by moderately improved industry supply and demand dynamics. Demand and local prices in architectural and industrial coatings face uncertainty given their correlation with the building and construction market as well as interest rates.

Other factors impacting operating segment profitability include an expected increase in planned maintenance turnaround spending of approximately $200 million compared with 2023.

Projected Uses of Cash

Items that may impact the consolidated statements of cash flows in 2024 include:

- Cash contributions to pension plans are expected to be approximately $150 million.
- Capital expenditures are expected to be approximately $3 billion.
- Cash dividends from equity companies are expected to be approximately $200 million.
- Cash outflows related to the Company's 2023 Restructuring Program, including restructuring implementation costs, are expected to be approximately $400 million.

LIQUIDITY AND CAPITAL RESOURCES

The Company had cash and cash equivalents of $2,987 million at December 31, 2023 and $3,886 million at December 31, 2022, of which $1,984 million at December 31, 2023 and $1,789 million at December 31, 2022, was held by subsidiaries in foreign countries, including U.S. territories. For each of its foreign subsidiaries, the Company makes an assertion regarding the amount of earnings intended for permanent reinvestment, with the balance available to be repatriated to the United States.

Cash held by foreign subsidiaries for permanent reinvestment is generally used to finance the subsidiaries' operational activities and future foreign investments. Dow has the ability to repatriate additional funds to the United States, which could result in an adjustment to the tax liability for foreign withholding taxes, foreign and/or U.S. state income taxes and the impact of foreign currency movements. At December 31, 2023, management believed that sufficient liquidity was available in the United States. The Company has and expects to continue repatriating certain funds from its non-U.S. subsidiaries that are not needed to finance local operations; however, these particular repatriation activities have not and are not expected to result in a significant incremental tax liability to the Company.

For comparison of cash flows for the fiscal years ended December 31, 2022 and 2021, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 1, 2023.

The Company's cash flows from operating, investing and financing activities, as reflected in the consolidated statements of cash flows, are summarized in the following table:

Cash Flow Summary	*Dow Inc.*		*TDCC*	
In millions	*2023*	*2022*	*2023*	*2022*
Cash provided by (used for):				
Operating activities - continuing operations	$ 5,164	$ 7,486	$ 5,109	$ 7,519
Operating activities - discontinued operations	32	(11)	—	—
Operating activities	$ 5,196	$ 7,475	$ 5,109	$ 7,519
Investing activities	$ (2,928)	$ (2,970)	$ (2,928)	$ (2,970)
Financing activities	$ (3,115)	$ (3,361)	$ (3,028)	$ (3,405)

Cash Flows from Operating Activities
Cash provided by operating activities from continuing operations in 2023 was primarily driven by the Company's cash earnings, dividends from equity method investments and cash provided by working capital, which were partially offset by performance-based compensation payments, severance payments related to the 2023 Restructuring Program and pension contributions. Cash provided by operating activities from continuing operations in 2022 was primarily driven by the Company's cash earnings, dividends from equity method investments and cash provided by working capital, which were partially offset by performance-based compensation payments and pension contributions.

Net Working Capital and Current Ratio at Dec 31	*Dow Inc.*		*TDCC*	
In millions	*2023*	*2022*	*2023*	*2022*
Current assets	$ 17,614	$ 20,477	$ 17,676	$ 20,511
Current liabilities	9,957	11,331	9,849	11,247
Net working capital	$ 7,657	$ 9,146	$ 7,827	$ 9,264
Current ratio	1.77:1	1.81:1	1.79:1	1.82:1

Working Capital Metrics	*Twelve Months Ended*	
	Dec 31, 2023	*Dec 31, 2022*
Days sales outstanding in trade receivables	42	40
Days sales in inventory	60	54
Days payables outstanding	64	60

Cash used for operating activities from discontinued operations reflected cash payments and receipts for certain agreements and matters related to the Company's separation from DowDuPont Inc.

Cash Flows from Investing Activities
Cash used for investing activities in 2023 and 2022 was primarily for capital expenditures and purchases of investments, which were partially offset by proceeds from sales and maturities of investments.

The Company's capital expenditures were $2,356 million in 2023 and $1,823 million in 2022. Capital spending was higher in 2023 as the Company continued the ramp up of investments in its higher return, lower risk and quick payback incremental growth projects. The Company expects capital spending in 2024 to be approximately $3 billion, which includes the ramp up of the construction of the Company's Fort Saskatchewan Path2Zero project. The Company expects capital spending to average $1 billion annually through 2029 for this key growth project. Enterprise-wide capital spending is expected to exceed depreciation and amortization through 2027, during the first phase of the project.

Capital spending in recent years has included the retrofit of one of the Company's Louisiana steam crackers with Dow's proprietary fluidized catalytic dehydrogenation ("FCDh") technology to produce on-purpose propylene and the addition of a new specialty alkoxylation reactor in Plaquemine, Louisiana, which were both completed in 2022; the addition of an integrated methylene diphenyl diisocyanate ("MDI") distillation and prepolymers facility at its site in Freeport, Texas, which was completed in 2023; and construction of a world-scale polyethylene unit on the U.S. Gulf Coast.

Cash Flows from Financing Activities

Cash used for financing activities in 2023 was primarily for debt related activities. In addition, Dow Inc. included cash outflows for dividends paid to stockholders and purchases of treasury stock. TDCC included cash outflows for dividends paid to Dow Inc. Cash used for financing activities in 2022 included payments on long-term debt, which was more than offset by proceeds from issuance of long-term debt. In addition, Dow Inc. included cash outflows for dividends paid to stockholders and purchases of treasury stock. TDCC included cash outflows for dividends paid to Dow Inc. See Notes 13 and 16 to the Consolidated Financial Statements for additional information related to the issuance and retirement of debt and the Company's share repurchases and dividends.

Non-GAAP Cash Flow Measures

Free Cash Flow

Dow defines Free Cash Flow as "Cash provided by 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 shareholders. Free Cash Flow is an integral financial measure used in the Company's financial planning process.

Operating EBITDA

Dow defines Operating EBITDA as earnings (i.e., "Income before income taxes") before interest, depreciation and amortization, excluding the impact of significant items.

Cash Flow Conversion (Cash Flow From Operations to Operating EBITDA)

Dow defines Cash Flow Conversion (Cash flow from operations to Operating EBITDA) as "Cash provided by 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.

These financial measures are not recognized in accordance with accounting principles generally accepted in the United States of America ("GAAP") and should not be viewed as alternatives to GAAP financial measures of performance. All companies do not calculate non-GAAP financial measures in the same manner and, accordingly, Dow's definitions may not be consistent with the methodologies used by other companies.

Reconciliation of Non-GAAP Cash Flow Measures	*Dow Inc.*	
In millions	*2023*	*2022*
Cash provided by operating activities - continuing operations (GAAP)	$ 5,164	$ 7,486
Capital expenditures	(2,356)	(1,823)
Free Cash Flow (non-GAAP)	$ 2,808	$ 5,663

Reconciliation of Cash Flow Conversion (Cash Flow From Operations to Operating EBITDA)	Dow Inc.	
In millions	2023	2022
Net income (GAAP)	$ 660	$ 4,640
+ Provision (credit) for income taxes	(4)	1,450
Income before income taxes	$ 656	$ 6,090
- Interest income	229	173
+ Interest expense and amortization of debt discount	746	662
- Significant items [1]	(1,605)	(11)
Operating EBIT (non-GAAP)	$ 2,778	$ 6,590
+ Depreciation and amortization	2,611	2,758
Operating EBITDA (non-GAAP)	$ 5,389	$ 9,348
Cash provided by operating activities - continuing operations (GAAP)	$ 5,164	$ 7,486
Cash flow from operations to net income (GAAP)	782.4 %	161.3 %
Cash Flow Conversion (Cash flow from operations to Operating EBITDA) (non-GAAP)	95.8 %	80.1 %

1. The year ended December 31, 2023, includes restructuring charges and implementation and efficiency costs associated with the Company's 2023 Restructuring Program, certain gains and losses associated with previously impaired equity investments, a loss associated with legacy agricultural products groundwater contamination matters, a gain associated with a legal matter with Nova Chemicals Corporation, foreign currency losses and inventory valuation impacts related to the devaluation of the Argentine peso, non-cash settlement charges related to the purchase of nonparticipating group annuity contracts for certain Company pension plans in the United States and Canada and activity related to the separation from DowDuPont. The year ended December 31, 2022, includes costs associated with implementing the Company's Digital Acceleration program and 2020 Restructuring Program, asset related charges due to the Russia and Ukraine conflict, a gain related to a legal matter with Nova Chemicals Corporation, a gain related to an adjustment of the Dow Silicones breast implant liability, a loss on the early extinguishment of debt and activity related to the separation from DowDuPont. See Note 24 to the Consolidated Financial Statements for additional information.

Liquidity & Financial Flexibility

The Company's primary source of incremental liquidity is cash flows from operating activities. The generation of cash from operations and the Company's ability to access capital markets is expected to meet the Company's cash requirements for working capital, capital expenditures, debt maturities, contributions to pension plans, dividend distributions to stockholders, share repurchases and other needs. In addition to cash from operating activities, the Company's current liquidity sources also include TDCC's U.S. and Euromarket commercial paper programs, committed and uncommitted credit facilities, committed and uncommitted accounts receivable facilities, a medium-term notes program, a U.S. retail note program ("InterNotes®") and other debt markets.

The Company continues to maintain a strong financial position with all of its committed credit facilities undrawn and fully available at December 31, 2023. Cash and committed and available forms of liquidity were $12.8 billion at December 31, 2023, a decrease of $900 million from December 31, 2022. The Company also has no substantive long-term debt maturities due until 2027. Additional details on sources of liquidity are as follows:

Commercial Paper

TDCC issues promissory notes under its U.S. and Euromarket commercial paper programs. TDCC had no commercial paper outstanding at December 31, 2023 ($299 million at December 31, 2022). TDCC maintains access to the commercial paper market at competitive rates. Amounts outstanding under TDCC's commercial paper programs during the period may be greater or less than the amount reported at the end of the period. Subsequent to December 31, 2023, TDCC issued approximately $0 million of commercial paper.

Committed Credit Facilities

The Company also has the ability to access liquidity through TDCC's committed and available credit facilities. At December 31, 2023, TDCC had total committed and available credit facilities of $8.4 billion. See Note 13 to the Consolidated Financial Statements for additional information on committed and available credit facilities.

Uncommitted Credit Facilities

The Company has entered into various uncommitted bilateral credit arrangements as a potential source of excess liquidity. These lines can be used to support short-term liquidity needs and for general purposes. The Company had no drawdowns outstanding at December 31, 2023.

Accounts Receivable Facilities
In addition to the above committed credit facilities, the Company maintains a committed accounts receivable facility in the United States where eligible trade accounts receivable, up to $900 million, may be sold at any point in time. The Company also maintains a committed accounts receivable facility in Europe where eligible trade accounts receivable, up to €500 million, may be sold at any point in time. Sales of receivables under these committed facilities were not material in 2023. At December 31, 2023, approximately $5 million of receivables remained unremitted. In addition, the Company has an uncommitted accounts receivable facility in the United States providing additional liquidity. Sales of receivables under this facility were not material in 2023. See Note 12 to the Consolidated Financial Statements for additional information.

Early Settlement of Letters of Credit
The Company utilizes, from time-to-time, letters of credit discounting programs to manage and expedite the settlement of letters of credit in certain regions. These letters of credit are associated with accounts receivable and the Company retains no interest in the transferred letters of credit or receivables once sold.

Accounts Receivable Discounting Facilities
The Company has access to accounts receivable discounting facilities, under which receivables are transferred with limited recourse. The Company retains no interest in the transferred receivables once sold. The Company maintains these facilities and also participates in certain customers' supply chain financing and other early pay programs as a routine source of working capital.

Letters of Credit
TDCC utilizes letters of credit to support commitments made in the ordinary course of business. While the terms and amounts of letters of credit change, TDCC generally has approximately $600 million of outstanding letters of credit at any given time.

Company-Owned Life Insurance
The Company has investments in company-owned life insurance ("COLI") policies, which are recorded at their cash surrender value as of each balance sheet date. The Company has the ability to monetize its investment in its COLI policies as an additional source of liquidity. At December 31, 2023, the Company had monetized $97 million of its existing COLI policies' surrender value. See Note 5 to the Consolidated Financial Statements for additional information.

Shelf Registration - United States
On June 13, 2022, Dow Inc. and TDCC filed a shelf registration statement with the U.S. Securities and Exchange Commission. The shelf indicates that Dow Inc. may offer common stock; preferred stock; depositary shares; debt securities; guarantees; warrants to purchase common stock, preferred stock and debt securities; and stock purchase contracts and stock purchase units, with pricing and availability of any such offerings depending on market conditions. The shelf also indicates that TDCC may offer debt securities, guarantees and warrants to purchase debt securities, with pricing and availability of any such offerings depending on market conditions. In 2022, TDCC filed a prospectus supplement under this shelf registration to register an undetermined amount of securities for issuance under InterNotes®. Also, in 2022, TDCC filed a prospectus supplement under this shelf registration to register an undetermined amount of securities for issuance under a medium-term notes program.

Debt

As the Company continues to maintain its strong balance sheet and financial flexibility, management is focused on net debt (a non-GAAP financial measure), as the Company believes this is the best representation of its financial leverage at this point in time. As shown in the following table, net debt is equal to total gross debt minus "Cash and cash equivalents" and "Marketable securities."

Total Debt at Dec 31	*Dow Inc.*		*TDCC*	
In millions	*2023*	*2022*	*2023*	*2022*
Notes payable	$ 62	$ 362	$ 62	$ 362
Long-term debt due within one year	117	362	117	362
Long-term debt	14,907	14,698	14,907	14,698
Gross debt	$ 15,086	$ 15,422	$ 15,086	$ 15,422
- Cash and cash equivalents	2,987	3,886	2,987	3,886
- Marketable securities [1]	1,300	939	1,300	939
Net debt (non-GAAP)	$ 10,799	$ 10,597	$ 10,799	$ 10,597
Total equity	$ 19,108	$ 21,247	$ 19,406	$ 21,489
Gross debt as a percentage of total capitalization	44.1 %	42.1 %	43.7 %	41.8 %
Net debt as a percentage of total capitalization (non-GAAP)	36.1 %	33.3 %	35.8 %	33.0 %

1. Included in "Other current assets" in the consolidated balance sheets.

In the fourth quarter of 2023, the Company redeemed $23 million aggregate principal amount of 2.100 percent notes due November 2030, $14 million aggregate principal amount of 4.625 percent notes due October 2044, and $1 million aggregate principal amount of 4.375 percent notes due November 2042.

In 2023, the Company issued an aggregate principal amount of $80 million of InterNotes®. Additionally, the Company repaid $250 million of long-term debt at maturity.

The Company may at any time repurchase certain debt securities in the open market or in privately negotiated transactions subject to: the applicable terms under which any such debt securities were issued, certain internal approvals of the Company, and applicable laws and regulations of the relevant jurisdiction in which any such potential transactions might take place. This in no way obligates the Company to make any such repurchases nor should it be considered an offer to do so.

TDCC's public debt instruments and primary, private credit agreements contain, among other provisions, certain customary restrictive covenant and default provisions. TDCC's most significant debt covenant with regard to its financial position is the obligation to maintain the ratio of its consolidated indebtedness to consolidated capitalization at no greater than 0.70 to 1.00 at any time the aggregate outstanding amount of loans under the Five Year Competitive Advance and Revolving Credit Facility Agreement ("Revolving Credit Agreement") equals or exceeds $500 million. The ratio of TDCC's consolidated indebtedness as defined in the Revolving Credit Agreement was 0.41 to 1.00 at December 31, 2023. Management believes TDCC was in compliance with all of its covenants and default provisions at December 31, 2023. For information on TDCC's debt covenants and default provisions, see Note 13. There were no material changes to the debt covenants and default provisions related to TDCC's outstanding long-term debt and primary, private credit agreements in 2023.

Dow Inc. is obligated, substantially concurrently with the issuance of any guarantee in respect of outstanding or committed indebtedness under the Revolving Credit Agreement, to enter into a supplemental indenture with TDCC and the trustee under TDCC's existing 2008 base indenture governing certain notes issued by TDCC. Under such supplemental indenture, Dow Inc. will guarantee all outstanding debt securities and all amounts due under such existing base indenture and will become subject to certain covenants and events of default under the existing base indenture.

In addition, the Revolving Credit Agreement includes an event of default which would be triggered in the event Dow Inc. incurs or guarantees third party indebtedness for borrowed money in excess of $250 million or engages in any material activity or directly owns any material assets, in each case, subject to certain conditions and exceptions. Dow Inc. may, at its option, cure the event of default by delivering an unconditional and irrevocable guarantee to the administrative agent within thirty days of the event or events giving rise to such event of default.

No such events have occurred or have been triggered at the time of the filing of this Annual Report on Form 10-K. See Note 13 to the Consolidated Financial Statements for information related to TDCC's notes payable and long-term debt activity and information on TDCC's debt covenants and default provisions.

While taking into consideration the current economic environment, management expects that the Company will continue to have sufficient liquidity and financial flexibility to meet all of its business obligations.

Credit Ratings

TDCC's credit ratings at January 31, 2024 were as follows:

Credit Ratings	*Long-Term Rating*	*Short-Term Rating*	*Outlook*
Fitch Ratings	BBB+	F1	Stable
Moody's Investors Service	Baa1	P-2	Stable
Standard & Poor's	BBB	A-2	Stable

On June 15, 2023, Fitch Ratings affirmed TDCC's BBB+ long-term credit rating and announced a short-term credit rating upgrade to F1 from F2, and also revised its long-term outlook from positive to stable. On August 22, 2023, Standard and Poor's affirmed TDCC's BBB and A-2 rating, and revised its outlook from positive to stable. Subsequent to 2023, on January 19, 2024, Moody's Investors Service affirmed TDCC's Baa1 and P-2 rating, and affirmed its outlook of stable. These credit agencies' decisions were made as part of their annual review process and reflect the Company's supportive financial policies and strong operating performance.

Dividends

Dow Inc.

Dow Inc. has paid dividends on a quarterly basis and expects to continue to do so, subject to approval by the Board. The dividends declared by the Board align to the Company's strategy announced in 2018 of returning approximately 45 percent of Operating Net Income to shareholders through dividends and total shareholder remuneration of approximately 65 percent, when including share repurchases, over the economic cycle. The Company defines Operating Net Income, a non-GAAP measure, as "Net income available for Dow Inc. common stockholders," excluding the impact of significant items. The following tables provide information on dividends declared and paid to common stockholders:

Dividends Paid for the Years Ended Dec 31 In millions, except per share amounts	*2023*	*2022*
Dividends paid, per common share	$ 2.80	$ 2.80
Dividends paid to common stockholders	$ 1,972	$ 2,006

Dow Inc. Cash Dividends Declared and Paid			
Declaration Date	*Record Date*	*Payment Date*	*Amount (per share)*
February 9, 2023	February 28, 2023	March 10, 2023	$ 0.70
April 13, 2023	May 31, 2023	June 9, 2023	$ 0.70
August 9, 2023	August 31, 2023	September 8, 2023	$ 0.70
October 12, 2023	November 30, 2023	December 8, 2023	$ 0.70

TDCC

TDCC has committed to fund Dow Inc.'s dividends paid to common stockholders and share repurchases, as approved by the Board from time to time, as well as certain governance expenses. Funding is accomplished through intercompany loans. TDCC's Board of Directors reviews and determines a dividend distribution to Dow Inc. to settle the intercompany loans. For the year ended December 31, 2023, TDCC declared and paid dividends to Dow Inc. of $2,510 million ($4,375 million for the year ended December 31, 2022). At December 31, 2023, TDCC's intercompany loan balance with Dow Inc. was insignificant. See Note 23 to the Consolidated Financial Statements for additional information.

Share Repurchase Program
On April 13, 2022, the Board approved a share repurchase program authorizing up to $3 billion for the repurchase of the Company's common stock, with no expiration date. The Company repurchased $625 million of its common stock in 2023. At December 31, 2023, approximately $1,425 million of the share repurchase program authorization remained available for repurchases. As previously announced, the Company intends to repurchase shares to cover dilution over the cycle. The Company may from time to time expand its share repurchases beyond dilution, based on a number of factors including macroeconomic conditions, free cash flow generation, and the Dow share price. Any share repurchases, when coupled with the Company's dividends, are intended to implement the long-term strategy of targeting shareholder remuneration of approximately 65 percent over the economic cycle.

Pension Plans
The Company has both funded and unfunded defined benefit pension plans in the United States and a number of other countries. 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 froze the pensionable compensation and credited service amounts used to calculate pension benefits for employees who participate in the U.S. Plans. In recent years, the Company had significantly increased funding of its U.S. plans while employing certain pension de-risking strategies. Accordingly, in the fourth quarter of 2023, the Company's pension plans in the United States and Canada purchased or converted to nonparticipating group annuity contracts, irrevocably transferring benefit obligations of $1,681 million for certain participants and $1,617 million of related plan assets to the insurers, requiring no additional cash funding from the Company, with no impact on the pension benefits of participants. These transactions resulted in non-cash pretax settlement charges of $642 million in 2023, related to the accelerated recognition of a portion of the accumulated actuarial losses of the plans.

The Company's funding policy for its pension plans is to contribute to funded plans when pension laws and/or economics either require or encourage funding. In 2023 and 2022, the Company contributed $142 million and $235 million to its pension plans, respectively, including contributions to fund benefit payments for its unfunded pension plans. Additionally, in the second quarter of 2023, the Company received a pension asset reversion of approximately $90 million for a portion of the excess funding of one of its plans in Europe, which is included in "Other assets and liabilities, net" in the consolidated statements of cash flows. The Company expects to contribute approximately $150 million to its pension plans in 2024. See Note 18 to the Consolidated Financial Statements for additional information concerning the Company's pension plans.

Restructuring
The actions related to the 2023 Restructuring Program are expected to result in additional cash expenditures of $122 million, primarily through 2024 and consist primarily of severance and related benefit costs. Restructuring implementation and efficiency costs, primarily decommissioning and demolition activities related to asset actions, and costs associated with the Company's productivity and efficiency actions, are expected to result in additional cash expenditures of approximately $285 million, primarily through the end of 2024. Restructuring implementation and efficiency costs totaled $243 million in 2023.

The Company expects to incur additional costs in the future related to its restructuring activities, which will be recognized as incurred. The Company also expects to incur additional employee-related costs, including involuntary termination benefits related to its other optimization activities. These costs cannot be reasonably estimated at this time. See Note 4 to the Consolidated Financial Statements for additional information on the Company's restructuring activities.

Contractual Obligations

The following table summarizes the Company's contractual obligations, commercial commitments and expected cash requirements for interest at December 31, 2023. Additional information related to these obligations can be found in Notes 13, 14, 15 and 18 to the Consolidated Financial Statements.

Contractual Obligations at Dec 31, 2023	*Payments Due In*				
In millions	*2024*	*2025-2026*	*2027-2028*	*2029 and beyond*	*Total*
Dow Inc.					
Long-term debt obligations [1]	$ 115	$ 563	$ 1,944	$ 12,660	$ 15,282
Expected cash requirements for interest [2]	714	1,354	1,303	8,098	11,469
Pension and other postretirement benefits	215	429	434	3,562	4,640
Operating leases [3]	378	512	309	421	1,620
Purchase obligations [4]	3,697	3,107	2,134	3,119	12,057
Other noncurrent obligations [5]	—	860	602	1,496	2,958
Total	$ 5,119	$ 6,825	$ 6,726	$ 29,356	$ 48,026
TDCC					
Long-term debt obligations [1]	$ 115	$ 563	$ 1,944	$ 12,660	$ 15,282
Expected cash requirements for interest [2]	714	1,354	1,303	8,098	11,469
Pension and other postretirement benefits	215	429	434	3,562	4,640
Operating leases [3]	378	512	309	421	1,620
Purchase obligations [4]	3,697	3,107	2,134	3,119	12,057
Other noncurrent obligations [5]	—	757	602	1,457	2,816
Total	$ 5,119	$ 6,722	$ 6,726	$ 29,317	$ 47,884

1. Excludes unamortized debt discount and issuance costs of $258 million. Includes finance lease obligations of $873 million.
2. Cash requirements for interest on long-term debt was calculated using current interest rates at December 31, 2023, and includes $10 million of various floating rate notes.
3. Includes imputed interest of $259 million.
4. Includes outstanding purchase orders and other commitments greater than $1 million obtained through a survey conducted within the Company.
5. Includes liabilities related to asbestos litigation, environmental remediation, legal matters and other noncurrent liabilities. In addition to these items, Dow Inc. includes liabilities related to noncurrent obligations with DuPont and Corteva. The table excludes uncertain tax positions due to uncertainties in the timing of the effective settlement of tax positions with the respective taxing authorities and deferred tax liabilities as it is impractical to determine whether there will be a cash impact related to these liabilities. The table also excludes deferred revenue as it does not represent future cash requirements arising from contractual payment obligations.

The Company expects to meet its contractual obligations through its normal sources of liquidity and believes it has the financial resources to satisfy these contractual obligations.

Off-Balance Sheet Arrangements

Off-balance sheet arrangements are obligations the Company has with nonconsolidated entities related to transactions, agreements or other contractual arrangements. The Company holds variable interests in joint ventures accounted for under the equity method of accounting. The Company is not the primary beneficiary of these joint ventures and therefore is not required to consolidate these entities (see Note 22 to the Consolidated Financial Statements). In addition, see Note 12 to the Consolidated Financial Statements for information regarding the transfer of financial assets.

Guarantees arise during the ordinary course of business from relationships with customers, committed accounts receivable facilities and nonconsolidated affiliates when the Company undertakes an obligation to guarantee the performance of others if specific triggering events occur. Additional information related to guarantees can be found in the "Guarantees" section of Note 14 to the Consolidated Financial Statements.

Fair Value Measurements

See Note 18 to the Consolidated Financial Statements for information related to fair value measurements of pension and other postretirement benefit plan assets; see Note 20 for information related to other-than-temporary impairments; and, see Note 21 for additional information concerning fair value measurements.

OTHER MATTERS

Recent Accounting Guidance

See Note 2 to the Consolidated Financial Statements for a summary of recent accounting guidance.

Critical Accounting Estimates

The preparation of financial statements and related disclosures in accordance with U.S. GAAP requires management to make judgments, assumptions and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. Note 1 to the Consolidated Financial Statements describes the significant accounting policies and methods used in the preparation of the consolidated financial statements. Following are the Company's accounting policies impacted by judgments, assumptions and estimates:

Asbestos-Related Matters of Union Carbide Corporation

Union Carbide is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide's premises, and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide subsidiary, Amchem Products, Inc. ("Amchem"). Each year, Ankura Consulting Group, LLC ("Ankura") performs a review for Union Carbide based upon historical asbestos claims, resolution and asbestos-related defense and processing costs, through the terminal year of 2049. Union Carbide compares current asbestos claim and resolution activity, including asbestos-related defense and processing costs, to the results of the most recent Ankura study at each balance sheet date to determine whether the asbestos-related liability continues to be appropriate.

For additional information, see Part I, Item 3. Legal Proceedings; Asbestos-Related Matters of Union Carbide Corporation in Management's Discussion and Analysis of Financial Condition and Results of Operations; and Notes 1 and 14 to the Consolidated Financial Statements.

Environmental Matters

The Company determines the costs of environmental remediation of its facilities and formerly owned facilities based on evaluations of current law and existing technologies. Inherent uncertainties exist in such evaluations primarily due to unknown environmental conditions, changing governmental regulations and legal standards regarding liability, and emerging remediation technologies. The recorded liabilities are adjusted periodically as remediation efforts progress, or as additional technical or legal information becomes available. At December 31, 2023, the Company had accrued obligations of $1,180 million for probable environmental remediation and restoration costs, including $241 million for the remediation of Superfund sites. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two times that amount. For further discussion, see Environmental Matters in Management's Discussion and Analysis of Financial Condition and Results of Operations and Notes 1 and 14 to the Consolidated Financial Statements.

Pension and Other Postretirement Benefits

The amounts recognized in the consolidated financial statements related to pension and other postretirement benefits are determined from actuarial valuations. Inherent in these valuations are assumptions including expected return on plan assets, discount rates at which the liabilities could have been settled at December 31, 2023, rate of increase in future compensation levels, mortality rates and health care cost trend rates. These assumptions are updated annually and are disclosed in Note 18 to the Consolidated Financial Statements. In accordance with U.S. GAAP, actual results that differ from the assumptions are accumulated and amortized over future periods and, therefore, affect expense recognized and obligations recorded in future periods. The U.S. pension plans represent 72 percent of the Company's pension plan assets and 70 percent of the pension obligations. The U.S. pension plans were frozen effective December 31, 2023, and therefore, participants will not accrue additional benefits for future service and compensation.

The Company uses the spot rate approach to determine the discount rate utilized to measure the service cost and interest cost components of net periodic pension and other postretirement benefit costs for the United States and other selected countries. Under the spot rate approach, the Company calculates service cost and interest cost by applying individual spot rates from the Willis Towers Watson RATE:Link yield curve (based on high-quality corporate bond yields) for each selected country to the separate expected cash flow components of service cost and interest

cost; service cost and interest cost for all other plans (including all plans prior to adoption) are determined on the basis of the single equivalent discount rates derived in determining those plan obligations.

The following information relates to the U.S. plans only; a similar approach is used for the Company's non-U.S. plans.

The Company determines the expected long-term rate of return on assets by performing a detailed analysis of historical and expected returns based on the strategic asset allocation approved by the Company's Investment Committee and the underlying return fundamentals of each asset class. The Company's historical experience with the pension fund asset performance is also considered. The expected return of each asset class is derived from a forecasted future return confirmed by historical experience. The expected long-term rate of return is an assumption and not what is expected to be earned in any one particular year. The weighted-average long-term rate of return assumption used for determining net periodic pension expense for 2023 was 7.46 percent. The weighted-average assumption to be used for determining 2024 net periodic pension expense is 7.07 percent. Future actual pension expense will depend on future investment performance, changes in future discount rates and various other factors related to the population of participants in the Company's pension plans.

The discount rates utilized to measure the pension and other postretirement obligations of the U.S. plans are based on the yield on high-quality corporate fixed income investments at the measurement date. Future expected actuarially determined cash flows for the Company's U.S. plans are individually discounted at the spot rates under the Willis Towers Watson U.S. RATE:Link 60-90 corporate yield curve (based on 60th to 90th percentile high-quality corporate bond yields) to arrive at the plan's obligations as of the measurement date. The weighted average discount rate utilized to measure pension obligations decreased to 5.30 percent at December 31, 2023, from 5.64 percent at December 31, 2022.

At December 31, 2023, the net underfunded status of the U.S. tax-qualified plans on a projected benefit obligation basis was $1,192 million. The net underfunded amount increased $647 million compared with December 31, 2022. The increase in the net underfunded amount in 2023 was primarily due to the market-related impact of lower discount rates. The Company uses a generational mortality table to determine the duration of its pension and other postretirement obligations.

The following discussion relates to the Company's significant pension plans.

The Company bases the determination of pension expense on a market-related valuation of plan assets that reduces year-to-year volatility. This market-related valuation recognizes investment gains or losses over a five-year period from the year in which they occur. Investment gains or losses for this purpose represent the difference between the expected return calculated using the market-related value of plan assets and the actual return based on the market value of plan assets. Since the market-related value of plan assets recognizes gains or losses over a five-year period, the future value will be impacted when previously deferred gains or losses are recorded. Over the life of the plans, both gains and losses have been recognized and amortized. At December 31, 2023, net losses of $2,661 million remain to be recognized in the calculation of the market-related value of plan assets. These net losses will result in increases in future pension expense as they are recognized in the market-related value of assets.

The net decrease in the market-related value of assets due to the recognition of prior losses is presented in the following table:

Net Decrease in Market-Related Asset Value Due to Recognition of Prior Losses In millions	
2024	$ 697
2025	902
2026	1,038
2027	24
Total	$ 2,661

Exclusive of the one-time settlement charge recognized in 2023, the Company expects net periodic benefit cost ("NPBC") to decrease in 2024 by approximately $96 million. The decrease is primarily due to the freeze of pension

benefits in the United States, effective December 31, 2023, and other de-risking activities, partially offset by discount rate decreases.

A 25 basis point increase or decrease in the long-term return on assets assumption would change the Company's NPBC credit for 2024 by $53 million. A 25 basis point increase in the discount rate assumption would increase the Company's NPBC credit for 2024 by $7 million. A 25 basis point decrease in the discount rate assumption would decrease the Company's NPBC credit for 2024 by $16 million.

Income Taxes

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. Based on the evaluation of available evidence, both positive and negative, the Company recognizes future tax benefits, such as net operating loss carryforwards and tax credit carryforwards, to the extent that realizing these benefits is considered to be more likely than not.

At December 31, 2023, the Company had a net deferred tax asset balance of $1,087 million, after valuation allowances of $2,948 million.

In evaluating the ability to realize the deferred tax assets, the Company relies on, in order of increasing subjectivity, taxable income in prior carryback years, the future reversals of existing taxable temporary differences, tax planning strategies and forecasted taxable income using historical and projected future operating results.

The Company files tax returns in multiple jurisdictions and is subject to examination by taxing authorities throughout the world. Tax authorities have the ability to review and challenge matters that could be subject to differing interpretation of applicable tax laws and regulations as they relate to the amount, character, timing or inclusion of revenue and expenses or the sustainability of tax attributes. The ultimate resolution of such uncertainties could last several years. When an uncertain tax position is identified, the Company considers and interprets complex tax laws and regulations in order to determine the need for recognizing a provision in its financial statements. Significant judgment is required in determining the timing and measurement of uncertain tax positions. The Company utilizes internal and external expertise in interpreting tax laws to support the Company's tax positions. The Company recognizes the financial statement effects of an uncertain income tax position when it is more likely than not, based on technical merits, that the position will be sustained upon examination. At December 31, 2023, the Company had uncertain tax positions for both domestic and foreign issues of $513 million and $561 million for interest and penalties.

Environmental Matters

Environmental Policies

Dow is committed to world-class environmental, health and safety ("EH&S") performance, as demonstrated by industry-leading results, a long-standing commitment to the American Chemistry Council's Responsible Care® program, a strong commitment to achieve the Company's 2025 Sustainability Goals and Dow's drive to deliver against its targets around a circular economy and climate protection. These goals and targets set the standard for sustainability in the chemical industry, focusing on improvements in the Company's local corporate citizenship and product stewardship, and by actively pursuing methods to reduce the Company's environmental impact.

To meet the Company's public commitments, as well as the stringent laws and government regulations related to environmental protection and remediation to which its global operations are subject, the Company has well-defined policies, requirements and management systems. The Company'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 company-wide management system for EH&S, Operations, Quality and Human Resources.

The Company believes 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 the U.S. & Canada have received third-party verification of the Company's compliance with Responsible Care® and with outside specifications such as ISO-14001. The Company 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.

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. The data is reviewed at the facility level and then by global coordinators before being aggregated for corporate environmental reporting purposes.

Dow's EH&S policies help to ensure the Company achieves its annual health and safety performance targets and the Company seeks to continuously improve on these targets through process and personal safety project implementations. Improvement in these areas, as well as environmental compliance, remains a top management priority, as the Company continues to implement its 2025 Sustainability Goals and progressive, multi-decade sustainability targets that include advancing a circular economy and climate protection. Progress is reviewed annually by management and with the Environment, Health, Safety & Technology Committee of the Board.

Detailed information on Dow's performance regarding environmental matters and goals is accessible through the Company's Science & Sustainability webpage at *www.dow.com/sustainability*. Dow's website and its content are not deemed incorporated by reference into this report.

Chemical Security

Public and political attention continues to be placed on the protection of critical infrastructure, including the chemical industry, from security threats. Sabotage, terrorism, war, natural disasters and cybersecurity incidents have increased global concerns about the security and safety of chemical production and distribution. Many, including the Company and the American Chemistry Council, have called for uniform risk-based and performance-based national standards for securing the U.S. chemical industry. The Company is subject to U.S. regulations with established risk-based and performance-based standards that must be met at U.S. Coast Guard-regulated facilities promulgated by the U.S. Department of Homeland Security. The Company is also subject to the requirements of the Rail Transportation Security Rule issued by the U.S. Transportation Security Administration. The Company continues to support uniform risk-based national standards for securing the chemical industry.

The Company maintains a comprehensive, multi-level security plan that focuses on security, emergency planning, preparedness and response. This plan, which has been activated in response to significant world and national events, is reviewed on an annual basis. The Company continues to improve its security plans, placing emphasis on the safety of Dow communities and people by being prepared to meet risks at any level and to address both internal and external identifiable risks. The security plan includes regular vulnerability assessments, security audits, mitigation efforts and physical security upgrades designed to reduce vulnerability. The Company's security plans are also designed to avert interruptions of normal business operations that could materially and adversely affect the Company's results of operations, financial condition and cash flows.

The Company played a key role in the development and implementation of the American Chemistry Council's Responsible Care® Security Code ("Security Code"), which requires that all aspects of security – including facility, transportation and cyberspace – be assessed and gaps addressed. Through the global implementation of the Security Code, the Company has permanently heightened the level of security – not just in the United States, but worldwide. The Company employs several hundred employees and contractors in its Emergency Services and Security department worldwide. In 2019, the Company established its Global Security Operations Center ("GSOC") to provide 24-hour/day, 365-day/year 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.

Through the implementation of the Security Code, including voluntary security enhancements and upgrades, the Company is well-positioned to comply with U.S. chemical facility regulations and other regulatory security frameworks. The Company participates with the American Chemistry Council to periodically review and update the Security Code.

The Company continues to work collaboratively across the supply chain on Responsible Care®, supply chain design, emergency preparedness, shipment visibility and transportation of hazardous materials. The Company cooperated with public and private entities to lead the implementation of advanced tank car design, and track and trace technologies. Further, the Company's Distribution Risk Review process addresses potential threats in all modes of transportation across the Company's supply chain. To reduce vulnerabilities, the Company maintains security measures that meet or exceed regulatory and industry security standards in all areas in which they operate.

The Company's initiatives relative to chemical security, emergency preparedness and response, Community Awareness and Emergency Response and crisis management are implemented consistently at all Dow sites on a global basis. Each Dow site has established outreach programs designed to engage community stakeholders with objectives centered around awareness of Dow operations, products, and efforts to protect worker and community health and the environment. These programs also educate community members on emergency planning and response, emissions and waste, future site plans to reduce waste and emissions, and process safety systems. Finally, these outreach efforts establish an opportunity for Dow site leaders to hear about community stakeholder expectations and address questions and concerns about safety, health, environmental or other issues. The Company participates with chemical associations globally and participates as an active member of the Global Congress on Chemical Security and Emerging Threats and in positions of leadership in the U.S. Chemical Sector Coordinating Council.

Climate Protection

Evaluation of climate-related risks and opportunities continues to be a catalyst for the development of the Company's Decarbonize & Grow strategy (Dow's climate transition plan), its water-intensity goal and its Valuing Nature goal. Dow's science-based strategy includes a phased approach to decarbonize while meeting growing demand for Dow's products and contributing to a low-carbon future through continued investment in new products, technologies and processes. In 2020, Dow announced commitments to reduce its net annual Scope 1 and 2 CO_2e emissions by an additional 5 million metric tons by 2030 versus its 2020 baseline, a 15 percent reduction versus 2020 and a 30 percent reduction in greenhouse gas emissions since 2005. Additionally, Dow announced its intention to be carbon neutral by 2050 (Scope 1+2+3, as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, plus product benefits). In 2021, Dow outlined a path to decarbonize its production processes (Scope 1 and 2 CO_2e emissions), utilizing a phased approach in which end-of-life capacity is replaced with higher-efficiency, lower greenhouse gas emitting assets. Reflecting Dow's focus to make meaningful progress in the near term, Dow intends to reduce its CO_2e emissions by approximately 2 million metric tons by 2025 versus its 2020 baseline while growing underlying earnings and plans to build the world's first net-zero Scope 1 and 2 CO_2e emissions integrated ethylene cracker and derivatives facility in Alberta, Canada, which is expected to add approximately 1,885 KTA of ethylene and polyethylene capacity by 2029. Dow is also committed to advancing water stewardship within the Company's operations and to working collaboratively to enhance water management at the watershed level. As part of this commitment, Dow has set a global target to reduce freshwater intake intensity by 20 percent at six key water-stressed sites by 2025. Additionally, Dow has implemented a robust process to quantify the value of products and projects that are better for nature, including nature-based solutions.

Despite these commitments, climate change-related risks and uncertainties, legal or regulatory responses to climate change, and failure to meet climate change commitments could negatively impact Dow's results of operations, financial condition and/or reputation. Climate-related risks include both physical and transition risks.

Physical Risks

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.

To evaluate physical risks, Dow partnered with S&P Global Trucost ("Trucost") to assess the Company's exposure to physical risks based on the geographic location of its manufacturing operations. The risks assessed included water stress, flood, heat waves, cold waves, hurricanes, wildfires and sea level rise. The analysis included an assessment of the physical risks using a baseline year of 2020 with time periods for medium- (year 2030) and long-term (year 2050) using the Intergovernmental Panel on Climate Change representative concentration pathways. These pathways represent varying degrees of global atmospheric greenhouse gas concentrations (low, medium and high), and thus different expectations on global temperature rise. Results will be incorporated into Dow's long-term assessments of its manufacturing sites, which is a key input into Dow's capital approval process.

Transition Risks

Climate-related transition risks include the availability, development and affordability of lower greenhouse gas emissions technology, the effects of CO_2e pricing, and changes in public sentiment, regulations, taxes, public mandates or requirements as they relate to CO_2e, water or land use.

Climate-related risks, including both physical and transition risks, are assessed with input from internal and external sources including corporate, business, function and geographic leaders; subject matter experts; investors; and other stakeholders. The evaluation of climate-related risks and opportunities is integrated into an annual company-wide

risk management process, known as enterprise risk management ("ERM"). ERM identifies significant or major risks to the Company and develops action plans to modify or mitigate risks.

Every few years, Dow also utilizes a robust scenario analysis to assess the long-term materiality and impact of climate-related risks and opportunities. Scenario analysis is used to challenge business-as-usual assumptions and strengthen the resiliency of the Company's Decarbonize & Grow strategy. Scenarios are used to evaluate both physical and transition risk and are particularly useful in evaluating the potential and impact of emerging risks.

Decarbonize & Grow
Dow's Decarbonize & Grow strategy involves specific actions to mitigate identified climate-related physical and transition risks, while also advancing opportunities in several key areas. These include:

- Optimizing Manufacturing Facilities and Processes for Sustainability: Dow is investing approximately $1 billion in annual capital across the economic cycle to decarbonize assets, in a phased approach, while growing capacity.
- Increasing Clean Energy in Purchased Power Mix: Dow continues to invest in cost-efficient clean energy, including wind, solar, biomass and hydropower, across operations.
- Developing Next Generation, Low-Carbon Manufacturing Technologies: Dow is investing in longer-term, future-focused manufacturing technologies that will be critical in the decarbonization of the Company's manufacturing.
- Building a Value-Generating Scope 3 Decarbonization Pathway: Approximately two-thirds of Dow's emissions footprint fall into the Scope 3 categories and more than half of those come from the raw materials, transportation and other services purchased as a company. The Company was recognized as a Supplier Engagement Leader for the second straight year by CDP, a global non-profit that directs the world's environmental disclosure system for companies, cities, states and regions. Dow has significantly advanced its Scope 3 strategy by improving emissions accounting, advancing transparency along the value chain, and working closely with key suppliers to set and meet emissions reduction targets.
- Developing Low-Carbon Products, Technologies and Services: Dow products are essential to a low carbon future, and the Company wants the world's best brands to look to Dow to help them achieve their goals and make their products more sustainable. Dow is helping its customers achieve their climate goals by providing products that facilitate energy efficiency, lightweighting, fuel transition, circularity, increased operational efficiency, resource reductions and reduced emissions.

Advancing Water Stewardship and Resilience
As one of the largest materials science companies in the world, Dow depends on a steady supply of fresh water to create the products that are essential for everyday life and human progress. Dow strives to use the Company's technology, expertise and partnerships to help conserve and promote regenerative water use, protect watersheds and create a future where clean water is abundant and available to all. Effective water stewardship is also required for long-term company viability and Dow's senior executive leadership team oversees the Company's water strategy.

Dow's water risk management approach recognizes that every site and every business is accountable for water while certain watersheds require additional measures to address specific water stress challenges. Key Dow locations have specific water action plans to address risk to operations given their dependence on a stressed watershed. These action plans include mitigations for local water scarcity or quality issues and consider the needs of other local users for freshwater. Additionally, Dow identified six sites in 2015, located in Texas (2); Bahia Blanca, Argentina; Terneuzen, The Netherlands; Böhlen, Germany; and Tarragona, Spain; where operations are located in a water-stressed watershed, have local water quality issues, have competition among local users for water, or have some local knowledge of watershed challenges, and these six sites have been the focus of actions since that time.

Advancing a Circular Economy
Dow is committed to turning the tide on plastic waste and meeting customers' increasing demands for more sustainable and circular products through Dow's materials science expertise and its investments in circular innovations and partnerships – from designing for recyclability at the beginning of a product's life to building materials ecosystems that will help turn plastic waste into a valuable resource that can be used to create new products. Dow is working to advance circularity for its key materials and, to this end, is working to deliver on its

enterprise target to Transform the Waste, which entails transforming plastic waste and other forms of feedstocks to deliver 3 million metric tons of circular and renewable solutions annually by 2030. To reach the target, Dow is collaborating with other stakeholders across value chains to build materials ecosystems to collect, reuse or recycle plastic waste. This, in turn, will enable Dow to return more plastic waste into the circular system, and scale production of circular and low-carbon emissions solutions.

Since 2020, Dow has invested more than $200 million into impact funds, recycling infrastructure, venture capital, research and development and key technologies to transform waste into solutions that support a circular economy. Dow is catalyzing a circular economy for plastics through global partnerships with non-governmental organizations and investors, such as the Alliance to End Plastic Waste, The Recycling Partnership, Circulate Capital, Closed Loop Partners and Lombard Odier Global Plastic Circularity Fund. Additionally, Dow is making progress on its Transform the Waste target through several recently announced circular and renewable offtake agreements and projects that will help contribute to achieving the new target. See Item 1. Business for updates on these investments, partnerships and projects.

In support of, and in collaboration with, value chain partners and customers, Dow is aligning its innovation and application development programs so its products are recycle-ready at the outset or enable circularity in customers' products and processes. Designing for circularity at the molecular level expands the possibilities for recycling across a variety of applications, and ultimately lessens the environmental impact of Dow's customers' products.

Dow's efforts under Transform the Waste expand beyond packaging. In 2023, the Company launched and/or commercialized a number of other circular solutions like SPECFLEX C, a recycled polyurethane solution for the automotive sector and Propylene Glycol CIR.

Developing Safer Materials

How the Company manufactures, distributes and enables the proper use and disposal of its products can have a large and meaningful impact on the environment. Dow's vision is a future where every material it brings to market is sustainable for the people and the planet. Dow is working to deliver that sustainable future through its materials science expertise and collaboration with its customers. By constantly innovating how it sources, manufactures and delivers material solutions, Dow helps customers achieve their goals and create a better tomorrow. Dow has an impact on safer materials directly through the manufacture and delivery of solutions and indirectly through the chemicals that are sourced.

Dow is committed to demonstrating the value of chemistry and materials science to society and improving the way the world understands and considers science in decision-making to maximize benefits to businesses, society and the planet. Through Dow's 2025 Safe Materials for a Sustainable Planet goal, the Company has made progress toward this vision by innovating sustainable materials of tomorrow, leading candid conversations about product safety and committing to the advancement of open and transparent chemistry with value chain partners, customers and the public.

Environmental Remediation

For comparison of environmental remediation-related matters for the fiscal years ended December 31, 2022 and 2021, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 1, 2023.

The Company accrues the costs of remediation of its facilities and formerly owned facilities based on current law and regulatory requirements. The nature of such remediation can include management of soil and groundwater contamination. The accounting policies adopted to properly reflect the monetary impacts of environmental matters are discussed in Note 1 to the Consolidated Financial Statements. To assess the impact on the financial statements, environmental experts review currently available facts to evaluate the probability and scope of potential liabilities. Inherent uncertainties exist in such evaluations primarily due to unknown environmental conditions, changing governmental regulations and legal standards regarding liability, and the ability to apply remediation technologies. These liabilities are adjusted periodically as remediation efforts progress or as additional technical or legal information becomes available. The Company had an accrued liability of $939 million at December 31, 2023, related to the remediation of current or former Dow-owned sites. At December 31, 2022, the liability related to remediation was $948 million.

In addition to current and former Dow-owned sites, under the federal Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") and equivalent state laws (hereafter referred to collectively as "Superfund Law"), the Company is liable for remediation of other hazardous waste sites where the Company allegedly disposed of, or arranged for the treatment or disposal of, hazardous substances. Because Superfund Law imposes joint and several liability upon each party at a site, the Company has evaluated its potential liability in light of the number of other companies that have also been named potentially responsible parties (“PRPs”) at each site, the estimated apportionment of costs among all PRPs, and the financial ability and commitment of each to pay its expected share. The Company’s remaining liability for the remediation of Superfund sites was $241 million at December 31, 2023 ($244 million at December 31, 2022). The Company has not recorded any third-party recovery related to these sites as a receivable.

Information regarding environmental sites is provided below:

Environmental Sites	*Dow-owned Sites* [1]		*Superfund Sites* [2]	
	2023	*2022*	*2023*	*2022*
Number of sites at Jan 1	171	171	130	134
Sites added during year	6	—	4	2
Sites closed during year	(23)	—	(1)	(6)
Number of sites at Dec 31	154	171	133	130

1. Dow-owned sites are sites currently or formerly owned by the Company. In the United States, remediation obligations are imposed by the Resource Conservation and Recovery Act or analogous state law. At December 31, 2023, 24 of these sites (24 sites at December 31, 2022) were formerly owned by Dowell Schlumberger, Inc., a group of companies in which the Company previously owned a 50 percent interest. The Company sold its interest in Dowell Schlumberger in 1992.
2. Superfund sites are sites, including sites not owned by the Company, where remediation obligations are imposed by Superfund Law.

Additional information is provided below for the Company’s Midland, Michigan, manufacturing site and Midland off-site locations (collectively, the "Midland sites"), as well as a Superfund site in Wood-Ridge, New Jersey, the locations for which the Company has the largest potential environmental liabilities.

In the early days of operations at the Midland manufacturing site, wastes were usually disposed of on-site, resulting in soil and groundwater contamination, which has been contained and managed on-site under a series of Resource Conservation and Recovery Act permits and regulatory agreements. The Hazardous Waste Operating License for the Midland manufacturing site, issued in 2003, and renewed and replaced in September 2015, also included provisions for the Company to conduct an investigation to determine the nature and extent of off-site contamination from historic Midland manufacturing site operations. In January 2010, the Company, the U.S. Environmental Protection Agency ("EPA") and the State of Michigan ("State") entered into an Administrative Order on Consent that requires the Company to conduct a remedial investigation, a feasibility study and a remedial design for the Tittabawassee River, the Saginaw River and the Saginaw Bay, and pay the oversight costs of the EPA and the State under the authority of CERCLA. See Note 14 to the Consolidated Financial Statements for further information relating to Midland off-site environmental matters.

Rohm and Haas, a wholly owned subsidiary of the Company, is a PRP at the Wood-Ridge, New Jersey, Ventron/ Velsicol Superfund Site, and the adjacent Berry’s Creek Study Area ("BCSA") (collectively, the "Wood-Ridge sites"). Rohm and Haas is a successor in interest to a company that owned and operated a mercury processing facility, where wastewater and waste handling resulted in contamination of soils and adjacent creek sediments. In 2018, the Berry’s Creek Study Area Potentially Responsible Party Group (“PRP Group”), consisting of over 100 PRPs, completed a Remedial Investigation/Feasibility Study for the BCSA. During that time, the EPA concluded that an “iterative or adaptive approach” was appropriate for cleaning up the BCSA. Thus, each phase of remediation will be followed by a period of monitoring to assess its effectiveness and determine if there is a need for more work. In September 2018, the EPA signed a Record of Decision ("ROD 1") which describes the initial phase of the EPA’s plan to clean-up the BCSA. ROD 1 will remediate waterways and major tributaries in the most contaminated part of the BCSA. The PRP Group has signed agreements with the EPA to design the selected remedy. Although there is currently much uncertainty as to what will ultimately be required to remediate the BCSA and Rohm and Haas's share of these costs has yet to be determined, the range of activities that are required in the interim Record of Decision is known in general terms. The PRP Group has been approached by the EPA to convene discussions for the Remedial Action Consent Decree the EPA is preparing for the Berry’s Creek Site. The group submitted the 60 percent design for EPA review and has identified and contracted with a Remedial Action contractor to support completion of the 95 percent design. Allocation remains incomplete.

At December 31, 2023, the Company had accrued liabilities totaling $319 million ($339 million at December 31, 2022) for environmental remediation at the Midland and Wood-Ridge sites. In 2023, the Company spent $48 million ($37 million in 2022) for environmental remediation at the Midland and Wood-Ridge sites.

In total, the Company's accrued liability for probable environmental remediation and restoration costs was $1,180 million at December 31, 2023, compared with $1,192 million at December 31, 2022. This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two times that amount. Consequently, it is reasonably possible that environmental remediation and restoration costs in excess of amounts accrued could have a material impact on the Company's results of operations, financial condition and cash flows. It is the opinion of the Company's management, however, that the possibility is remote that costs in excess of the range disclosed will have a material impact on the Company's results of operations, financial condition and cash flows.

The amounts charged to income on a pretax basis related to environmental remediation totaled $203 million in 2023 and $176 million in 2022. The amounts charged to income on a pretax basis related to operating the Company's current pollution abatement facilities, excluding internal recharges, totaled $758 million in 2023 and $773 million in 2022. Capital expenditures for environmental protection were $228 million in 2023 and $137 million in 2022.

Asbestos-Related Matters of Union Carbide Corporation

Union Carbide is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide's premises, and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide subsidiary, Amchem. In many cases, plaintiffs are unable to demonstrate that they have suffered any compensable loss as a result of such exposure, or that injuries incurred in fact resulted from exposure to Union Carbide's products.

For comparison of asbestos-related matters of Union Carbide Corporation for the fiscal years ended December 31, 2022 and 2021, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 1, 2023.

The table below provides information regarding asbestos-related claims pending against Union Carbide and Amchem based on criteria developed by Union Carbide and its external consultants:

Asbestos-Related Claim Activity	*2023*	*2022*
Claims unresolved at Jan 1	6,873	8,747
Claims filed	4,199	4,664
Claims settled, dismissed or otherwise resolved	(4,705)	(6,538)
Claims unresolved at Dec 31	6,367	6,873
Claimants with claims against both Union Carbide and Amchem	(1,236)	(1,530)
Individual claimants at Dec 31	5,131	5,343

Plaintiffs' lawyers often sue numerous defendants in individual lawsuits or on behalf of numerous claimants. As a result, the damages alleged are not expressly identified as to Union Carbide, Amchem or any other particular defendant, even when specific damages are alleged with respect to a specific disease or injury. For these reasons and based upon Union Carbide's litigation and settlement experience, Union Carbide does not consider the damages alleged against Union Carbide and Amchem to be a meaningful factor in its determination of any potential asbestos-related liability.

For additional information see Part I, Item 3. Legal Proceedings and Asbestos-Related Matters of Union Carbide Corporation in Note 14 to the Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company's business operations give rise to market risk exposure due to changes in foreign exchange rates, interest rates, commodity prices and other market factors such as equity prices. To manage such risks effectively, the Company enters into hedging transactions, pursuant to established guidelines and policies that enable it to mitigate the adverse effects of financial market risk. Derivatives used for this purpose are designated as hedges per the accounting guidance related to derivatives and hedging activities, where appropriate. A secondary objective is to add value by creating additional non-specific exposure within established limits and policies; derivatives used for this purpose are not designated as hedges. The potential impact of creating such additional exposures is not material to the Company's results.

The global nature of the Company's business requires active participation in the foreign exchange markets. The Company has assets, liabilities and cash flows in currencies other than the U.S. dollar. The primary objective of the Company's foreign currency risk management is to optimize the U.S. dollar value of net assets and cash flows. To achieve this objective, the Company hedges on a net exposure basis using foreign currency forward contracts, over-the-counter option contracts, cross-currency swaps and nonderivative instruments in foreign currencies. Exposures primarily relate to assets, liabilities and bonds denominated in foreign currencies, as well as economic exposure, which is derived from the risk that currency fluctuations could affect the dollar value of future cash flows related to operating activities. The largest exposures are denominated in European currencies, the Chinese yuan, the Japanese yen, the Thai baht and the Argentinian peso, although exposures also exist in other currencies in Asia Pacific, Canada, Latin America, the Middle East, Africa and India.

The main objective of interest rate risk management is to reduce the total funding cost to the Company and to alter the interest rate exposure to the desired risk profile. To achieve this objective, the Company hedges using interest rate swaps, "swaptions," and exchange-traded instruments. The Company's primary exposure is to the U.S. dollar yield curve.

The Company has a portfolio of debt and equity securities derived primarily from the investment activities of its insurance subsidiaries. This exposure is managed in a manner consistent with the Company's market risk policies and procedures.

Inherent in the Company's business is exposure to price changes for several commodities. Some exposures can be hedged effectively through liquid tradable financial instruments. Natural gas and crude oil, along with feedstocks for ethylene and propylene production, constitute the main commodity exposures. Over-the-counter and exchange traded instruments are used to hedge these risks, when feasible.

The Company uses value-at-risk ("VAR"), stress testing and scenario analysis for risk measurement and control purposes. VAR estimates the maximum potential loss in fair market values, given a certain move in prices over a certain period of time, using specified confidence levels. The VAR methodology used by the Company is a variance/covariance model. This model uses a 97.5 percent confidence level and includes at least one year of historical data.

The 2023 and 2022 year-end and average daily VAR for the aggregate of all positions are shown below. These amounts are immaterial relative to the total equity of the Company.

Total Daily VAR by Exposure Type at Dec 31	*2023*		*2022*	
In millions	*Year-end*	*Average*	*Year-end*	*Average*
Commodities	$ 14	$ 11	$ 72	$ 56
Equity securities	6	8	10	9
Foreign exchange	20	17	7	18
Interest rate	139	177	252	230
Composite	$ 179	$ 213	$ 341	$ 313

The Company's daily VAR for the aggregate of all positions decreased from a composite VAR of $341 million at December 31, 2022 to a composite VAR of $179 million at December 31, 2023. The interest rate VAR decreased due to a decrease in interest rate volatility and a decrease in interest rate exposure. The equity securities VAR decreased due to a decrease in equity volatility and a decrease in equity exposure. The foreign exchange VAR increased due to an increase in outstanding derivatives and bonds designated as hedging instruments. The commodities VAR decreased due to a decrease in managed exposures and a decrease in commodity volatility. See Note 20 to the Consolidated Financial Statements for further disclosure regarding market risk.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Dow Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Dow Inc. and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended December 31, 2023, and the related notes and the schedule listed in the Index at Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established *in Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated January 31, 2024, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Uncertain Tax Positions — Refer to Notes 1 and 6 to the financial statements

Critical Audit Matter Description

The Company has a complex legal structure involving numerous domestic and foreign locations with constantly changing tax laws, regulations, and legal interpretations. The Company’s management is required to interpret and apply these tax laws and regulations in determining the amount of its income tax liability and provision. When an uncertain tax position is identified by management, the Company must evaluate if it is more likely than not, based on the technical merits, that the uncertain tax position will be sustained upon examination. The Company recognizes a benefit for tax positions using the highest cumulative tax benefit that is more likely than not to be

realized. The Company establishes a liability for unrecognized tax benefits that do not meet this threshold. The evaluation of each uncertain tax position requires management to apply specialized skill, knowledge, and significant judgment related to the identified position. The Company's liability for unrecognized tax benefits and related accrued interest and penalties as of December 31, 2023 was $513 million and $561 million, respectively.

Because of the complexity of tax laws, regulations and legal interpretations relevant to numerous taxing jurisdictions in which the Company operates, auditing uncertain tax positions and the determination of whether the more likely than not threshold was met requires a high degree of auditor judgment and increased extent of effort, including the involvement of our income tax specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to uncertain tax positions included the following, among others:

- We tested the effectiveness of internal controls over income taxes, including those over identifying uncertain tax positions and measuring liabilities.
- We evaluated, with the assistance of our income tax specialists, the Company's uncertain tax positions by performing the following:
  - Obtaining Company and third-party opinions or memoranda regarding the uncertain tax positions.
  - Identifying key judgements underlying the Company's position and evaluating whether the conclusions are consistent with our interpretation of the relevant laws and regulations.
  - Evaluating the Company's method of measuring its liability for unrecognized tax benefits, including underlying data and assumptions.
  - Evaluating the basis for certain intercompany transactions, such as transfer pricing, by comparison to economic studies performed by management and third-party data.
  - Evaluating matters raised by taxing authorities in former and ongoing tax audits.
  - Assessing changes and interpretation of applicable tax law.

/s/ DELOITTE & TOUCHE LLP

Midland, Michigan

January 31, 2024

We have served as the Company's auditor since 1905.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholder and the Board of Directors of The Dow Chemical Company

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of The Dow Chemical Company and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, equity, and cash flows, for each of the three years in the period ended December 31, 2023, and the related notes and the schedule listed in the Index at Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established *in Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated January 31, 2024, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Uncertain Tax Positions — Refer to Notes 1 and 6 to the financial statements

Critical Audit Matter Description

The Company has a complex legal structure involving numerous domestic and foreign locations with constantly changing tax laws, regulations, and legal interpretations. The Company’s management is required to interpret and apply these tax laws and regulations in determining the amount of its income tax liability and provision. When an uncertain tax position is identified by management, the Company must evaluate if it is more likely than not, based on the technical merits, that the uncertain tax position will be sustained upon examination. The Company recognizes a benefit for tax positions using the highest cumulative tax benefit that is more likely than not to be realized. The Company establishes a liability for unrecognized tax benefits that do not meet this threshold. The

evaluation of each uncertain tax position requires management to apply specialized skill, knowledge, and significant judgment related to the identified position. The Company's liability for unrecognized tax benefits and related accrued interest and penalties as of December 31, 2023 was $513 million and $561 million, respectively.

Because of the complexity of tax laws, regulations and legal interpretations relevant to numerous taxing jurisdictions in which the Company operates, auditing uncertain tax positions and the determination of whether the more likely than not threshold was met requires a high degree of auditor judgment and increased extent of effort, including the involvement of our income tax specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to uncertain tax positions included the following, among others:

- We tested the effectiveness of internal controls over income taxes, including those over identifying uncertain tax positions and measuring liabilities.
- We evaluated, with the assistance of our income tax specialists, the Company's uncertain tax positions by performing the following:
  - Obtaining Company and third-party opinions or memoranda regarding the uncertain tax positions.
  - Identifying key judgements underlying the Company's position and evaluating whether the conclusions are consistent with our interpretation of the relevant laws and regulations.
  - Evaluating the Company's method of measuring its liability for unrecognized tax benefits, including underlying data and assumptions.
  - Evaluating the basis for certain intercompany transactions, such as transfer pricing, by comparison to economic studies performed by management and third-party data.
  - Evaluating matters raised by taxing authorities in former and ongoing tax audits.
  - Assessing changes and interpretation of applicable tax law.

/s/ DELOITTE & TOUCHE LLP

Midland, Michigan

January 31, 2024

We have served as the Company's auditor since 1905.

Dow Inc. and Subsidiaries

Consolidated Statements of Income

(In millions, except per share amounts) For the years ended Dec 31,	*2023*	*2022*	*2021*
Net sales	$ 44,622	$ 56,902	$ 54,968
Cost of sales	39,742	48,338	44,191
Research and development expenses	829	851	857
Selling, general and administrative expenses	1,627	1,675	1,645
Amortization of intangibles	324	336	388
Restructuring and asset related charges - net	528	118	6
Equity in earnings (losses) of nonconsolidated affiliates	(119)	268	975
Sundry income (expense) - net	(280)	727	(35)
Interest income	229	173	55
Interest expense and amortization of debt discount	746	662	731
Income before income taxes	656	6,090	8,145
Provision (credit) for income taxes	(4)	1,450	1,740
Net income	660	4,640	6,405
Net income attributable to noncontrolling interests	71	58	94
Net income available for Dow Inc. common stockholders	$ 589	$ 4,582	$ 6,311
Per common share data:			
Earnings per common share - basic	$ 0.82	$ 6.32	$ 8.44
Earnings per common share - diluted	$ 0.82	$ 6.28	$ 8.38
Weighted-average common shares outstanding - basic	705.7	721.0	743.6
Weighted-average common shares outstanding - diluted	709.0	725.6	749.0

See Notes to the Consolidated Financial Statements.

Dow Inc. and Subsidiaries

Consolidated Statements of Comprehensive Income

(In millions) For the years ended Dec 31,	*2023*	*2022*	*2021*
Net income	$ 660	$ 4,640	$ 6,405
Other comprehensive income (loss), net of tax			
Unrealized losses on investments	—	(312)	(45)
Cumulative translation adjustments	43	(579)	(425)
Pension and other postretirement benefit plans	(609)	2,457	2,225
Derivative instruments	24	272	123
Total other comprehensive income (loss)	(542)	1,838	1,878
Comprehensive income	118	6,478	8,283
Comprehensive income attributable to noncontrolling interests, net of tax	71	58	94
Comprehensive income attributable to Dow Inc.	$ 47	$ 6,420	$ 8,189

See Notes to the Consolidated Financial Statements.

Dow Inc. and Subsidiaries
Consolidated Balance Sheets

(In millions, except share amounts) At Dec 31,	*2023*	*2022*
Assets		
Current Assets		
Cash and cash equivalents	$ 2,987	$ 3,886
Accounts and notes receivable:		
Trade (net of allowance for doubtful receivables - 2023: $81; 2022: $110)	4,718	5,611
Other	1,896	2,144
Inventories	6,076	6,988
Other current assets	1,937	1,848
Total current assets	17,614	20,477
Investments		
Investment in nonconsolidated affiliates	1,267	1,589
Other investments (investments carried at fair value - 2023: $1,877; 2022: $1,757)	2,740	2,793
Noncurrent receivables	438	666
Total investments	4,445	5,048
Property		
Property	60,203	58,055
Less: Accumulated depreciation	39,137	37,613
Net property	21,066	20,442
Other Assets		
Goodwill	8,641	8,644
Other intangible assets (net of accumulated amortization - 2023: $5,374; 2022: $5,022)	2,072	2,442
Operating lease right-of-use assets	1,320	1,227
Deferred income tax assets	1,486	960
Deferred charges and other assets	1,323	1,363
Total other assets	14,842	14,636
Total Assets	$ 57,967	$ 60,603
Liabilities and Equity		
Current Liabilities		
Notes payable	$ 62	$ 362
Long-term debt due within one year	117	362
Accounts payable:		
Trade	4,529	4,940
Other	1,797	2,276
Operating lease liabilities - current	329	287
Income taxes payable	419	334
Accrued and other current liabilities	2,704	2,770
Total current liabilities	9,957	11,331
Long-Term Debt	14,907	14,698
Other Noncurrent Liabilities		
Deferred income tax liabilities	399	1,110
Pension and other postretirement benefits - noncurrent	4,932	3,808
Asbestos-related liabilities - noncurrent	788	857
Operating lease liabilities - noncurrent	1,032	997
Other noncurrent obligations	6,844	6,555
Total other noncurrent liabilities	13,995	13,327
Stockholders' Equity		
Common stock (authorized 5,000,000,000 shares of $0.01 par value each; issued 2023: 778,595,514 shares; 2022: 771,678,525 shares)	8	8
Additional paid-in capital	8,880	8,540
Retained earnings	21,774	23,180
Accumulated other comprehensive loss	(7,681)	(7,139)
Treasury stock at cost (2023: 76,302,081 shares; 2022: 66,798,605 shares)	(4,374)	(3,871)
Dow Inc.'s stockholders' equity	18,607	20,718
Noncontrolling interests	501	529
Total equity	19,108	21,247
Total Liabilities and Equity	$ 57,967	$ 60,603

See Notes to the Consolidated Financial Statements.

Dow Inc. and Subsidiaries

Consolidated Statements of Cash Flows

(In millions) For the years ended Dec 31,	*2023*	*2022*	*2021*
Operating Activities			
Net income	$ 660	$ 4,640	$ 6,405
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,611	2,758	2,842
Provision (credit) for deferred income tax	(1,222)	79	278
Earnings of nonconsolidated affiliates less than (in excess of) dividends received	387	696	(651)
Net periodic pension benefit cost	548	23	39
Pension contributions	(142)	(235)	(1,219)
Net gain on sales of assets, businesses and investments	(70)	(19)	(105)
Restructuring and asset related charges - net	528	118	6
Other net loss	796	212	921
Changes in assets and liabilities, net of effects of acquired and divested companies:			
Accounts and notes receivable	1,161	1,187	(2,132)
Inventories	844	347	(1,768)
Accounts payable	(734)	(1,255)	2,458
Other assets and liabilities, net	(203)	(1,065)	(5)
Cash provided by operating activities - continuing operations	5,164	7,486	7,069
Cash provided by (used for) operating activities - discontinued operations	32	(11)	(60)
Cash provided by operating activities	5,196	7,475	7,009
Investing Activities			
Capital expenditures	(2,356)	(1,823)	(1,501)
Investment in gas field developments	(215)	(190)	(92)
Purchases of previously leased assets	(7)	(7)	(694)
Proceeds from sales of property, businesses and consolidated companies, net of cash divested	95	32	68
Acquisitions of property and businesses, net of cash acquired	(114)	(228)	(129)
Investments in and loans to nonconsolidated affiliates	(5)	(148)	—
Distributions and loan repayments from nonconsolidated affiliates	2	52	51
Proceeds from sales of ownership interests in nonconsolidated affiliates	63	11	—
Purchases of investments	(2,288)	(1,366)	(1,366)
Proceeds from sales and maturities of investments	1,958	747	759
Other investing activities, net	(61)	(50)	(10)
Cash used for investing activities	(2,928)	(2,970)	(2,914)
Financing Activities			
Changes in short-term notes payable	(249)	253	(48)
Proceeds from issuance of short-term debt greater than three months	—	—	144
Payments on short-term debt greater than three months	—	(14)	(130)
Proceeds from issuance of long-term debt	104	1,667	109
Payments on long-term debt	(446)	(1,006)	(2,771)
Collections on securitization programs	18	—	—
Purchases of treasury stock	(625)	(2,325)	(1,000)
Proceeds from issuance of stock	188	212	320
Transaction financing, debt issuance and other costs	(2)	(24)	(537)
Employee taxes paid for share-based payment arrangements	(42)	(35)	(12)
Distributions to noncontrolling interests	(89)	(83)	(73)
Dividends paid to stockholders	(1,972)	(2,006)	(2,073)
Cash used for financing activities	(3,115)	(3,361)	(6,071)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(45)	(237)	(99)
Summary			
Increase (decrease) in cash, cash equivalents and restricted cash	(892)	907	(2,075)
Cash, cash equivalents and restricted cash at beginning of year	3,940	3,033	5,108
Cash, cash equivalents and restricted cash at end of year	$ 3,048	$ 3,940	$ 3,033
Less: Restricted cash and cash equivalents, included in "Other current assets"	61	54	45
Cash and cash equivalents at end of year	$ 2,987	$ 3,886	$ 2,988

See Notes to the Consolidated Financial Statements.

Dow Inc. and Subsidiaries

Consolidated Statements of Equity

(In millions, except per share amounts) For the years ended Dec 31,	*2023*	*2022*	*2021*
Common Stock			
Balance at beginning and end of year	$ 8	$ 8	$ 8
Additional Paid-in Capital			
Balance at beginning of year	8,540	8,151	7,595
Common stock issued / sold	188	212	320
Stock-based compensation and allocation of ESOP shares	276	258	236
Treasury stock issuances - compensation and benefit plans	(124)	(79)	—
Other	—	(2)	—
Balance at end of year	8,880	8,540	8,151
Retained Earnings			
Balance at beginning of year	23,180	20,623	16,361
Net income available for Dow Inc.'s common stockholders	589	4,582	6,311
Dividends to stockholders	(1,972)	(2,006)	(2,073)
Common control transaction	—	—	46
Other	(23)	(19)	(22)
Balance at end of year	21,774	23,180	20,623
Accumulated Other Comprehensive Loss			
Balance at beginning of year	(7,139)	(8,977)	(10,855)
Other comprehensive income (loss)	(542)	1,838	1,878
Balance at end of year	(7,681)	(7,139)	(8,977)
Unearned ESOP Shares			
Balance at beginning of year	—	(15)	(49)
Allocation of ESOP shares	—	15	34
Balance at end of year	—	—	(15)
Treasury Stock			
Balance at beginning of year	(3,871)	(1,625)	(625)
Treasury stock purchases	(627)	(2,325)	(1,000)
Treasury stock issuances - compensation and benefit plans	124	79	—
Balance at end of year	(4,374)	(3,871)	(1,625)
Dow Inc.'s stockholders' equity	18,607	20,718	18,165
Noncontrolling Interests	501	529	574
Total Equity	$ 19,108	$ 21,247	$ 18,739

Dividends declared per share of common stock	$ 2.80	$ 2.80	$ 2.80

See Notes to the Consolidated Financial Statements.

The Dow Chemical Company and Subsidiaries

Consolidated Statements of Income

(In millions) For the years ended Dec 31,	*2023*	*2022*	*2021*
Net sales	$ 44,622	$ 56,902	$ 54,968
Cost of sales	39,738	48,332	44,187
Research and development expenses	829	851	857
Selling, general and administrative expenses	1,627	1,675	1,645
Amortization of intangibles	324	336	388
Restructuring and asset related charges - net	528	118	6
Equity in earnings (losses) of nonconsolidated affiliates	(119)	268	975
Sundry income (expense) - net	(327)	714	(79)
Interest income	239	181	56
Interest expense and amortization of debt discount	746	662	731
Income before income taxes	623	6,091	8,106
Provision (credit) for income taxes	(4)	1,450	1,738
Net income	627	4,641	6,368
Net income attributable to noncontrolling interests	71	58	94
Net income available for The Dow Chemical Company common stockholder	$ 556	$ 4,583	$ 6,274

See Notes to the Consolidated Financial Statements.

The Dow Chemical Company and Subsidiaries

Consolidated Statements of Comprehensive Income

(In millions) For the years ended Dec 31,	*2023*	*2022*	*2021*
Net income	$ 627	$ 4,641	$ 6,368
Other comprehensive income (loss), net of tax			
Unrealized losses on investments	—	(312)	(45)
Cumulative translation adjustments	43	(579)	(425)
Pension and other postretirement benefit plans	(609)	2,457	2,225
Derivative instruments	24	272	123
Total other comprehensive income (loss)	(542)	1,838	1,878
Comprehensive income	85	6,479	8,246
Comprehensive income attributable to noncontrolling interests, net of tax	71	58	94
Comprehensive income attributable to The Dow Chemical Company	$ 14	$ 6,421	$ 8,152

See Notes to the Consolidated Financial Statements.

The Dow Chemical Company and Subsidiaries
Consolidated Balance Sheets

(In millions, except share amounts) At Dec 31,	*2023*	*2022*
Assets		
Current Assets		
Cash and cash equivalents	$ 2,987	$ 3,886
Accounts and notes receivable:		
Trade (net of allowance for doubtful receivables - 2023: $81; 2022: $110)	4,718	5,611
Other	1,997	2,211
Inventories	6,076	6,988
Other current assets	1,898	1,815
Total current assets	17,676	20,511
Investments		
Investment in nonconsolidated affiliates	1,267	1,589
Other investments (investments carried at fair value - 2023: $1,877; 2022: $1,757)	2,740	2,793
Noncurrent receivables	424	650
Total investments	4,431	5,032
Property		
Property	60,203	58,055
Less: Accumulated depreciation	39,137	37,613
Net property	21,066	20,442
Other Assets		
Goodwill	8,641	8,644
Other intangible assets (net of accumulated amortization - 2023: $5,374; 2022: $5,022)	2,072	2,442
Operating lease right-of-use assets	1,320	1,227
Deferred income tax assets	1,486	960
Deferred charges and other assets	1,323	1,363
Total other assets	14,842	14,636
Total Assets	$ 58,015	$ 60,621
Liabilities and Equity		
Current Liabilities		
Notes payable	$ 62	$ 362
Long-term debt due within one year	117	362
Accounts payable:		
Trade	4,529	4,940
Other	1,818	2,349
Operating lease liabilities - current	329	287
Income taxes payable	419	334
Accrued and other current liabilities	2,575	2,613
Total current liabilities	9,849	11,247
Long-Term Debt	14,907	14,698
Other Noncurrent Liabilities		
Deferred income tax liabilities	399	1,110
Pension and other postretirement benefits - noncurrent	4,932	3,808
Asbestos-related liabilities - noncurrent	788	857
Operating lease liabilities - noncurrent	1,032	997
Other noncurrent obligations	6,702	6,415
Total other noncurrent liabilities	13,853	13,187
Stockholder's Equity		
Common stock (authorized and issued 100 shares of $0.01 par value each)	—	—
Additional paid-in capital	9,091	8,627
Retained earnings	17,495	19,472
Accumulated other comprehensive loss	(7,681)	(7,139)
The Dow Chemical Company’s stockholder's equity	18,905	20,960
Noncontrolling interests	501	529
Total equity	19,406	21,489
Total Liabilities and Equity	$ 58,015	$ 60,621

See Notes to the Consolidated Financial Statements.

The Dow Chemical Company and Subsidiaries
Consolidated Statements of Cash Flows

(In millions) For the years ended Dec 31,	*2023*	*2022*	*2021*
Operating Activities			
Net income	$ 627	$ 4,641	$ 6,368
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,611	2,758	2,842
Provision (credit) for deferred income tax	(1,222)	80	278
Earnings of nonconsolidated affiliates less than (in excess of) dividends received	387	696	(651)
Net periodic pension benefit cost	548	23	39
Pension contributions	(142)	(235)	(1,219)
Net gain on sales of assets, businesses and investments	(70)	(19)	(105)
Restructuring and asset related charges - net	528	118	6
Other net loss	797	221	927
Changes in assets and liabilities, net of effects of acquired and divested companies:			
Accounts and notes receivable	1,161	1,187	(2,132)
Inventories	844	347	(1,768)
Accounts payable	(734)	(1,255)	2,458
Other assets and liabilities, net	(226)	(1,043)	157
Cash provided by operating activities	5,109	7,519	7,200
Investing Activities			
Capital expenditures	(2,356)	(1,823)	(1,501)
Investment in gas field developments	(215)	(190)	(92)
Purchases of previously leased assets	(7)	(7)	(694)
Proceeds from sales of property, businesses and consolidated companies, net of cash divested	95	32	68
Acquisitions of property and businesses, net of cash acquired	(114)	(228)	(129)
Investments in and loans to nonconsolidated affiliates	(5)	(148)	—
Distributions and loan repayments from nonconsolidated affiliates	2	52	51
Proceeds from sales of ownership interests in nonconsolidated affiliates	63	11	—
Purchases of investments	(2,288)	(1,366)	(1,366)
Proceeds from sales and maturities of investments	1,958	747	759
Other investing activities, net	(61)	(50)	(10)
Cash used for investing activities	(2,928)	(2,970)	(2,914)
Financing Activities			
Changes in short-term notes payable	(249)	253	(48)
Proceeds from issuance of short-term debt greater than three months	—	—	144
Payments on short-term debt greater than three months	—	(14)	(130)
Proceeds from issuance of long-term debt	104	1,667	109
Payments on long-term debt	(446)	(1,006)	(2,771)
Collections on securitization programs	18	—	—
Proceeds from issuance of stock	188	212	320
Transaction financing, debt issuance and other costs	(2)	(24)	(537)
Employee taxes paid for share-based payment arrangements	(42)	(35)	(12)
Distributions to noncontrolling interests	(89)	(83)	(73)
Dividends paid to Dow Inc.	(2,510)	(4,375)	(3,264)
Cash used for financing activities	(3,028)	(3,405)	(6,262)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(45)	(237)	(99)
Summary			
Increase (decrease) in cash, cash equivalents and restricted cash	(892)	907	(2,075)
Cash, cash equivalents and restricted cash at beginning of year	3,940	3,033	5,108
Cash, cash equivalents and restricted cash at end of year	$ 3,048	$ 3,940	$ 3,033
Less: Restricted cash and cash equivalents, included in "Other current assets"	61	54	45
Cash and cash equivalents at end of year	$ 2,987	$ 3,886	$ 2,988

See Notes to the Consolidated Financial Statements.

The Dow Chemical Company and Subsidiaries

Consolidated Statements of Equity

(In millions, except per share amounts) For the years ended Dec 31,	*2023*	*2022*	*2021*
Common Stock			
Balance at beginning and end of year	$ —	$ —	$ —
Additional Paid-in Capital			
Balance at beginning of year	8,627	8,159	7,603
Issuance of parent company stock - Dow Inc.	188	212	320
Stock-based compensation and allocation of ESOP shares	276	258	236
Other	—	(2)	—
Balance at end of year	9,091	8,627	8,159
Retained Earnings			
Balance at beginning of year	19,472	19,288	16,300
Net income available for The Dow Chemical Company's common stockholder	556	4,583	6,274
Dividends to Dow Inc.	(2,510)	(4,375)	(3,264)
Other	(23)	(24)	(22)
Balance at end of year	17,495	19,472	19,288
Accumulated Other Comprehensive Loss			
Balance at beginning of year	(7,139)	(8,977)	(10,855)
Other comprehensive income (loss)	(542)	1,838	1,878
Balance at end of year	(7,681)	(7,139)	(8,977)
Unearned ESOP Shares			
Balance at beginning of year	—	(15)	(49)
Allocation of ESOP shares	—	15	34
Balance at end of year	—	—	(15)
The Dow Chemical Company's stockholder's equity	18,905	20,960	18,455
Noncontrolling Interests	501	529	574
Total Equity	$ 19,406	$ 21,489	$ 19,029

See Notes to the Consolidated Financial Statements.

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NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation and Basis of Presentation

The accompanying consolidated financial statements of Dow Inc. and TDCC were prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and include the assets, liabilities, revenues and expenses of all majority-owned subsidiaries over which Dow exercises control and, when applicable, entities for which Dow has a controlling financial interest or is the primary beneficiary. Intercompany transactions and balances are eliminated in consolidation. Investments in nonconsolidated affiliates (20-50 percent owned companies or less than 20 percent owned companies over which significant influence is exercised) are primarily accounted for using the equity method.

Dow Inc. owns all of the outstanding common shares of TDCC. As a result of the parent/subsidiary relationship between Dow Inc. and TDCC, and considering that the financial statements and disclosures of each company are substantially similar, the companies are filing a combined report for this Annual Report on Form 10-K. The information reflected in the report is equally applicable to both Dow Inc. and TDCC, except where otherwise noted. Transactions between TDCC and Dow Inc. are treated as related party transactions for TDCC. See Note 23 for additional information.

The Company 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. Corporate contains the reconciliation between the totals for the operating segments and the Company's totals. See Note 24 for additional information.

Except as otherwise indicated by the context, the term "Union Carbide" means Union Carbide Corporation and the term "Dow Silicones" means Dow Silicones Corporation, both wholly owned subsidiaries of the Company.

Use of Estimates in Financial Statement Preparation
The preparation of financial statements in accordance with U.S. GAAP requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The Company's consolidated financial statements include amounts that are based on management's best estimates and judgments. Actual results could differ from those estimates.

Significant Accounting Policies
Asbestos-Related Matters
Accruals for asbestos-related matters, including defense and processing costs, are recorded based on an analysis of claim and resolution activity, defense spending, and pending and future claims. These accruals are assessed at each balance sheet date to determine if the asbestos-related liability remains appropriate. Accruals for asbestos-related matters are included in the consolidated balance sheets in "Accrued and other current liabilities" and "Asbestos-related liabilities - noncurrent." See Note 14 for additional information.

Legal Costs
The Company expenses legal costs as incurred, with the exception of defense and processing costs associated with asbestos-related matters.

Foreign Currency Translation
The local currency has been primarily used as the functional currency throughout the world. Translation gains and losses of those operations that use local currency as the functional currency are included in the consolidated balance sheets in "Accumulated other comprehensive loss" ("AOCL"). For certain subsidiaries, the U.S. dollar is used as the functional currency. This occurs when the subsidiary operates in an economic environment where the products produced and sold are tied to U.S. dollar-denominated markets, or when the foreign subsidiary operates in a hyper-inflationary environment. Where the U.S. dollar is used as the functional currency, foreign currency translation gains and losses are reflected in income.

Environmental Matters
Accruals for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current law and existing technologies. These accruals are adjusted periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. Accruals for environmental liabilities are included in the consolidated balance sheets in "Accrued and other current liabilities" and "Other noncurrent obligations" at undiscounted amounts. Accruals for related insurance or other third-party recoveries for environmental liabilities are recorded when it is probable that a recovery will be realized and are included in the consolidated balance sheets in "Accounts and notes receivable - Other" or "Noncurrent receivables."

Environmental costs are capitalized if the costs extend the life of the property, increase its capacity and/or mitigate or prevent contamination from future operations. Environmental costs are also capitalized in recognition of legal asset retirement obligations resulting from the acquisition, construction and/or normal operation of a long-lived asset. Costs related to environmental contamination treatment and cleanup are charged to expense. Estimated future incremental operations, maintenance and management costs directly related to remediation are accrued when such costs are probable and reasonably estimable.

Cash and Cash Equivalents
Cash and cash equivalents include time deposits and investments with maturities of three months or less at the time of purchase.

Financial Instruments
The Company calculates the fair value of financial instruments using quoted market prices when available. When quoted market prices are not available for financial instruments, the Company uses standard pricing models with market-based inputs that take into account the present value of estimated future cash flows.

The Company utilizes derivatives to manage exposures to foreign currency exchange rates, commodity prices and interest rate risk. The fair values of all derivatives are recognized as assets or liabilities at the balance sheet date. Changes in the fair values of these instruments are reported in income or AOCL, depending on the use of the derivative and whether the Company has elected hedge accounting treatment.

Gains and losses on derivatives that are designated and qualify as cash flow hedging instruments are recorded in AOCL until the underlying transactions are recognized in income. Gains and losses on derivative and non-derivative instruments used as hedges of the Company's net investment in foreign operations are recorded in AOCL as part of the cumulative translation adjustment.

Gains and losses on derivatives designated and qualifying as fair value hedging instruments, as well as the offsetting losses and gains on the hedged items, are reported in income in the same accounting period. Derivatives not designated as hedging instruments are marked-to-market at the end of each accounting period with the results included in income.

Inventories
Inventories are stated at the lower of cost or net realizable value. The method of determining cost for each subsidiary varies among last-in, first-out ("LIFO"); first-in, first-out ("FIFO"); and average cost, and is used consistently from year to year. See Note 8 for additional information.

The Company routinely exchanges and swaps raw materials and finished goods with other companies to reduce delivery time, freight and other transportation costs. These transactions are treated as non-monetary exchanges and are valued at cost.

Property
Land, buildings and equipment are carried at cost less accumulated depreciation or amortization. Property under finance lease agreements is carried at the present value of lease payments over the lease term less accumulated amortization. Depreciation is based on the estimated service lives of depreciable assets and is calculated using the straight-line method. Fully depreciated assets are retained in property and accumulated depreciation accounts until they are disposed. In the case of disposals, assets and related accumulated depreciation are removed from the accounts, and the net amounts, less proceeds from disposal, are included in income.

Impairment and Disposal of Long-Lived Assets
The Company evaluates long-lived assets (property, finite-lived intangible assets and lease right-of-use assets) for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When undiscounted future cash flows are not expected to be sufficient to recover an asset's carrying amount, the asset is written down to its fair value based on bids received from third parties or a discounted cash flow analysis based on market participant assumptions.

Long-lived assets to be disposed of by sale, if material, are classified as held for sale and reported at the lower of carrying amount or fair value less cost to sell, and depreciation/amortization is ceased. Long-lived assets to be disposed of other than by sale are classified as held and used until they are disposed of and reported at the lower of carrying amount or fair value, and depreciation/amortization is recognized over the remaining useful life of the assets.

Goodwill and Other Intangible Assets
The Company records goodwill when the purchase price of a business combination exceeds the estimated fair value of net identified tangible and intangible assets acquired. Goodwill is tested for impairment at the reporting unit level annually in the fourth quarter, or more frequently when events or changes in circumstances indicate that the fair value of a reporting unit has more likely than not declined below its carrying value. When testing goodwill for impairment, the Company may first assess qualitative factors. If an initial qualitative assessment identifies that it is more likely than not that the fair value of a reporting unit is less than its carrying value, additional quantitative testing is performed. The Company may also elect to skip the qualitative testing and proceed directly to the quantitative testing. If the quantitative testing indicates that goodwill is impaired, an impairment charge is recognized based on the difference between the reporting unit's carrying value and its fair value. The Company primarily utilizes a discounted cash flow methodology to calculate the fair value of its reporting units.

Finite-lived intangible assets such as developed technology, customer-related, trademarks, tradenames and software, are amortized over their estimated useful lives, generally on a straight-line basis for periods ranging primarily from 3 to 20 years.

Asset Retirement Obligations
The Company records asset retirement obligations as incurred and reasonably estimable, including obligations for which the timing and/or method of settlement are conditional on a future event that may or may not be within the control of the Company. The fair values of obligations are recorded as liabilities on a discounted basis and are accreted over time for the change in present value. Costs associated with the liabilities are capitalized and amortized over the estimated remaining useful life of the assets.

Investments
Investments in debt securities, primarily held by the Company's insurance operations, are classified as trading, available-for-sale or held-to-maturity. Investments classified as trading are reported at fair value with unrealized gains and losses related to mark-to-market adjustments included in income. Those classified as available-for-sale are reported at fair value with unrealized gains and losses recorded in AOCL. Those classified as held-to-maturity are recorded at amortized cost. The cost of investments sold is determined by FIFO or specific identification.

Investments in equity securities with a readily determinable fair value are reported at fair value with unrealized gains and losses related to mark-to-market adjustments included in income. Equity securities without a readily determinable fair value are accounted for at cost, adjusted for impairments and observable price changes in orderly transactions.

The Company routinely reviews its investments for declines in fair value below the cost basis. When events or changes in circumstances indicate the carrying value of an asset may not be recoverable, the security is written down, establishing a new cost basis.

Leases
The Company determines whether a contract contains a lease at contract inception. A contract contains a lease if there is an identified asset and the Company has the right to control the asset.

Operating lease right-of-use (“ROU”) assets represent the Company's right to use an underlying asset for the lease term, and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company uses the incremental borrowing rate in determining the present value of lease payments, unless the implicit rate is readily determinable. If lease terms include options to extend or terminate the lease, the ROU asset and lease liability are measured based on the reasonably certain decision. Leases with a term of 12 months or less at the commencement date are not recognized on the balance sheet and are expensed as incurred.

The Company has lease agreements with lease and non-lease components, which are accounted for as a single lease component for nearly all classes of leased assets for which the Company is the lessee. Additionally, for certain equipment leases, the portfolio approach is applied to account for the operating lease ROU assets and lease liabilities. In the consolidated statements of income, lease expense for operating lease payments is recognized on a straight-line basis over the lease term. For finance leases, interest expense is recognized on the lease liability and the ROU asset is amortized over the lease term.

Some leasing arrangements require variable payments that are dependent upon usage or output, or may vary for other reasons, such as insurance or tax payments. Variable lease payments are recognized as incurred and are not presented as part of the ROU asset or lease liability. See Note 15 for additional information.

Revenue
The Company recognizes revenue when its customer obtains control of promised goods or services in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition, the Company performs the following five steps: (1) identify the contract(s) with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when (or as) the entity satisfies a performance obligation. See Note 3 for additional information.

Revenue related to the Company's insurance operations includes third-party insurance premiums, which are earned over the terms of the related insurance policies and reinsurance contracts.

Severance Costs
The Company routinely reviews its operations around the world in an effort to ensure competitiveness across its businesses and geographic regions. When the reviews result in a workforce reduction related to the shutdown of facilities or other optimization activities, severance benefits are provided to employees primarily under the Company's ongoing benefit arrangements. These severance costs are accrued once management commits to a plan of termination and it becomes probable that employees will be entitled to benefits at amounts that can be reasonably estimated.

Government Assistance
The Company receives grants, subsidies and incentives (collectively "incentives") from governments in various jurisdictions in support of its operations and capital projects. The incentives are recorded when there is reasonable assurance that the Company will comply with the terms and conditions attached to the incentives and that the incentives will be received. Incentives are recognized on a systematic basis over the periods in which the related cost or expenditures occur and are included in the Company's financial statements as reductions of "Cost of sales" or "Research and development expenses" in the Company's consolidated statements of income or as a reduction of "Property" in the consolidated balance sheets.

In 2023, the Company received $183 million of government incentives primarily related to the cost of energy used in the Company's production processes ($260 million in 2022). These incentives, from various governments, are typically based on level of energy consumption and are recorded as a reduction to "Cost of sales" in the consolidated statements of income and as "Accounts and notes receivable - Other" until received or as a reduction to "Accounts payable - Trade" in the consolidated balance sheets. Other forms of government assistance received by the Company in 2023 and 2022 were not material.

Income Taxes
The Company accounts for income taxes using the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the carrying amounts and tax bases of assets and liabilities using enacted tax rates. The effect of a change in tax rates on deferred tax assets or liabilities is recognized in income in the period that includes the enactment date. The Company uses the portfolio approach for releasing income tax effects from AOCL.

The Company recognizes the financial statement effects of an uncertain income tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. The Company accrues for other tax contingencies when it is probable that a liability to a taxing authority has been incurred and the amount of the contingency can be reasonably estimated. The current portion of uncertain income tax positions is included in "Income taxes payable" and the long-term portion is included in "Other noncurrent obligations" in the consolidated balance sheets.

Provision is made for taxes on undistributed earnings of foreign subsidiaries and related companies to the extent that such earnings are not deemed to be permanently invested.

Earnings per Common Share
The calculation of earnings per common share is based on the weighted-average number of the Company's common shares outstanding for the applicable period. The calculation of diluted earnings per common share reflects the effect of all potential common shares that were outstanding during the respective periods, unless the effect of doing so is antidilutive.

TDCC Dividends
TDCC is a wholly owned subsidiary of Dow Inc. and TDCC's Board of Directors determines whether or not there will be a dividend distribution to Dow Inc. See Notes 16 and 23 for additional information.

NOTE 2 – RECENT ACCOUNTING GUIDANCE

Recently Adopted Accounting Guidance

In 2023, the Company adopted the disclosure requirements of Accounting Standards Update ("ASU") 2022-04, "Liabilities — Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations," including early adoption of the requirement to disclose rollforward information on a prospective basis. The ASU, which is intended to enhance the transparency of supplier finance programs, requires buyers in a supplier finance program to disclose sufficient information about the program to allow a user of financial statements to understand the program's nature, activity during the period, changes from period to period, and potential magnitude. See Note 5 for disclosures related to the Company's supplier finance program.

Accounting Guidance Issued But Not Adopted at December 31, 2023

In March 2023, the Financial Accounting Standards Board ("FASB") issued ASU 2023-02, "Investments — Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method." The amendments permit reporting entities to elect to account for their tax equity investments using the proportional amortization method if certain conditions are met. Under the proportional amortization method, an entity amortizes the initial cost of the investment in proportion to the income tax credits and other income tax benefits received and recognizes the net amortization and income tax credits and other income tax benefits in the income statement as a component of income tax expense (benefit). The amendments also require certain disclosures in annual and interim reporting periods about an entity's tax credit programs. The new standard is effective for public companies for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, and the amendments must be applied on either a modified retrospective or a retrospective basis. Early adoption is permitted. The adoption of this guidance is not expected to have a material impact on the consolidated financial statements.

In November 2023, the FASB issued ASU 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures," which is intended to improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses, allowing financial statement users to better understand the components of a segment's profit or loss to assess potential future cash flows for each reportable segment and the entity as a whole. The amendments expand a public entity's segment disclosures by requiring disclosure of significant segment expenses that are regularly provided to the chief operating decision maker ("CODM"), clarifying when an entity may report one or more additional measures to assess segment performance, requiring enhanced interim disclosures, providing new disclosure requirements for entities with a single reportable segment, and requiring other new disclosures. The amendments are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, and early adoption is permitted. Although the ASU only requires additional disclosures about the Company's operating segments, the Company is currently evaluating the impact of adopting this guidance on the consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures," which is intended to enhance the transparency, decision usefulness and effectiveness of income tax disclosures. The amendments in this ASU require a public entity to disclose a tabular tax rate reconciliation, using both percentages and currency, with specific categories. A public entity is also required to provide a qualitative description of the states and local jurisdictions that make up the majority of the effect of the state and local income tax category and the net amount of income taxes paid, disaggregated by federal, state and foreign taxes and also disaggregated by individual jurisdictions. The amendments also remove certain disclosures that are no longer considered cost beneficial. The amendments are effective prospectively for annual periods beginning after December 15, 2024, and early adoption and retrospective application are permitted. Although the ASU only modifies the Company's required income tax disclosures, the Company is currently evaluating the impact of adopting this guidance on the consolidated financial statements.

NOTE 3 – REVENUE

The majority of the Company's revenue is derived from product sales. In 2023, 98 percent of the Company's revenue related to product sales (99 percent in 2022 and 2021). The remaining sales were primarily related to the Company's insurance operations and licensing of patents and technologies.

Disaggregation of Revenue

Dow disaggregates its revenue from contracts with customers by operating segment and business, as the Company believes it best depicts the nature, amount, timing and uncertainty of its revenue and cash flows. See details in the tables below:

Net Trade Sales by Segment and Business In millions	*2023*	*2022*	*2021*
Hydrocarbons & Energy	$ 6,566	$ 9,414	$ 8,149
Packaging and Specialty Plastics	16,583	19,846	19,979
Packaging & Specialty Plastics	$ 23,149	$ 29,260	$ 28,128
Industrial Solutions	$ 4,207	$ 5,682	$ 5,139
Polyurethanes & Construction Chemicals	8,316	10,907	11,700
Others	15	17	12
Industrial Intermediates & Infrastructure	$ 12,538	$ 16,606	$ 16,851
Coatings & Performance Monomers	$ 3,337	$ 4,051	$ 4,050
Consumer Solutions	5,160	6,713	5,622
Performance Materials & Coatings	$ 8,497	$ 10,764	$ 9,672
Corporate	$ 438	$ 272	$ 317
Total	$ 44,622	$ 56,902	$ 54,968

Net Trade Sales by Geographic Region In millions	*2023*	*2022*	*2021*
U.S. & Canada	$ 16,640	$ 20,945	$ 19,613
EMEAI [1]	14,537	19,631	19,746
Asia Pacific	8,266	10,344	10,043
Latin America	5,179	5,982	5,566
Total	$ 44,622	$ 56,902	$ 54,968

1. Europe, Middle East, Africa and India.

Product Sales

Product sales consist of sales of the Company's products to manufacturers and distributors. The Company considers order confirmations or purchase orders, which in some cases are governed by master supply agreements, to be contracts with a customer. Product sale contracts are generally short-term contracts where the time between order confirmation and satisfaction of all performance obligations is less than one year. However, the Company has some long-term contracts which can span multiple years.

Revenues from product sales are recognized when the customer obtains control of the product, which occurs at a point in time, usually upon shipment, with payment terms typically in the range of 30 to 60 days after invoicing, depending on business and geographic region. When the Company performs shipping and handling activities after the transfer of control to the customer (e.g., when control transfers prior to shipment), these are considered fulfillment activities, and accordingly, the costs are accrued when the related revenue is recognized. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenues. The Company elected to use the practical expedient to expense cash and non-cash sales incentives, as the amortization period for the costs to obtain the contract would have been one year or less.

Certain long-term contracts include a series of distinct goods that are delivered continuously to the customer through a pipeline (e.g., feedstocks). For these types of product sales, the Company invoices the customer in an amount that directly corresponds with the value to the customer of the Company's performance to date. As a result, the Company recognizes revenue based on the amount billable to the customer in accordance with the right to invoice practical expedient.

The transaction price includes estimates for reductions in revenue from customer rebates and right of returns on product sales. These amounts are estimated based upon the most likely amount of consideration to which the customer will be entitled. All estimates are based on historical experience, anticipated performance and the Company's best judgment at the time to the extent it is probable that a significant reversal of revenue recognized will not occur. All estimates for variable consideration are reassessed periodically. The Company elected the practical expedient to not adjust the amount of consideration for the effects of a significant financing component for all instances in which the period between payment and transfer of the goods will be one year or less.

For contracts with multiple performance obligations, the Company allocates the transaction price to each performance obligation based on the relative standalone selling price. The standalone selling price is the observable price which depicts the price as if sold to a similar customer in similar circumstances.

Patents, Trademarks and Licenses
The Company enters into licensing arrangements in which it licenses certain rights of its patents and technology to customers. Revenue from the majority of the Company's licenses for patents and technology is derived from sales-based royalties. The Company estimates the amount of sales-based royalties it expects to be entitled to based on historical sales to the customer. For the remaining revenue from licensing arrangements, payments are typically received from the Company's licensees based on billing schedules established in each contract. Revenue is recognized when the performance obligation is satisfied.

Remaining Performance Obligations
Remaining performance obligations represent the transaction price allocated to unsatisfied or partially unsatisfied performance obligations. At December 31, 2023, the Company had unfulfilled performance obligations of $744 million ($840 million at December 31, 2022) related to the licensing of technology and expects revenue to be recognized for the remaining performance obligations over the next seven years.

The Company has additional remaining performance obligations for product sales that have expected durations of one year or less, product sales of materials delivered through a pipeline for which the Company has elected the "right to invoice" practical expedient, and variable consideration attributable to royalties for licenses of patents and technology. The Company has received advance payments from customers related to long-term supply agreements that are deferred and recognized over the life of the contract, with remaining contract terms that range up to 21 years. The Company will have rights to future consideration for revenue recognized when product is delivered to the customer. These payments are included in "Accrued and other current liabilities" and "Other noncurrent obligations" in the consolidated balance sheets.

Contract Assets and Liabilities
The Company receives payments from customers based upon contractual billing schedules. Accounts receivable are recorded when the right to consideration becomes unconditional. Contract assets include amounts related to the Company's contractual right to consideration for completed performance obligations not yet invoiced. Contract liabilities include payments received in advance of performance under the contract and are recognized in revenue when the performance obligations are met. "Contract liabilities - current" primarily reflects deferred revenue from prepayments from customers for product to be delivered in 12 months or less and royalty payments that are deferred and will be recognized in 12 months or less. "Contract liabilities - noncurrent" includes advance payments that the Company has received from customers related to long-term supply agreements and royalty payments that are deferred and recognized over the life of the contract.

Revenue recognized in 2023 from amounts included in contract liabilities at the beginning of the period was approximately $315 million (approximately $250 million in 2022 and $295 million in 2021). In 2023, the amount of contract assets reclassified to receivables as a result of the right to the transaction consideration becoming unconditional was approximately $45 million (approximately $15 million in 2022). The Company did not recognize any asset impairment charges related to contract assets in 2023 (immaterial in 2022 and no impairment charges in 2021).

The following table summarizes contract assets and liabilities at December 31, 2023 and 2022:

Contract Assets and Liabilities at Dec 31 In millions	*Balance Sheet Classification*	*2023*	*2022*
Accounts and notes receivable - trade	Accounts and notes receivable - trade	$ 4,718	$ 5,611
Contract assets - current	Other current assets	$ 13	$ 48
Contract assets - noncurrent	Deferred charges and other assets	$ 4	$ 16
Contract liabilities - current [1]	Accrued and other current liabilities	$ 195	$ 275
Contract liabilities - noncurrent [2]	Other noncurrent obligations	$ 1,642	$ 1,725

1. The decrease from December 31, 2022 to December 31, 2023 was primarily due to recognition of deferred royalty payments.
2. The decrease from December 31, 2022 to December 31, 2023 was primarily due to recognition of revenue on long-term product supply agreements.

NOTE 4 – RESTRUCTURING AND ASSET RELATED CHARGES - NET

The "Restructuring and asset related charges - net" line in the consolidated statements of income is used to record charges for restructuring programs and other asset related charges, which includes other asset impairments.

Restructuring Programs

2023 Restructuring Program

On January 25, 2023, the Board approved restructuring actions to achieve the Company's structural cost improvement initiatives in response to the continued economic impact from the global recessionary environment and to enhance its agility and long-term competitiveness across the economic cycle. As a result of these actions the Company recorded pretax restructuring charges of $541 million in the first quarter of 2023, additional pretax restructuring charges of $8 million in the second quarter of 2023, and a $14 million net credit adjustment in the fourth quarter of 2023. These actions are expected to be substantially complete by the end of 2024.

The following table summarizes the activities related to the 2023 Restructuring Program, including segment information:

2023 Restructuring Program In millions	*Severance and Related Benefit Costs*	*Asset Write-downs and Write-offs*	*Total*
Packaging & Specialty Plastics	$ —	$ 1	$ 1
Industrial Intermediates & Infrastructure	—	50	50
Performance Materials & Coatings	—	49	49
Corporate	344	91	435
Total restructuring charges	$ 344	$ 191	$ 535
Charges against the reserve	—	(191)	(191)
Cash payments	(222)	—	(222)
Reserve balance at Dec 31, 2023	$ 122	$ —	$ 122

At December 31, 2023, $101 million of the reserve balance was included in "Accrued and other current liabilities" and $21 million was included in "Other noncurrent obligations" in the consolidated balance sheets.

The Company recorded pretax restructuring charges of $535 million inception-to-date under the 2023 Restructuring Program, consisting of severance and related benefit costs of $344 million and asset write-downs and write-offs of $191 million.

Severance and Related Benefit Costs
Severance benefits are provided to employees primarily under Dow's ongoing benefit arrangements and are accrued against the Corporate segment once management commits to a plan of termination. The 2023 Restructuring Program included a charge for severance and related benefit costs of $344 million for a global workforce reduction of approximately 2,000 employees. The majority of separations occurred by the end of the second quarter of 2023 with the remaining occurring primarily through the end of 2024.

Asset Write-downs and Write-offs
The 2023 Restructuring Program included charges related to the write-down and write-off of assets totaling $191 million. Details regarding the asset write-downs and write-offs are as follows:

- Industrial Intermediates & Infrastructure charges relate to the shutdown of certain polyurethanes assets and the write-off of other assets. The majority of the impacted facilities are expected to be shutdown by the end of 2024.
- Performance Materials & Coatings recorded charges to rationalize its asset footprint by shutting down certain coatings assets. These facilities are expected to be shutdown by the end of 2024.
- Corporate recorded charges related to the write-down of Company owned and leased, non-manufacturing facilities, primarily related to office space rationalization.

Restructuring implementation costs, primarily decommissioning and demolition activities related to asset actions and costs associated with the Company's productivity and efficiency actions, are expected to result in additional cash expenditures of approximately $285 million, primarily through the end of 2024.

Asset Related Charges
In 2023, the Company recorded pretax asset related credits of $7 million in Corporate related to a prior restructuring program.

In 2022, the Company recorded pretax asset related charges of $118 million due to the Russia and Ukraine conflict and the expectation that certain assets would not be recoverable. These charges included the write-down of inventory, the recording of bad debt reserves and the impairment of other assets. Asset related charges by segment in 2022 were as follows: $8 million in Packaging & Specialty Plastics, $73 million in Industrial Intermediates & Infrastructure, $6 million in Performance Materials & Coatings and $31 million in Corporate.

NOTE 5 – SUPPLEMENTARY INFORMATION

Dow Inc. Sundry Income (Expense) – Net In millions	*2023*	*2022*	*2021*
Non-operating pension and other postretirement benefit plan net (cost) credits [1]	$ (264)	$ 358	$ 332
Foreign exchange losses [2]	(340)	(117)	(8)
Gain on sales of other assets and investments [3]	80	78	105
Asset impairments and related costs [4]	(18)	—	—
Gain (loss) on early extinguishment of debt [5]	5	(8)	(574)
Indemnification and other transaction related costs [6]	26	4	30
Gain related to Nova legal matter [7]	106	321	—
Dow Silicones breast implant liability adjustment	—	60	—
Luxi arbitration award [7]	—	—	54
Gain on divestitures and asset sale [8]	—	—	16
Other - net	125	31	10
Total sundry income (expense) – net	$ (280)	$ 727	$ (35)

1. The year ended December 31, 2023, includes pretax pension settlement charges of $642 million related to the transfer of certain plan benefit obligations to insurance companies. See Note 18 for additional information about the Company's pension and other postretirement plans, including pension settlement charges.
2. Foreign exchange losses in 2023 relate primarily to exposures in the Argentine peso, including $109 million related to the devaluation of the Argentine peso by the Argentina government in December 2023. Foreign exchange losses in 2022 relate primarily to exposures in the Argentine peso.
3. The year ended December 31, 2023, includes gains associated with the sale of shares of a previously impaired equity method investment.
4. Certain obligations associated with a previously impaired equity method investment.
5. See Note 13 for additional information.
6. Primarily related to charges associated with agreements entered into with DuPont de Nemours, Inc. ("DuPont") and Corteva, Inc. ("Corteva") as part of the separation and distribution.
7. See Note 14 for additional information.
8. The year ended December 31, 2021, includes post-closing adjustments on a previous divestiture, related to Packaging & Specialty Plastics.

Sundry income (expense) - net for TDCC for the years ended December 31, 2023, 2022 and 2021, is substantially the same as that of Dow Inc., with the primary difference related to indemnification and other transaction related costs recorded on Dow Inc. Therefore, TDCC sundry income (expense) - net is not disclosed separately.

Other Investments

The Company has investments in company-owned life insurance policies ("COLI"), which are recorded at their cash surrender value as of each balance sheet date, as provided below:

Investments in Company-Owned Life Insurance In millions	*Dec 31, 2023*	*Dec 31, 2022*
Gross cash value	$ 623	$ 708
Less: Existing drawdowns [1]	97	—
Investments in company-owned life insurance [2]	$ 526	$ 708

1. Classified as "Proceeds from sales and maturities of investments" in the consolidated statements of cash flows.
2. Classified as "Other investments" in the consolidated balance sheets.

The Company has the ability to monetize its investment in its COLI policies as an additional source of liquidity. At December 31, 2023, the Company had monetized $97 million of its existing COLI policies' value (zero at December 31, 2022).

Supplier Finance Program

The Company facilitates a supply chain financing ("SCF") program in the ordinary course of business in order to extend payment terms with vendors. Under the terms of this program, a vendor can voluntarily enter into an agreement with a participating financial intermediary to sell its receivables due from the Company. The vendor receives payment from the financial intermediary, and the Company pays the financial intermediary on the terms originally negotiated with the vendor, which generally range from 90 to 120 days. The vendor negotiates the terms of the agreements directly with the financial intermediary and the Company is not a party to that agreement. The financial intermediary may allow the participating vendor to utilize the Company's creditworthiness in establishing credit spreads and associated costs, which may provide the vendor with more favorable terms than they would be able to secure on their own. The Company does not provide guarantees related to the SCF program. At December 31, 2023, outstanding obligations confirmed as valid under the SCF program were $285 million ($267 million at December 31, 2022), included in "Accounts payable – Trade" in the consolidated balance sheets.

The following table summarizes the outstanding obligations confirmed as valid under the SCF program for the year ended December 31, 2023:

Supplier Finance Program Activity In millions	*2023*
Confirmed obligations outstanding at Jan 1	$ 267
Invoices confirmed to financial intermediary	1,308
Confirmed invoices paid to financial intermediary	(1,290)
Confirmed obligations outstanding at Dec 31	$ 285

Accrued and Other Current Liabilities

"Accrued and other current liabilities" were $2,704 million and $2,575 million at December 31, 2023 and $2,770 million and $2,613 million at December 31, 2022, for Dow Inc. and TDCC, respectively. Accrued payroll, which is a component of "Accrued and other current liabilities" and includes liabilities related to payroll, performance-based compensation and severance, was $714 million at December 31, 2023 and $650 million at December 31, 2022. No other components of "Accrued and other current liabilities" were more than 5 percent of total current liabilities.

Supplemental Cash Flow Information

The following table shows cash paid for interest and income taxes for the years ended December 31, 2023, 2022 and 2021:

Supplemental Cash Flow Information In millions	*2023*	*2022*	*2021*
Cash paid during year for:			
Interest	$ 800	$ 675	$ 801
Income taxes	$ 735	$ 793	$ 731

NOTE 6 – INCOME TAXES

The financial statements for Dow Inc. and TDCC are substantially similar, including the reporting of current and deferred tax expense (benefit), provision for income taxes, and deferred tax asset and liability balances. As a result, the following income tax discussion pertains to Dow Inc. only.

Geographic Allocation of Income and Provision (Credit) for Income Taxes In millions	*2023*	*2022*	*2021*
Income (loss) before income taxes			
Domestic	$ (602)	$ 2,383	$ 1,523
Foreign	1,258	3,707	6,622
Income before income taxes	$ 656	$ 6,090	$ 8,145
Current tax expense (benefit)			
Federal	$ 249	$ 434	$ (46)
State and local	18	82	48
Foreign	951	855	1,460
Total current tax expense	$ 1,218	$ 1,371	$ 1,462
Deferred tax expense (benefit)			
Federal	$ (445)	$ 63	$ 130
State and local	3	1	26
Foreign	(780)	15	122
Total deferred tax expense (benefit)	$ (1,222)	$ 79	$ 278
Provision (credit) for income taxes	$ (4)	$ 1,450	$ 1,740
Net income	$ 660	$ 4,640	$ 6,405

Reconciliation to U.S. Statutory Rate	*2023*	*2022*	*2021*
Statutory U.S. federal income tax rate	21.0 %	21.0 %	21.0 %
Equity earnings effect	4.2	(1.2)	(2.2)
Foreign income taxed at rates other than the statutory U.S. federal income tax rate	8.3	(1.4)	(1.3)
U.S. tax effect of foreign earnings and dividends	(13.0)	1.2	1.7
Unrecognized tax benefits	33.1	1.3	4.7
Changes in valuation allowances	18.8	(2.8)	2.6
Federal tax accrual adjustment	(21.2)	0.6	(5.3)
State and local income taxes	3.0	2.8	0.2
Change in tax basis in foreign assets [1]	(56.0)	—	—
Other - net	1.2	2.3	—
Effective tax rate	(0.6)%	23.8 %	21.4 %

1. The 2023 impact primarily represents the initial recognition of tax basis in intangible assets in foreign jurisdictions and the related valuation allowance.

Deferred Tax Balances at Dec 31	2023		2022	
In millions	Assets	Liabilities	Assets	Liabilities
Property	$ 404	$ 2,663	$ 505	$ 3,001
Tax loss and credit carryforwards	1,754	—	1,472	—
Postretirement benefit obligations	983	196	749	239
Other accruals and reserves	1,923	521	1,497	279
Intangibles [1]	2,090	331	36	415
Inventory	114	272	129	278
Investments	166	34	116	41
Other – net	733	115	999	131
Subtotal	$ 8,167	$ 4,132	$ 5,503	$ 4,384
Valuation allowances [1]	(2,948)	—	(1,269)	—
Total	$ 5,219	$ 4,132	$ 4,234	$ 4,384

1. The change in 2023 primarily represents the initial recognition of tax basis in intangible assets in foreign jurisdictions and the related valuation allowance.

Operating Loss and Tax Credit Carryforwards at Dec 31	2023	2022
In millions	Assets	Assets
Operating loss carryforwards		
Expire within 5 years	$ 213	$ 158
Expire after 5 years or indefinite expiration	727	752
Total operating loss carryforwards	$ 940	$ 910
Tax credit carryforwards		
Expire within 5 years	$ 80	$ 77
Expire after 5 years or indefinite expiration	317	96
Total tax credit carryforwards	$ 397	$ 173
Capital loss carryforwards		
Expire within 5 years	$ 417	$ 389
Total tax loss and tax credit carryforwards	$ 1,754	$ 1,472

Undistributed earnings of foreign subsidiaries and related companies that are deemed to be permanently invested amounted to $7,148 million at December 31, 2023 and $6,013 million at December 31, 2022. Undistributed earnings are subject to certain taxes upon repatriation, primarily where foreign withholding taxes apply. It is not practicable to calculate the unrecognized deferred tax liability on undistributed earnings.

The following table provides a reconciliation of the Company's unrecognized tax benefits:

Total Gross Unrecognized Tax Benefits In millions	*2023*	*2022*	*2021*
Total unrecognized tax benefits at Jan 1	$ 520	$ 580	$ 373
Decreases related to positions taken on items from prior years	(58)	(47)	(3)
Increases related to positions taken on items from prior years	89	53	187
Increases related to positions taken in the current year	77	46	44
Settlement of uncertain tax positions with tax authorities	(109)	(111)	(18)
Decreases due to expiration of statutes of limitations	(11)	—	(1)
Foreign exchange loss (gain)	5	(1)	(2)
Total unrecognized tax benefits at Dec 31	$ 513	$ 520	$ 580
Total unrecognized tax benefits that, if recognized, would impact the effective tax rate	$ 513	$ 520	$ 501
Total amount of interest and penalties expense (benefit) recognized in "Provision for income taxes"	$ 126	$ (27)	$ 359
Total accrual for interest and penalties recognized in the consolidated balance sheets	$ 561	$ 498	$ 502

The Company files tax returns in multiple jurisdictions. These returns are subject to examination and possible challenge by the tax authorities. Open years contain matters that could be subject to differing interpretations of applicable tax laws and regulations as they relate to the amount, character, timing or inclusion of revenue and expenses or the sustainability of income tax credits for a given audit cycle. The ultimate resolution of such uncertainties is not expected to have a material impact on the Company's results of operations. The earliest open tax years are 2004 for state income taxes and 2007 for federal income taxes in the United States and 2011 for taxes in foreign jurisdictions.

NOTE 7 - EARNINGS PER SHARE CALCULATIONS

The following tables provide earnings per share calculations of Dow Inc. for the years ended December 31, 2023, 2022 and 2021. In accordance with the accounting guidance for earnings per share, earnings per share of TDCC is not presented as this information is not required in financial statements of wholly owned subsidiaries.

Net Income for Earnings Per Share Calculations In millions	*2023*	*2022*	*2021*
Net income	$ 660	$ 4,640	$ 6,405
Net income attributable to noncontrolling interests	71	58	94
Net income attributable to participating securities [1]	11	24	32
Net income attributable to common stockholders	$ 578	$ 4,558	$ 6,279

1. Restricted stock units are considered participating securities due to the Company's practice of paying dividend equivalents on unvested shares.

Earnings Per Share - Basic and Diluted Dollars per share	*2023*	*2022*	*2021*
Earnings per common share - basic	$ 0.82	$ 6.32	$ 8.44
Earnings per common share - diluted	$ 0.82	$ 6.28	$ 8.38

Share Count Information Shares in millions	*2023*	*2022*	*2021*
Weighted-average common shares outstanding - basic	705.7	721.0	743.6
Plus dilutive effect of equity compensation plans	3.3	4.6	5.4
Weighted-average common shares outstanding - diluted	709.0	725.6	749.0
Stock options and restricted stock units excluded from EPS calculations [1]	9.6	7.6	5.8

1. These outstanding options to purchase shares of common stock and restricted stock units were excluded from the calculation of diluted earnings per share because the effect of including them would have been antidilutive.

NOTE 8 – INVENTORIES

The following table provides a breakdown of inventories:

Inventories at Dec 31 In millions	*2023*	*2022*
Finished goods	$ 3,413	$ 4,150
Work in process	1,234	1,476
Raw materials	746	954
Supplies	992	892
Total	$ 6,385	$ 7,472
Adjustment of inventories to the LIFO basis	(309)	(484)
Total inventories	$ 6,076	$ 6,988

At December 31, 2023, approximately 29 percent, 60 percent and 11 percent of the Company's inventories were accounted for under the LIFO, FIFO and average cost methods, respectively. At December 31, 2022, approximately 27 percent, 64 percent and 9 percent of the Company's inventories were accounted for under the LIFO, FIFO and average cost methods, respectively.

NOTE 9 – PROPERTY

The following table provides a breakdown of property:

Property at Dec 31 In millions	*Estimated Useful Lives (Years)*	*2023*	*2022*
Land and land improvements	0-25	$ 2,218	$ 2,129
Buildings	5-50	5,216	5,045
Machinery and equipment	3-25	43,343	42,131
Other property	3-50	6,865	6,622
Construction in progress	—	2,561	2,128
Total property		$ 60,203	$ 58,055

In millions	*2023*	*2022*	*2021*
Depreciation expense	$ 1,932	$ 1,958	$ 2,063
Capitalized interest	$ 88	$ 63	$ 59

NOTE 10 – NONCONSOLIDATED AFFILIATES

The Company's investments in companies accounted for using the equity method ("nonconsolidated affiliates"), by classification in the consolidated balance sheets, and dividends received from nonconsolidated affiliates are shown in the following tables:

Investments in Nonconsolidated Affiliates at Dec 31 In millions	*2023* [1]	*2022* [1]
Investment in nonconsolidated affiliates	$ 1,267	$ 1,589
Other noncurrent obligations	(229)	(144)
Net investment in nonconsolidated affiliates	$ 1,038	$ 1,445

1. The carrying amount of the Company's investments in nonconsolidated affiliates at December 31, 2023 and 2022, was $55 million less than its share of the investees' net assets, exclusive of additional differences relating to Sadara, EQUATE Petrochemical Company K.S.C.C. ("EQUATE") and AgroFresh Solutions Inc. ("AFSI"), which are discussed separately in the disclosures that follow.

Dividends Received from Nonconsolidated Affiliates In millions	*2023*	*2022*	*2021*
Dividends from nonconsolidated affiliates [1]	$ 268	$ 964	$ 324

1. Included in "Earnings of nonconsolidated affiliates less than (in excess of) dividends received" in the consolidated statements of cash flows.

The nonconsolidated affiliates in which the Company has investments are privately held companies; therefore, quoted market prices are not available.

Sadara

In 2011, the Company and Saudi Arabian Oil Company formed Sadara - a joint venture between the two companies that subsequently constructed and now operates a world-scale, fully integrated chemicals complex in Jubail Industrial City, Kingdom of Saudi Arabia. The Company has a 35 percent equity interest in this joint venture and has been, and continues to be, responsible for marketing the majority of Sadara's products through the Company's established sales channels. In 2021, Dow and the Saudi Arabian Oil Company agreed to and began transitioning the marketing rights and responsibilities for Sadara's finished products to levels more consistent with each partner's equity ownership, which is being implemented through 2026. This transition will not impact equity earnings, but is expected to reduce the Company's sales of Sadara products over the five year period.

The Company's investment in Sadara was $1,387 million less than Dow's proportionate share of the carrying value of the underlying net assets held by Sadara at December 31, 2023 ($1,464 million less at December 31, 2022). This basis difference, which resulted from the 2019 impairment of the investment, is primarily attributed to the long-lived assets of Sadara and is being amortized over the remaining useful lives of the assets. At December 31, 2023, the Company had a negative investment balance in Sadara of $128 million classified as "Other noncurrent obligations" ($322 million at December 31, 2022 included in "Investment in nonconsolidated affiliates") in the Company's consolidated balance sheets. See Note 14 for additional information related to guarantees.

EQUATE

At December 31, 2023, the Company had a negative investment balance in EQUATE of $101 million classified as "Other noncurrent obligations" ($144 million at December 31, 2022) in the consolidated balance sheets. The Company's investment in EQUATE was $432 million less than the Company's proportionate share of EQUATE's underlying net assets at December 31, 2023 ($447 million less at December 31, 2022), which represents the difference between the fair values of certain MEGlobal assets acquired by EQUATE and the Company's related valuation on a U.S. GAAP basis. A basis difference of $111 million at December 31, 2023 ($126 million at December 31, 2022), is being amortized over the remaining useful lives of the assets and the remainder is considered a permanent difference.

AFSI
At March 31, 2023, the Company's previously impaired investment in AFSI was converted to cash upon completion of the AFSI shareholder-approved go-private transaction. The Company had an investment balance in AFSI of zero at December 31, 2023 and 2022. At December 31, 2022, the Company's investment in AFSI was $72 million less than the Company's proportionate share of AFSI's underlying net assets. At December 31, 2023, the Company held no ownership interest in AFSI (40 percent ownership interest in AFSI at December 31, 2022).

Transactions with Nonconsolidated Affiliates
The Company has service agreements with certain nonconsolidated affiliates, including contracts to manage the operations of manufacturing sites and the construction of new facilities; licensing and technology agreements; and marketing, sales, purchase, lease and sublease agreements.

The Company sells excess ethylene glycol produced at manufacturing facilities in the United States and Europe to MEGlobal, a subsidiary of EQUATE. The Company also sells ethylene to MEGlobal as a raw material for its ethylene glycol plants in Canada. Sales of these products to MEGlobal represented 1 percent of total net sales in 2023, 2022 and 2021. Sales of ethylene to MEGlobal are reflected in the Packaging & Specialty Plastics segment and represented 2 percent of the segment's sales in 2023, 2022 and 2021. Sales of ethylene glycol to MEGlobal are reflected in the Industrial Intermediates & Infrastructure segment and represented 1 percent of the segment's sales in 2023, 2022 and 2021.

The Company is responsible for marketing the majority of Sadara products outside of the Middle East zone through the Company’s established sales channels. Under this arrangement, the Company purchases and sells Sadara products for a marketing fee. Purchases of Sadara products represented 6 percent of "Cost of sales" in 2023 (7 percent in 2022 and 9 percent in 2021).

The Company purchases products from The SCGC-Dow Group, primarily for marketing and distribution in Asia Pacific. Purchases of products from The SCGC-Dow Group represented 3 percent of "Cost of sales" in 2023, 2022 and 2021.

Sales to and purchases from other nonconsolidated affiliates were not material to the consolidated financial statements.

Balances due to or due from nonconsolidated affiliates at December 31, 2023 and 2022, were as follows:

Balances Due To or Due From Nonconsolidated Affiliates at Dec 31 In millions	*2023*	*2022*
Accounts and notes receivable - Other	$ 189	$ 307
Accounts payable - Other	$ 823	$ 1,083

Principal Nonconsolidated Affiliates

The Company had an ownership interest in 38 nonconsolidated affiliates at December 31, 2023 (37 at December 31, 2022). The Company's principal nonconsolidated affiliates and its ownership interest (direct and indirect) for each at December 31, 2023, 2022 and 2021, are as follows:

Principal Nonconsolidated Affiliates at Dec 31		Ownership Interest		
	Country	2023	2022	2021
EQUATE Petrochemical Company K.S.C.C.	Kuwait	42.50 %	42.50 %	42.50 %
The Kuwait Olefins Company K.S.C.C.	Kuwait	42.50 %	42.50 %	42.50 %
The Kuwait Styrene Company K.S.C.C.	Kuwait	42.50 %	42.50 %	42.50 %
Map Ta Phut Olefins Company Limited [1]	Thailand	32.77 %	32.77 %	32.77 %
Sadara Chemical Company	Saudi Arabia	35.00 %	35.00 %	35.00 %
The SCGC-Dow Group:				
Siam Polyethylene Company Limited	Thailand	50.00 %	50.00 %	50.00 %
Siam Polystyrene Company Limited	Thailand	50.00 %	50.00 %	50.00 %
Siam Styrene Monomer Company Limited	Thailand	50.00 %	50.00 %	50.00 %
Siam Synthetic Latex Company Limited	Thailand	50.00 %	50.00 %	50.00 %

1. The Company's effective ownership of Map Ta Phut Olefins Company Limited ("Map Ta Phut") is 32.77 percent, of which the Company directly owns 20.27 percent and indirectly owns 12.50 percent through its equity interest in Siam Polyethylene Company Limited.

The Company's investment in and equity earnings from its principal nonconsolidated affiliates are as follows:

Investment in Principal Nonconsolidated Affiliates at Dec 31 In millions	2023	2022
Investment in principal nonconsolidated affiliates	$ 754	$ 1,116
Other noncurrent obligations	(229)	(144)
Net investment in principal nonconsolidated affiliates	$ 525	$ 972

Equity in Earnings (Losses) of Principal Nonconsolidated Affiliates In millions	2023	2022	2021
Equity in earnings (losses) of principal nonconsolidated affiliates	$ (192)	$ 192	$ 918

The summarized financial information that follows represents the combined accounts (at 100 percent) of the principal nonconsolidated affiliates.

Summarized Balance Sheet Information at Dec 31 In millions	2023	2022
Current assets	$ 4,904	$ 6,241
Noncurrent assets	21,832	22,526
Total assets	$ 26,736	$ 28,767
Current liabilities	$ 3,490	$ 3,754
Noncurrent liabilities	18,794	18,999
Total liabilities	$ 22,284	$ 22,753
Noncontrolling interests	$ 157	$ 223

Summarized Income Statement Information [1] In millions	2023	2022	2021
Sales	$ 11,102	$ 14,026	$ 14,969
Gross profit	$ 289	$ 1,246	$ 3,219
Income (loss), net of tax	$ (1,053)	$ (91)	$ 2,013

1. The results in this table include purchase and sale activity between certain principal nonconsolidated affiliates and the Company, as previously discussed in the "Transactions with Nonconsolidated Affiliates" section.

NOTE 11 – GOODWILL AND OTHER INTANGIBLE ASSETS

The following table shows changes in the carrying amounts of goodwill by reportable segment for the years ended December 31, 2023 and 2022:

Goodwill In millions	*Packaging & Specialty Plastics*	*Industrial Intermediates & Infrastructure*	*Performance Materials & Coatings*	*Total*
Balance at Jan 1, 2022	$ 5,105	$ 1,096	$ 2,563	$ 8,764
Foreign currency impact	(5)	(3)	(112)	(120)
Balance at Dec 31, 2022	$ 5,100	$ 1,093	$ 2,451	$ 8,644
Foreign currency impact	3	1	(7)	(3)
Balance at Dec 31, 2023	$ 5,103	$ 1,094	$ 2,444	$ 8,641

At December 31, 2023, goodwill was carried by all reporting units except Coatings & Performance Monomers.

Goodwill Impairments

The carrying amounts of goodwill at December 31, 2023 and 2022, were net of accumulated impairments of $309 million in Industrial Intermediates & Infrastructure and $2,530 million in Performance Materials & Coatings.

Goodwill Impairment Testing

The Company performs an impairment test of goodwill annually in the fourth quarter. In 2023, the Company performed qualitative testing for all reporting units that carried goodwill. Based on the results of the qualitative testing, the Company did not perform quantitative testing on any reporting units in 2023, 2022, and 2021. The qualitative testing on the reporting units indicated that it was not more likely than not that fair value was less than the carrying value for the reporting units.

Other Intangible Assets

The following table provides information regarding the Company's other intangible assets:

Other Intangible Assets at Dec 31	*2023*			*2022*		
In millions	*Gross Carrying Amount*	*Accum Amort*	*Net*	*Gross Carrying Amount*	*Accum Amort*	*Net*
Intangible assets:						
Developed technology	$ 2,634	$ (2,181)	$ 453	$ 2,651	$ (2,025)	$ 626
Software	1,352	(981)	371	1,358	(962)	396
Trademarks/tradenames	352	(346)	6	352	(345)	7
Customer-related	3,108	(1,866)	1,242	3,103	(1,690)	1,413
Total other intangible assets	$ 7,446	$ (5,374)	$ 2,072	$ 7,464	$ (5,022)	$ 2,442

The following table provides information regarding amortization expense related to intangible assets:

Amortization Expense In millions	*2023*	*2022*	*2021*
Other intangible assets, excluding software	$ 324	$ 336	$ 388
Software, included in "Cost of sales"	$ 70	$ 80	$ 90

Total estimated amortization expense for the next five fiscal years, including amounts expected to be capitalized, is as follows:

Estimated Amortization Expense for Next Five Years In millions	
2024	$ 379
2025	$ 288
2026	$ 213
2027	$ 178
2028	$ 157

NOTE 12 – TRANSFERS OF FINANCIAL ASSETS

Accounts Receivable Programs

The Company maintains accounts receivable facilities with various financial institutions, with committed and uncommitted facilities in the United States and a committed accounts receivable facility in Europe (collectively, "the Programs"), which are both set to expire in November 2025. Under the terms of the Programs, the Company may sell certain eligible trade accounts receivable at any point in time, up to $900 million for the U.S. committed facility, and €500 million for the Europe committed facility. Under the terms of the Programs, the Company continues to service the receivables from the customer, but retains no interest in the receivables, and remits payment to the financial institutions. The Company also provides a guarantee to the financial institutions for the creditworthiness and collection of the receivables in satisfaction of the facility. See Note 14 for additional information related to guarantees. In 2023, the Company sold $112 million of receivables under the Programs ($391 million in 2022).

Beginning in 2023, the Company has access to an accounts receivable discounting facility that covers receivables generated from sales in EMEAI. Under the terms of the discounting facility, the Company retains no interest in the transferred receivables once sold and receivables are transferred with limited recourse. In 2023, the Company sold $91 million of receivables into the facility.

NOTE 13 – NOTES PAYABLE, LONG-TERM DEBT AND AVAILABLE CREDIT FACILITIES

Notes Payable at Dec 31 In millions	*2023*	*2022*
Commercial paper	$ —	$ 299
Notes payable to banks and other lenders	62	63
Total notes payable	$ 62	$ 362
Year-end average interest rates [1]	33.84 %	6.55 %

1. The average interest rate increase from 2022 to 2023 is primarily due to interest rates in Argentina.

Long-Term Debt at Dec 31 In millions	*2023 Average Rate*	*2023*	*2022 Average Rate*	*2022*
Promissory notes and debentures:				
Final maturity 2023	— %	$ —	7.63 %	$ 250
Final maturity 2025	5.63 %	333	5.63 %	333
Final maturity 2028	4.80 %	600	4.80 %	600
Final maturity 2029 and thereafter [1]	5.40 %	10,228	5.39 %	10,264
Other facilities:				
Foreign currency notes and loans, various rates and maturities	1.18 %	2,653	1.16 %	2,562
InterNotes®, varying maturities through 2053	4.12 %	595	3.87 %	543
Finance lease obligations [2]		873		790
Unamortized debt discount and issuance costs		(258)		(282)
Long-term debt due within one year [3]		(117)		(362)
Long-term debt		$ 14,907		$ 14,698

1. Cost includes net fair value hedge adjustment gains of $49 million at December 31, 2023 ($46 million at December 31, 2022). See Note 20 for additional information.
2. See Note 15 for additional information.
3. Presented net of current portion of unamortized debt issuance costs.

Maturities of Long-Term Debt for Next Five Years at Dec 31, 2023 In millions	
2024	$ 115
2025	$ 443
2026	$ 120
2027	$ 1,261
2028	$ 683

2023 Activity

In the fourth quarter of 2023, the Company redeemed $23 million aggregate principal amount of 2.100 percent notes due November 2030, $14 million aggregate principal amount of 4.625 percent notes due October 2044, and $1 million aggregate principal amount of 4.375 percent notes due November 2042. As a result of the redemption, the Company recognized a pretax gain on the early extinguishment of debt of $5 million, included in "Sundry income (expense) - net" in the consolidated statements of income and related to Corporate.

In 2023, the Company issued an aggregate principal amount of $80 million of InterNotes®. Additionally, the Company repaid $250 million of long-term debt at maturity and approximately $3 million of long-term debt was repaid by consolidated variable interest entities.

2022 Activity
In the second quarter of 2022, the Company redeemed $750 million aggregate principal amount of 3.625 percent notes due May 2026. As a result of the redemption, the Company recognized a pretax loss on the early extinguishment of debt of $8 million, included in "Sundry income (expense) - net" in the consolidated statements of income and related to Corporate.

In the fourth quarter of 2022, the Company issued $1.5 billion of senior unsecured notes. The offering included $600 million aggregate principal amount of 6.30 percent notes due 2033 and $900 million aggregate principal amount of 6.90 percent notes due 2053.

In 2022, the Company issued an aggregate principal amount of $167 million of InterNotes®. Additionally, the Company repaid $121 million of long-term debt at maturity and approximately $3 million of long-term debt was repaid by consolidated variable interest entities.

2021 Activity
In the second quarter of 2021, the Company redeemed $208 million aggregate principal amount of 3.15 percent notes due May 2024 and $811 million aggregate principal amount of 3.50 percent notes due October 2024. As a result of the redemptions, the Company recognized a pretax loss of $101 million on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and related to Corporate.

In the third quarter of 2021, the Company completed cash tender offers for certain debt securities. In total, $1,042 million aggregate principal amount was tendered and retired. As a result, the Company recognized a pretax loss of $472 million on the early extinguishment of debt, included in "Sundry income (expense) – net" in the consolidated statements of income and related to Corporate. In addition, the Company voluntarily repaid $81 million of long-term debt due within one year.

In 2021, the Company issued an aggregate principal amount of $109 million of InterNotes®, and redeemed an aggregate principal amount of $31 million at maturity. In addition, the Company voluntarily repaid an aggregate principal amount of $213 million of InterNotes® with various maturities. As a result, the Company recognized a pretax loss of $1 million on the early extinguishment of debt, included in "Sundry income (expense) - net" in the consolidated statements of income and related to Corporate. Additionally, the Company repaid $259 million of long-term debt at maturity and approximately $25 million of long-term debt was repaid by consolidated variable interest entities.

Available Credit Facilities
The following table summarizes the Company's credit facilities:

Committed and Available Credit Facilities at Dec 31, 2023				
In millions	*Committed Credit*	*Credit Available*	*Maturity Date*	*Interest*
Five Year Competitive Advance and Revolving Credit Facility	$ 5,000	$ 5,000	November 2028	Floating rate
Bilateral Revolving Credit Facility	375	375	October 2024	Floating rate
Bilateral Revolving Credit Facility	100	100	March 2025	Floating rate
Bilateral Revolving Credit Facility	100	100	March 2025	Floating rate
Bilateral Revolving Credit Facility	200	200	September 2025	Floating rate
Bilateral Revolving Credit Facility	175	175	September 2025	Floating rate
Bilateral Revolving Credit Facility	300	300	November 2025	Floating rate
Bilateral Revolving Credit Facility	300	300	February 2026	Floating rate
Bilateral Revolving Credit Facility	100	100	March 2026	Floating rate
Bilateral Revolving Credit Facility	150	150	November 2026	Floating rate
Bilateral Revolving Credit Facility	200	200	November 2026	Floating rate
Bilateral Revolving Credit Facility	250	250	March 2027	Floating rate
Bilateral Revolving Credit Facility	100	100	May 2027	Floating rate
Bilateral Revolving Credit Facility	350	350	June 2027	Floating rate
Bilateral Revolving Credit Facility	200	200	September 2027	Floating rate
Bilateral Revolving Credit Facility	100	100	October 2027	Floating rate
Bilateral Revolving Credit Facility	100	100	November 2027	Floating rate
Bilateral Revolving Credit Facility	300	300	May 2028	Floating rate
Total Committed and Available Credit Facilities	$ 8,400	$ 8,400		

Letters of Credit
The Company utilizes letters of credit to support commitments made in the ordinary course of business. While the terms and amounts of letters of credit change, the Company generally has approximately $600 million of outstanding letters of credit at any given time.

Debt Covenants and Default Provisions
TDCC’s outstanding long-term debt has been issued primarily under indentures which contain, among other provisions, certain customary restrictive covenants with which TDCC must comply while the underlying notes are outstanding. Failure of TDCC to comply with any of its covenants, could result in a default under the applicable indenture and allow the note holders to accelerate the due date of the outstanding principal and accrued interest on the underlying notes.

TDCC's indenture covenants include obligations to not allow liens on principal U.S. manufacturing facilities, enter into sale and lease-back transactions with respect to principal U.S. manufacturing facilities, merge or consolidate with any other corporation, or sell, lease or convey, directly or indirectly, all or substantially all of TDCC’s assets. The outstanding debt also contains customary default provisions. TDCC remains in compliance with these covenants.

TDCC’s primary, private credit agreements also contain certain customary restrictive covenant and default provisions in addition to the covenants set forth above with respect to TDCC’s debt. Significant other restrictive covenants and default provisions related to these agreements include:

(a) the obligation to maintain the ratio of TDCC’s consolidated indebtedness to consolidated capitalization at no greater than 0.70 to 1.00 at any time the aggregate outstanding amount of loans under the Five Year Competitive Advance and Revolving Credit Facility Agreement ("Revolving Credit Agreement") dated November 23, 2021, equals or exceeds $500 million,

(b) a default if TDCC or an applicable subsidiary fails to make any payment, including principal, premium or interest, under the applicable agreement on other indebtedness of, or guaranteed by, TDCC or such applicable subsidiary in an aggregate amount of $100 million or more when due, or any other default or other event under the applicable agreement with respect to such indebtedness occurs which permits or results in the acceleration of $400 million or more in the aggregate of principal, and

(c) a default if TDCC or any applicable subsidiary fails to discharge or stay within 60 days after the entry of a final judgment against TDCC or such applicable subsidiary of more than $400 million.

Failure of TDCC to comply with any of the covenants or default provisions could result in a default under the applicable credit agreement which would allow the lenders to not fund future loan requests and to accelerate the due date of the outstanding principal and accrued interest on any outstanding indebtedness.

Dow Inc. is obligated, substantially concurrently with the issuance of any guarantee in respect of outstanding or committed indebtedness under TDCC's Revolving Credit Agreement, to enter into a supplemental indenture with TDCC and the trustee under TDCC's existing 2008 base indenture governing certain notes issued by TDCC. Under such supplemental indenture, Dow Inc. will guarantee all outstanding debt securities and all amounts due under such existing base indenture and will become subject to certain covenants and events of default under the existing base indenture.

In addition, the Revolving Credit Agreement includes an event of default which would be triggered in the event Dow Inc. incurs or guarantees third party indebtedness for borrowed money in excess of $250 million or engages in any material activity or directly owns any material assets, in each case, subject to certain conditions and exceptions. Dow Inc. may, at its option, cure the event of default by delivering an unconditional and irrevocable guarantee to the administrative agent within thirty days of the event or events giving rise to such event of default.

No such events have occurred or have been triggered at the time of the filing of this Annual Report on Form 10-K.

NOTE 14 – COMMITMENTS AND CONTINGENCIES

Environmental Matters

Introduction

Accruals for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current law and existing technologies. At December 31, 2023, the Company had accrued obligations of $1,180 million for probable environmental remediation and restoration costs ($1,192 million at December 31, 2022), including $241 million for the remediation of Superfund sites ($244 million at December 31, 2022). This is management's best estimate of the costs for remediation and restoration with respect to environmental matters for which the Company has accrued liabilities, although it is reasonably possible that the ultimate cost with respect to these particular matters could range up to approximately two times that amount. Consequently, it is reasonably possible that environmental remediation and restoration costs in excess of amounts accrued could have a material impact on the Company's results of operations, financial condition and cash flows. It is the opinion of the Company's management, however, that the possibility is remote that costs in excess of the range disclosed will have a material impact on the Company's results of operations, financial condition or cash flows. Inherent uncertainties exist in these estimates primarily due to unknown conditions, changing governmental regulations and legal standards regarding liability, and emerging remediation technologies for handling site remediation and restoration. As new or additional information becomes available and/or certain spending trends become known, management will evaluate such information in determination of the current estimate of the environmental liability.

The following table summarizes the activity in the Company's accrued obligations for environmental matters for the years ended December 31, 2023 and 2022:

Accrued Obligations for Environmental Matters In millions	*2023*	*2022*
Balance at Jan 1	$ 1,192	$ 1,220
Accrual adjustment	211	184
Payments against reserve	(229)	(204)
Foreign currency impact	6	(8)
Balance at Dec 31	$ 1,180	$ 1,192

The amounts charged to income on a pretax basis related to environmental remediation totaled $203 million in 2023, $176 million in 2022 and $158 million in 2021. Capital expenditures for environmental protection were $228 million in 2023, $137 million in 2022 and $65 million in 2021.

Midland Off-Site Environmental Matters

On June 12, 2003, the Michigan Department of Environmental Quality ("MDEQ") issued a Hazardous Waste Operating License (the "License") to the Company's Midland, Michigan, manufacturing site (the "Midland Site"), which was renewed and replaced by the MDEQ on September 25, 2015, and included provisions requiring the Company to conduct an investigation to determine the nature and extent of off-site contamination in the City of Midland soils, the Tittabawassee River and Saginaw River sediment and floodplain soils, and the Saginaw Bay, and, if necessary, undertake remedial action. In 2016, final regulatory approval was received from the MDEQ for the City of Midland and the Company is continuing the long-term monitoring requirements of the Remedial Action Plan.

Tittabawassee and Saginaw Rivers, Saginaw Bay

The Company, the U.S. Environmental Protection Agency ("EPA") and the State of Michigan ("State") entered into an administrative order on consent ("AOC"), effective January 21, 2010, that requires the Company to conduct a remedial investigation, a feasibility study and a remedial design for the Tittabawassee River, the Saginaw River and the Saginaw Bay, and pay the oversight costs of the EPA and the State under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act. These actions, to be conducted under the lead oversight of the EPA, will build upon the investigative work completed under the State Resource Conservation Recovery Act program from 2005 through 2009.

The Tittabawassee River, beginning at the Midland Site and extending down to the first six miles of the Saginaw River, are designated as the first Operable Unit for purposes of conducting the remedial investigation, feasibility study and remedial design work. This work will be performed in a largely upriver to downriver sequence for eight geographic segments of the Tittabawassee and upper Saginaw Rivers. In the first quarter of 2012, the EPA requested the Company address the Tittabawassee River floodplain ("Floodplain") as an additional segment. In January 2015, the Company and the EPA entered into an order to address remediation of the Floodplain. The remedial work is expected to continue as river levels allow. The remainder of the Saginaw River and the Saginaw Bay are designated as a second Operable Unit and the work associated with that unit may also be geographically segmented. The AOC does not obligate the Company to perform removal or remedial action; that action can only be required by a separate order. The Company and the EPA have been negotiating orders separate from the AOC that obligate the Company to perform remedial actions under the scope of work of the AOC. The Company and the EPA have entered into six separate orders to perform limited remedial actions in seven of the eight geographic segments in the first Operable Unit, including the Floodplain. Dow has received from the EPA a Notice of Completion of Work for three of these six orders and the Company continues the long-term monitoring requirements. In 2023, Dow started evaluation of the final geographic segment of the first Operable Unit. Dow also has entered into a separate order to perform a limited remedial action for certain properties located within the second Operable Unit. In 2022, the Company implemented the limited remedial action in the second Operable Unit and, in 2023, submitted a Completion Report for those limited remedial actions.

Alternative Dispute Resolution Process

The Company, the EPA, the U.S. Department of Justice and the natural resource damage trustees (which include the Michigan Office of the Attorney General, the Michigan Department of Environment, Great Lakes and Energy, the Michigan Department of Natural Resources, the U.S. Fish and Wildlife Service, the U.S. Bureau of Indian Affairs and the Saginaw-Chippewa Indian Tribe of Michigan) have been engaged in negotiations to seek to resolve potential governmental claims against the Company for natural resource damages related to historical off-site contamination associated with the City of Midland, the Tittabawassee and Saginaw Rivers and the Saginaw Bay. The Company and the governmental parties started meeting in the fall of 2005 and entered into a Confidentiality Agreement in December 2005.

On July 20, 2020, the U.S. District Court for the Eastern District of Michigan ("District Court") entered a final consent decree in Civil Action No. 1:19-cv-13292 between the Company and federal, state and tribal trustees to resolve allegations of natural resource damages arising from the historic operations of the Company's Midland Site. The consent decree required the Company to pay a $15 million cash settlement to be used for long-term maintenance and trustee-selected remediation projects with an additional $7 million to specified local projects managed by third parties. These funds were paid in December 2020. The consent decree further requires the Company to complete or fund 13 additional environmental restoration projects which are valued by the trustees at approximately $77 million, to be conducted over the next several years. To date, three projects have been completed, including two environmental restoration projects/public amenities opened to the public. The Company continues to work with the trustees on the remaining projects.

At December 31, 2023, the accrual for these off-site matters was $89 million (included in the total accrued obligation of $1,180 million). At December 31, 2022, the Company had an accrual for these off-site matters of $92 million (included in the total accrued obligation of $1,192 million).

Environmental Matters Summary

It is the opinion of the Company's management that the possibility is remote that costs in excess of those disclosed will have a material impact on the Company's results of operations, financial condition or cash flows.

Litigation

Asbestos-Related Matters of Union Carbide Corporation

Introduction

Union Carbide is and has been involved in a large number of asbestos-related suits filed primarily in state courts during the past four decades. These suits principally allege personal injury resulting from exposure to asbestos-containing products and frequently seek both actual and punitive damages. The alleged claims primarily relate to products that Union Carbide sold in the past, alleged exposure to asbestos-containing products located on Union Carbide's premises and Union Carbide's responsibility for asbestos suits filed against a former Union Carbide subsidiary, Amchem Products, Inc. ("Amchem"). In many cases, plaintiffs are unable to demonstrate that they have suffered any compensable loss as a result of such exposure, or that injuries incurred in fact resulted from exposure to Union Carbide's products. Union Carbide expects more asbestos-related suits to be filed against Union Carbide and Amchem in the future, and will aggressively defend or reasonably resolve, as appropriate, both pending and future claims.

Estimating the Asbestos-Related Liability

Union Carbide has engaged Ankura Consulting Group, LLC ("Ankura") to perform periodic studies to estimate the undiscounted cost of disposing of pending and future claims against Union Carbide and Amchem through the terminal year of 2049, including a reasonable forecast of future defense and processing costs. Each October, Union Carbide requests Ankura to review its historical asbestos claim and resolution activity through the third quarter of the current year, including asbestos-related defense and processing costs, to determine the appropriateness of updating the most recent study. At each balance sheet date, Union Carbide also compares current asbestos claim and resolution activity, including asbestos-related defense and processing costs, to the results of the most recent Ankura study to determine whether the accrual continues to be appropriate.

In December 2021, Ankura stated that an update of its December 2020 study would not provide a more likely estimate of future events than the estimate reflected in that study and, therefore, the estimate in that study remained applicable. Based on Union Carbide's internal review process and Ankura's response, Union Carbide determined that no change to the accrual was required.

In December 2022, Ankura completed a study of Union Carbide's historical asbestos claim and resolution activity through September 30, 2022, including asbestos-related defense and processing costs, and provided estimates for the undiscounted cost of disposing of pending and future claims against Union Carbide and Amchem through the terminal year of 2049. Based on the study and Union Carbide's internal review process, it was determined that no adjustment to the accrual was required. At December 31, 2022, the asbestos-related liability for pending and future claims against Union Carbide and Amchem, including future asbestos-related defense and processing costs, was $947 million, and approximately 23 percent of the recorded liability related to pending claims and approximately 77 percent related to future claims.

In December 2023, Ankura stated that an update of its December 2022 study would not provide a more likely estimate of future events than the estimate reflected in that study and, therefore, the estimate in that study remained applicable. Based on Union Carbide's internal review process and Ankura's response, Union Carbide determined that no adjustment to the accrual was required. At December 31, 2023, the asbestos-related liability for pending and future claims against Union Carbide and Amchem, including future asbestos-related defense and processing costs, was $867 million, and approximately 25 percent of the recorded liability related to pending claims and approximately 75 percent related to future claims.

Summary
The Company's management believes the amounts recorded by Union Carbide for the asbestos-related liability, including defense and processing costs, reflect reasonable and probable estimates of the liability based upon current, known facts. However, future events, such as the number of new claims to be filed and/or received each year, the average cost of defending and disposing of each such claim, as well as the numerous uncertainties surrounding asbestos litigation in the United States over a significant period of time, could cause the actual costs for Union Carbide to be higher or lower than those projected or those recorded. Any such events could result in an increase or decrease in the recorded liability.

Because of the uncertainties described above, Union Carbide cannot estimate the full range of the cost of resolving pending and future asbestos-related claims facing Union Carbide and Amchem. As a result, it is reasonably possible that an additional cost of disposing of Union Carbide's asbestos-related claims, including future defense and processing costs, could have a material impact on the Company's results of operations and cash flows for a particular period and on the consolidated financial position.

Groundwater Contamination
The Company is the subject of various complaints related to alleged groundwater contamination based on decades-old sales and applications of certain agricultural chemical products ("Legacy Liabilities"). The costs associated with these Legacy Liabilities were previously covered by insurance policies that have since been depleted. In the first quarter of 2023, the Company completed a study of the Legacy Liabilities now deemed to be probable and estimable based on the public reporting of sampling data and historical information to develop a reasonable estimate of the cost of pending and future claims. As a result, the Company recorded a pretax charge of $177 million, included in "Cost of sales" in the consolidated statements of income and related to Industrial Intermediates & Infrastructure. At December 31, 2023, the total liability related to such alleged Legacy Liabilities settlements was $232 million, which was included in “Accrued and other current liabilities” and "Other noncurrent obligations" in the consolidated balance sheets.

The Company is also the subject of other groundwater contamination complaints, including claims related to1,4-dioxane. The Company continues to defend itself in this litigation and it has determined that the Company's exposure to liability, if any, is not currently probable or estimable.

Other Litigation Matters
In addition to the specific matters described above, the Company is party to a number of other 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. Certain of these actions purport to be class actions and seek damages in very large amounts. All such claims are being contested. The Company has an active risk management program consisting of numerous insurance policies

secured from many carriers at various times. These policies may provide coverage that could be utilized to minimize the financial impact, if any, of certain contingencies described above. It is the opinion of the Company's management that the possibility is remote that the aggregate of all such other claims and lawsuits will have a material adverse impact on the results of operations, financial condition and cash flows of the Company.

Indemnifications with Corning Incorporated ("Corning")
In connection with the June 1, 2016, ownership restructure of Dow Silicones, the Company is indemnified by Corning for at least 50 percent of future losses associated with certain pre-closing liabilities, subject to certain conditions and limits. The maximum amount of indemnified losses which may be recovered are subject to a cap that declines over time. Indemnified losses are capped at $1 billion between May 31, 2018 and May 31, 2023, and no recoveries are permitted on claims initially submitted after May 31, 2023. The Company had indemnification assets of $100 million at December 31, 2023 ($98 million at December 31, 2022), which was included in "Other current assets" and "Noncurrent receivables" in the consolidated balance sheets.

Gain Contingency - Dow v. Nova Chemicals Corporation Patent Infringement Matter
In December 2010, Dow filed suit in the Federal Court in Ontario, Canada ("Federal Court") alleging that Nova Chemicals Corporation ("Nova") was infringing the Company's Canadian polyethylene patent 2,106,705 (the "'705 Patent"). Nova counterclaimed on the grounds of invalidity and non-infringement. In accordance with Canadian practice, the suit was bifurcated into a merits phase, followed by a damages phase. Following trial in the merits phase, in May 2014, the Federal Court ruled that the Company's '705 Patent was valid and infringed by Nova. Nova appealed to the Canadian Federal Court of Appeal, which affirmed the Federal Court decision in August 2016. Nova then sought leave to appeal its loss to the Supreme Court of Canada ("Canadian Supreme Court"), which dismissed Nova's petition in April 2017. As a result, Nova exhausted all appeal rights on the merits, and it was undisputed that Nova owed the Company the profits it earned from its infringing sales as determined in the trial for the damages phase.

In April 2017, the Federal Court issued a Public Judgment in the damages phase, which detailed its conclusions on how to calculate the profits to be awarded to the Company. In June 2017, the Federal Court ordered Nova to pay $645 million Canadian dollars to the Company, plus pre- and post-judgment interest, for which the Company received payment equivalent to $501 million U.S. dollars in July 2017. Although Nova was appealing portions of the damages judgment, certain portions of it were indisputable and could be retained by the Company regardless of the outcome of any further appeals by Nova. As a result of these actions and in accordance with ASC Topic 450-30 "Gain Contingencies," the Company recorded a $160 million pretax gain in the second quarter of 2017.

On September 15, 2020, the Canadian Federal Court of Appeal dismissed Nova's appeal of the damages judgment, thus affirming the trial court's decision in its entirety. In November 2020, Nova filed an application for leave to appeal this decision to the Canadian Supreme Court. In November 2022, the Canadian Supreme Court dismissed Nova's appeal, thereby exhausting all of Nova's appeal rights for the damages judgment. As a result, the Company recorded a pretax gain of $341 million in the fourth quarter of 2022 for the previously disputed portion of the damages judgment, of which $321 million was included in "Sundry income (expense) - net," related to Packaging & Specialty Plastics, and $20 million was included in "Selling, general and administrative expenses" in the consolidated statements of income.

Gain Contingency - Dow v. Nova Chemicals Corporation Ethylene Asset Matter
On September 18, 2019, the Court of the King's Bench in Alberta, Canada, signed a judgment ordering Nova to pay the Company $1.43 billion Canadian dollars (equivalent to approximately $1.08 billion U.S. dollars) by October 11, 2019, for damages the Company incurred through 2012 related to the companies' jointly-owned ethylene asset in Joffre, Alberta, Canada, which has been received by the Company. The Court of the King's Bench in Alberta, Canada, which initially ruled in June 2018, found that Nova failed to operate the ethylene asset at full capacity for more than ten years, and furthermore, that Nova violated several contractual agreements related to the Company receiving its share of the asset's ethylene production. These actions deprived the Company of millions of pounds of ethylene. Nova appealed the judgment; however, certain portions were no longer in dispute and would be retained by the Company regardless of the outcome of any further appeals by Nova. As a result and in accordance with ASC Topic 450-30 "Gain Contingencies," the Company recorded a $186 million pretax gain in 2019. In 2020 and 2023, further actions by Nova and/or related court decisions upholding the majority of Dow's damages made additional portions of the ruling in Dow's favor final and no longer subject to dispute. As a result, the Company recorded additional pretax gains of $570 million in 2020 and $122 million in 2023. In 2023, $106 million of the pretax gain was included in "Sundry income (expense) - net," related to Packaging & Specialty Plastics, and $16 million was included in "Selling, general and administrative expenses" in the consolidated statements of income.

At December 31, 2023, $201 million ($323 million at December 31, 2022) was included in "Other noncurrent obligations" in the Company's consolidated balance sheets related to the disputed portion of the damages judgment. Dow continues to seek an award of additional damages for the period from 2013 through 2018 to account for the ethylene shortfall during those years. The damages hearing that began in the trial court in November 2021 to resolve the impact of the appellate ruling and quantify Dow's damages for the 2013-2018 period has concluded; the parties are awaiting the court's ruling. Dow has also filed a new lawsuit in the same Alberta, Canada court to account for damages due to lost ethylene after June 2018.

Luxi Chemical Group Breach of Contract Matter

In November 2017, an arbitration panel of the Stockholm Chamber of Commerce held that Luxi Chemical Group Co., Ltd. (“Luxi”), based in Shandong Province, China, violated a secrecy and non-use agreement related to the Dow and Johnson Matthey Davy Technologies Limited (“JM”) LP OXO^{SM} Process by using Dow and JM protected information in the design, construction, and operation of its butanol and 2-ethylhexanol plants, awarding damages, fees and costs, plus interest, to both Dow and JM. In September 2021, Luxi paid the arbitration award and interest assessment and, as a result, Dow recorded a pretax gain of $54 million included in “Sundry income (expense) – net” in the consolidated statements of income and related to Industrial Intermediates & Infrastructure.

Brazilian Tax Credits

In March 2017, the Federal Supreme Court of Brazil (“Brazil Supreme Court”) ruled in a leading case that a Brazilian value-added tax ("ICMS") should not be included in the base used to calculate a taxpayer's federal contribution on total revenue known as PIS/COFINS (the “2017 Decision”). Previously, three of the Company’s Brazilian subsidiaries filed lawsuits challenging the inclusion of ICMS in their calculation of PIS/COFINS, seeking recovery of excess taxes paid. In response to the 2017 Decision, the Brazilian tax authority filed an appeal seeking clarification of the amount of ICMS tax to exclude from the calculation of PIS/COFINS. In May 2021, the Brazil Supreme Court ruled in a leading case related to the amount of ICMS tax to exclude from the calculation of PIS/COFINS, which resolved two of the lawsuits filed by the Company and, in May 2022, a court decision related to the remaining lawsuit, ruling in favor of the Company's Brazilian subsidiary, became final and unappealable. As a result, the Company recorded pretax gains of $112 million in 2022 and $67 million in 2021 for certain excess PIS/COFINS paid from 2009 to 2019, plus applicable interest, which the Company expects to apply to future required federal tax payments, and the reversal of related liabilities. The pretax gains were recorded in “Cost of sales” in the consolidated statements of income. At December 31, 2023, related tax credits available and expected to be applied to future required federal tax payments totaled $114 million ($126 million at December 31, 2022).

Purchase Commitments

The Company has outstanding purchase commitments and various commitments for take-or-pay or throughput agreements. The Company was not aware of any purchase commitments that were negotiated as part of a financing arrangement for the facilities that will provide the contracted goods or services or for the costs related to those goods or services at December 31, 2023 and 2022.

Guarantees

The following table provides a summary of the final expiration, maximum future payments and recorded liability reflected in the consolidated balance sheets for guarantees:

Guarantees	*Dec 31, 2023*			*Dec 31, 2022*		
In millions	*Final Expiration*	*Maximum Future Payments* [1]	*Recorded Liability*	*Final Expiration*	*Maximum Future Payments* [1]	*Recorded Liability*
Guarantees	2038	$ 1,385	$ 196	2038	$ 1,236	$ 200

1. In addition, TDCC has provided guarantees, in proportion to the Company's 35 percent ownership interest, of all future interest payments that will become due on Sadara’s project financing debt during the grace period, which Dow's share is estimated to be $298 million at December 31, 2023 ($393 million at December 31, 2022). The Company does not expect to be required to perform under the guarantees.

Guarantees arise during the ordinary course of business from relationships with customers, committed accounts receivable facilities and nonconsolidated affiliates when the Company undertakes an obligation to guarantee the performance of others (via delivery of cash or other assets) if specified triggering events occur. With guarantees, such as commercial or financial contracts, non-performance by the guaranteed party triggers the obligation of the Company to make payments to the beneficiary of the guarantee. The majority of the Company’s guarantees relate to debt of nonconsolidated affiliates, which have expiration dates ranging from less than one year to 15 years. The

Company's current expectation is that future payment or performance related to the non-performance of others is considered remote.

TDCC has entered into guarantee agreements related to Sadara, a nonconsolidated affiliate. Sadara reached an agreement with its lenders to re-profile its outstanding project financing debt in the first quarter of 2021. In conjunction with the debt re-profiling, TDCC entered into a guarantee of up to approximately $1.3 billion of Sadara's debt, proportionate to the Company's 35 percent ownership interest. The debt re-profiling includes a grace period until June 2026, during which Sadara is obligated to make interest-only payments which are guaranteed by TDCC in proportion to the Company's 35 percent ownership interest. As part of the debt re-profiling, Sadara established a $500 million revolving credit facility guaranteed by Dow, which would be used to fund Dow's pro-rata share of any potential shortfall during the grace period. See Note 10 for additional information on Dow's investment in Sadara.

Asset Retirement Obligations

The Company has 98 manufacturing sites in 31 countries. Most of these sites contain numerous individual manufacturing operations, particularly at the Company's larger sites. Asset retirement obligations are recorded as incurred and reasonably estimable, including obligations for which the timing and/or method of settlement are conditional on a future event that may or may not be within the control of the Company. The retirement of assets may involve such efforts as remediation and treatment of asbestos, contractually required demolition, and other related activities, depending on the nature and location of the assets; and retirement obligations are typically realized only upon demolition of those facilities. In identifying asset retirement obligations, the Company considers identification of legally enforceable obligations, changes in existing law, estimates of potential settlement dates and the calculation of an appropriate discount rate to be used in calculating the fair value of the obligations. The Company has a well-established global process to identify, approve and track the demolition of retired or to-be-retired facilities; and no assets are retired from service until this process has been followed. The Company typically forecasts demolition projects based on the usefulness of the assets; environmental, health and safety concerns; and other similar considerations. Under this process, as demolition projects are identified and approved, reasonable estimates are determined for the time frames during which any related asset retirement obligations are expected to be settled. For those assets where a range of potential settlement dates may be reasonably estimated, obligations are recorded. The Company routinely reviews all changes to items under consideration for demolition to determine if an adjustment to the value of the asset retirement obligation is required.

The Company has recognized asset retirement obligations for the demolition and remediation activities at manufacturing sites primarily in Europe, the United States, Canada, Japan, Brazil, China, Singapore and United Arab Emirates, and capping activities at landfill sites in the United States, Brazil and Canada. The Company has also recognized conditional asset retirement obligations related to asbestos encapsulation as a result of planned demolition and remediation activities at manufacturing and administrative sites primarily in the United States and Europe. The aggregate carrying amount of conditional asset retirement obligations recognized by the Company (included in the asset retirement obligations balance shown below) was $21 million at December 31, 2023 ($11 million at December 31, 2022).

The following table shows changes in the aggregate carrying amount of the Company's asset retirement obligations for the years ended December 31, 2023 and 2022:

Asset Retirement Obligations In millions	*2023*	*2022*
Balance at Jan 1	$ 119	$ 118
Additional accruals	26	14
Liabilities settled	(2)	(8)
Accretion expense	3	2
Revisions in estimated cash flows	1	(9)
Other	(7)	2
Balance at Dec 31	$ 140	$ 119

The discount rate used to calculate the Company's asset retirement obligations at December 31, 2023, was 5.07 percent (5.53 percent at December 31, 2022). These obligations are included in the consolidated balance sheets as "Accrued and other current liabilities" and "Other noncurrent obligations."

The Company has not recognized conditional asset retirement obligations for which a fair value cannot be reasonably estimated in its consolidated financial statements. Assets that have not been submitted/reviewed for potential demolition activities are considered to have continued usefulness and are generally still operating normally. Therefore, without a plan to demolish the assets or the expectation of a plan, such as shortening the useful life of assets for depreciation purposes in accordance with the accounting guidance related to property, plant and equipment, the Company is unable to reasonably forecast a time frame to use for present value calculations. As such, the Company has not recognized obligations for individual plants/buildings at its manufacturing sites where estimates of potential settlement dates cannot be reasonably made. In addition, the Company has not recognized conditional asset retirement obligations for the capping of its approximately 35 underground storage wells and 129 underground brine mining and other wells at Company-owned sites when there are no plans or expectations of plans to exit the sites. It is the opinion of the Company's management that the possibility is remote that such conditional asset retirement obligations, when estimable, will have a material impact on the Company's consolidated financial statements based on current costs.

NOTE 15 - LEASES

Operating lease ROU assets are included in "Operating lease right-of-use assets" while finance lease ROU assets are included in "Net property" in the consolidated balance sheets. With respect to lease liabilities, operating lease liabilities are included in "Operating lease liabilities - current" and "Operating lease liabilities - noncurrent," and finance lease liabilities are included in "Long-term debt due within one year" and "Long-Term Debt" in the consolidated balance sheets.

Dow routinely leases sales and administrative offices, power plants, production facilities, warehouses and tanks for product storage, aircraft, motor vehicles, railcars, office machines and equipment. Some leases contain renewal provisions, purchase options and escalation clauses and the terms for these leased assets vary depending on the lease agreement. These leased assets have remaining lease terms of up to 51 years. See Note 1 for additional information on leases.

The components of lease cost for operating and finance leases for the years ended December 31, 2023, 2022 and 2021, were as follows:

Lease Cost In millions	*2023*	*2022*	*2021*
Operating lease cost	$ 426	$ 397	$ 494
Finance lease cost			
Amortization of right-of-use assets - finance	106	105	76
Interest on lease liabilities - finance	34	32	27
Total finance lease cost	140	137	103
Short-term lease cost	255	255	238
Variable lease cost	929	611	381
Sublease income	(9)	(10)	(6)
Total lease cost	$ 1,741	$ 1,390	$ 1,210

The following table provides supplemental cash flow and other information related to leases:

Other Lease Information In millions	*2023*	*2022*	*2021*
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows for operating leases	$ 424	$ 393	$ 497
Operating cash flows for finance leases	$ 34	$ 32	$ 27
Financing cash flows for finance leases	$ 127	$ 114	$ 74
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases [1]	$ 309	$ 151	$ (25)
Finance leases [1]	$ 234	$ 62	$ 512

1. In 2023, $98 million of leased assets were reclassified from Operating leases to Finance leases due to an amendment that extended the term of the agreement. In 2021, $193 million of leased assets were reclassified from Operating leases to Finance leases due to an amendment that extended the term of the agreement.

The following table summarizes the lease-related assets and liabilities recorded in the consolidated balance sheets at December 31, 2023 and 2022:

Lease Position In millions	*Balance Sheet Classification*	*Dec 31, 2023*	*Dec 31, 2022*
Assets			
Operating lease assets	Operating lease right-of-use assets	$ 1,320	$ 1,227
Finance lease assets	Property	1,328	1,167
Finance lease amortization	Accumulated depreciation	(538)	(441)
Total lease assets		$ 2,110	$ 1,953
Liabilities			
Current			
Operating	Operating lease liabilities - current	$ 329	$ 287
Finance	Long-term debt due within one year	117	109
Noncurrent			
Operating	Operating lease liabilities - noncurrent	1,032	997
Finance	Long-Term Debt	756	681
Total lease liabilities		$ 2,234	$ 2,074

In 2023, the Company amended an agreement to extend leases of certain assets. The amendment and related remeasurement resulted in a reclassification of $47 million from "Operating lease liabilities - noncurrent" to "Long-Term Debt" and $10 million from "Operating lease liabilities - current" to "Long-term debt due within one year." In addition to the reclassifications, the amendment increased "Long-Term Debt" by $61 million and decreased "Long-term debt due within one year" by $4 million.

The weighted-average remaining lease term and discount rate for leases recorded in the consolidated balance sheets at December 31, 2023 and 2022 are provided below:

Lease Term and Discount Rate	*Dec 31, 2023*	*Dec 31, 2022*
Weighted-average remaining lease term		
Operating leases	6.9 years	7.6 years
Finance leases	10.5 years	11.0 years
Weighted-average discount rate		
Operating leases	4.82 %	4.49 %
Finance leases	4.84 %	4.29 %

The following table provides the maturities of lease liabilities at December 31, 2023:

Maturities of Lease Liabilities In millions	*Operating Leases*	*Finance Leases*
2024	$ 378	$ 153
2025	287	144
2026	225	96
2027	174	88
2028	135	82
2029 and thereafter	421	545
Total future undiscounted lease payments	$ 1,620	$ 1,108
Less: Imputed interest	259	235
Total present value of lease liabilities	$ 1,361	$ 873

At December 31, 2023, Dow had additional leases of approximately $359 million, primarily for buildings and equipment, which had not yet commenced. These leases are expected to commence between 2024 and 2026, with lease terms of up to 20 years.

Dow provides guarantees related to certain leased assets, specifying the residual value that will be available to the lessor at lease termination through the sale of the assets to the lessee or third parties. The following table provides a summary of the final expiration, maximum future payments and recorded liability reflected in the consolidated balance sheets for residual value guarantees at December 31, 2023 and 2022. The lease agreements do not contain any material restrictive covenants.

Lease Guarantees In millions	*Dec 31, 2023*			*Dec 31, 2022*		
	Final Expiration	*Maximum Future Payments*	*Recorded Liability*	*Final Expiration*	*Maximum Future Payments*	*Recorded Liability*
Residual value guarantees	2031	$ 295	$ —	2031	$ 258	$ —

NOTE 16 – STOCKHOLDERS' EQUITY

Common Stock

The principal market for Dow Inc.'s common stock is the New York Stock Exchange, traded under the symbol “DOW.” Dow Inc. is the direct parent company of The Dow Chemical Company and its consolidated subsidiaries, ("TDCC" and together with Dow Inc., "Dow" or the "Company"), owning all of the outstanding common shares of TDCC.

The Company may issue shares of Dow Inc. common stock out of treasury stock or as new shares of common stock for options exercised and for the release of restricted stock units ("RSUs"), performance stock units ("PSUs"), the Employee Stock Purchase Plan ("ESPP") and the Employees' Savings Plan (the "Savings Plan"). Common stock shares issued to employees and non-employee directors was approximately 6.9 million in 2023 (7.5 million in 2022 and 8.2 million in 2021). See Note 19 for additional information on the Company's equity awards.

Retained Earnings

Dow Inc.

There are no significant restrictions limiting Dow Inc.’s ability to pay dividends. Dow Inc. declared dividends of $2.80 per share in 2023, 2022 and 2021.

Undistributed earnings of nonconsolidated affiliates included in retained earnings was $684 million at December 31, 2023 and $669 million at December 31, 2022.

TDCC

TDCC's Board of Directors determines whether or not there will be a dividend distribution to Dow Inc. TDCC declared and paid dividends to Dow Inc. of $2,510 million in 2023, $4,375 million in 2022 and $3,264 million in 2021.

Employee Stock Ownership Plan
The Dow Employee Stock Ownership Plan (the “ESOP”) allocated the remaining shares in 2022 and no shares remained unallocated at December 31, 2022 and December 31, 2023. Unallocated shares at December 31, 2021, were excluded from the Company's earnings per share calculation.

Compensation expense for allocated shares is recorded at the fair value of the shares on the date of allocation. As all remaining ESOP shares were allocated in 2022, there was no compensation expense recorded in 2023 for allocated ESOP shares. Compensation expense reflected in income before income taxes for ESOP shares allocated was $31 million in 2022 and $77 million in 2021.

Treasury Stock
On April 1, 2019, the Board ratified the share repurchase program originally approved on March 15, 2019, authorizing up to $3.0 billion for the repurchase of the Company's common stock, with no expiration date. The Company completed the April 1, 2019 share repurchase program in the second quarter of 2022. On April 13, 2022, the Board approved a new share repurchase program authorizing up to $3.0 billion for the repurchase of the Company's common stock, with no expiration date. In 2023, the Company repurchased $625 million of its common stock ($2,325 million in 2022 and $1,000 million in 2021). Excise tax for repurchased shares was $2 million in 2023 (zero in 2022 and 2021), and was included in treasury stock at cost. At December 31, 2023, $1,425 million of the share repurchase program authorization remained available for repurchases.

The Company began issuing treasury shares to satisfy its obligations to make matching contributions to plan participants under The Dow Employees' Savings Plan in the first quarter of 2022. The Company issued 2.3 million treasury shares under its compensation and benefit plans in 2023 and 1.5 million in 2022

Compensation expense for issued shares is recorded at the fair value of the shares on the date of issuance. Compensation expense reflected in income before income taxes for treasury shares issued was $120 million in 2023 and $94 million in 2022.

The following table provides a reconciliation of Dow Inc. common stock activity for the years ended December 31, 2023, 2022 and 2021:

Shares of Dow Inc. Common Stock	*Issued*	*Held in Treasury*
Balance at Jan 1, 2021	755,993,198	12,803,303
Issued [1]	8,233,684	—
Repurchased	—	16,208,270
Balance at Jan 1, 2022	764,226,882	29,011,573
Issued [1]	7,451,643	(1,499,610)
Repurchased	—	39,286,642
Balance at Jan 1, 2023	771,678,525	66,798,605
Issued [1]	6,916,989	(2,347,747)
Repurchased	—	11,851,223
Balance at Dec 31, 2023	778,595,514	76,302,081

1. Shares issued to employees and non-employee directors under the Company's equity compensation plans.

Accumulated Other Comprehensive Loss

The changes in each component of AOCL for the years ended December 31, 2023, 2022 and 2021 were as follows:

Accumulated Other Comprehensive Loss In millions	*2023*	*2022*	*2021*
Unrealized Gains (Losses) on Investments			
Beginning balance	$ (253)	$ 59	$ 104
Unrealized gains (losses) on investments	(6)	(326)	(21)
Tax (expense) benefit	54	13	5
Net unrealized gains (losses) on investments	48	(313)	(16)
(Gains) losses reclassified from AOCL to net income [1]	(63)	2	(38)
Tax expense (benefit) [2]	15	(1)	9
Net (gains) losses reclassified from AOCL to net income	(48)	1	(29)
Other comprehensive income (loss), net of tax	—	(312)	(45)
Ending balance	$ (253)	$ (253)	$ 59
Cumulative Translation Adjustment			
Beginning balance	$ (1,934)	$ (1,355)	$ (930)
Gains (losses) on foreign currency translation	57	(557)	(375)
Tax (expense) benefit	—	24	(40)
Net gains (losses) on foreign currency translation	57	(533)	(415)
(Gains) losses reclassified from AOCL to net income [3]	(14)	(46)	(10)
Other comprehensive income (loss), net of tax	43	(579)	(425)
Ending balance	$ (1,891)	$ (1,934)	$ (1,355)
Pension and Other Postretirement Benefits			
Beginning balance	$ (4,877)	$ (7,334)	$ (9,559)
Gains (losses) arising during the period	(1,454)	2,611	2,094
Tax (expense) benefit	349	(630)	(464)
Net gains (losses) arising during the period	(1,105)	1,981	1,630
Amortization of net loss and prior service credits reclassified from AOCL to net income [4]	648	622	776
Tax expense (benefit) [2]	(152)	(146)	(181)
Net loss and prior service credits reclassified from AOCL to net income	496	476	595
Other comprehensive income (loss), net of tax	(609)	2,457	2,225
Ending balance	$ (5,486)	$ (4,877)	$ (7,334)
Derivative Instruments			
Beginning balance	$ (75)	$ (347)	$ (470)
Gains (losses) on derivative instruments	(201)	638	155
Tax (expense) benefit	30	(87)	3
Net gains (losses) on derivative instruments	(171)	551	158
(Gains) losses reclassified from AOCL to net income [5]	250	(313)	(38)
Tax expense (benefit) [2]	(55)	34	3
Net (gains) losses reclassified from AOCL to net income	195	(279)	(35)
Other comprehensive income (loss), net of tax	24	272	123
Ending balance	$ (51)	$ (75)	$ (347)
Total AOCL ending balance	$ (7,681)	$ (7,139)	$ (8,977)

1. Reclassified to "Net sales" and "Sundry income (expense) - net."
2. Reclassified to "Provision for income taxes."
3. Reclassified to "Sundry income (expense) - net."
4. These AOCL components are included in the computation of net periodic benefit cost of the Company's defined benefit pension and other postretirement benefit plans. See Note 18 for additional information.
5. Reclassified to "Cost of sales," "Sundry income (expense) - net" and "Interest expense and amortization of debt discount."

NOTE 17 – NONCONTROLLING INTERESTS

Ownership interests in the Company's subsidiaries held by parties other than the Company are presented separately from the Company's equity in the consolidated balance sheets as "Noncontrolling interests." The amount of consolidated net income attributable to the Company and the noncontrolling interests are both presented on the face of the consolidated statements of income.

The following table summarizes the activity for equity attributable to noncontrolling interests for the years ended December 31, 2023, 2022 and 2021:

Noncontrolling Interests In millions	*2023*	*2022*	*2021*
Balance at Jan 1	$ 529	$ 574	$ 570
Net income attributable to noncontrolling interests [1]	71	58	94
Distributions to noncontrolling interests [2]	(81)	(76)	(66)
Cumulative translation adjustments	(19)	(28)	(25)
Other	1	1	1
Balance at Dec 31	$ 501	$ 529	$ 574

1. 2022 includes the portion of asset related charges attributable to noncontrolling interests related to a joint venture in Russia. See Note 4 for additional information.
2. Distributions to noncontrolling interests are net of $8 million in 2023 ($7 million in 2022 and 2021) in dividends paid to a joint venture, which were reclassified to "Equity in earnings (losses) of nonconsolidated affiliates" in the consolidated statements of income.

NOTE 18 – PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS

Defined Benefit Pension Plans

The Company has both funded and unfunded defined benefit pension plans in the United States and a number of other countries. The U.S. tax-qualified plan administered by the parent company is the largest plan. On March 4, 2021, the Company announced changes to its U.S. tax-qualified and non-qualified pension plans, which covered substantially all U.S. employees. As a result, effective December 31, 2023, the Company froze the pensionable compensation and credited service amounts used to calculate pension benefits for substantially all employees who participate in its U.S. tax-qualified and non-qualified retirement programs (collectively, the "U.S. Plans"), and, therefore, impacted employees will not accrue additional benefits for future service and compensation. In connection with these plan amendments, the Company remeasured its U.S. Plans in the first quarter of 2021, which resulted in a pretax actuarial gain of $1,268 million, included in other comprehensive income and a pretax curtailment gain of $19 million.

Separately, in the fourth quarter of 2023, certain Company pension plans in the United States and Canada purchased or converted to nonparticipating group annuity contracts from certain insurance companies, irrevocably transferring approximately $1,681 million of benefit obligations and $1,617 million of related plan assets to the insurers. These transactions did not require any cash funding from the Company and did not impact the pension benefits of participants. As a result of these transactions, the Company recognized pretax, non-cash settlement charges of $642 million in 2023, primarily related to the accelerated recognition of a portion of the accumulated actuarial losses of the plans, recorded in “Sundry income (expense) – net” in the consolidated statements of income and related to Corporate.

The Company's funding policy is to contribute to the plans when pension laws and/or economics either require or encourage funding. Total global pension contributions were $142 million in 2023, which includes contributions necessary to fund benefit payments for the Company's unfunded pension plans. Additionally, in the second quarter of 2023, the Company received a pension plan reversion of approximately $90 million for a portion of the excess funding of one of its plans in Europe, included in "Other assets and liabilities, net" in the consolidated statements of cash flows. The Company expects to contribute approximately $150 million to its pension plans in 2024.

The weighted-average assumptions used to determine pension plan obligations and net periodic benefit cost for all plans are summarized in the table below:

Weighted-Average Assumptions for All Pension Plans	*Benefit Obligations at Dec 31*		*Net Periodic Benefit Cost for the Year Ended*		
	2023	*2022*	*2023*	*2022*	*2021*
Discount rate	4.73 %	5.18 %	5.26 %	2.57 %	2.40 %
Interest crediting rate for applicable benefits	3.99 %	4.19 %	4.19 %	3.57 %	3.55 %
Rate of compensation increase	3.80 %	4.05 %	4.05 %	3.94 %	3.91 %
Expected return on plan assets			6.62 %	6.68 %	6.86 %

The weighted-average assumptions used to determine pension plan obligations and net periodic benefit cost for U.S. plans are summarized in the table below:

Weighted-Average Assumptions for U.S. Pension Plans	*Benefit Obligations at Dec 31*		*Net Periodic Benefit Cost for the Year Ended*		
	2023	*2022*	*2023*	*2022*	*2021*
Discount rate	5.30 %	5.64 %	5.76 %	3.04 %	3.03 %
Interest crediting rate for applicable benefits	4.50 %	4.50 %	4.50 %	4.50 %	4.50 %
Rate of compensation increase	4.25 %	4.25 %	4.25 %	4.25 %	4.25 %
Expected return on plan assets			7.46 %	7.95 %	7.96 %

Other Postretirement Benefit Plans

The Company provides certain health care and life insurance benefits to retired employees and survivors. The Company's plans outside of the United States are not significant; therefore, this discussion relates to the U.S. plans only. The plans provide health care benefits, including hospital, physicians' services, drug and major medical expense coverage, and life insurance benefits. In general, for employees hired before January 1, 1993, the plans provide benefits supplemental to Medicare when retirees are eligible for these benefits. The Company and the retiree share the cost of these benefits, with the Company portion increasing as the retiree has increased years of credited service, although there is a cap on the Company portion. The Company has the ability to change these benefits at any time. Employees hired after January 1, 2008, are not covered under the plans.

The Company funds most of the cost of these health care and life insurance benefits as incurred. In 2023, the Company did not make any contributions to its other postretirement benefit plan trusts. The trusts did not hold assets at December 31, 2023. The Company does not expect to contribute assets to its other postretirement benefit plan trusts in 2024.

The weighted-average assumptions used to determine other postretirement benefit plan obligations and net periodic benefit cost for the U.S. plans are provided below:

Weighted-Average Assumptions for U.S. Other Postretirement Benefits Plans	*Benefit Obligations at Dec 31*		*Net Periodic Benefit Cost for the Year Ended*		
	2023	*2022*	*2023*	*2022*	*2021*
Discount rate	5.23 %	5.57 %	5.57 %	2.85 %	2.38 %
Health care cost trend rate assumed for next year	6.61 %	6.79 %	6.79 %	6.50 %	6.75 %
Rate to which the cost trend rate is assumed to decline (the ultimate health care cost trend rate)	5.00 %	5.00 %	5.00 %	5.00 %	5.00 %
Year that the rate reaches the ultimate health care cost trend rate	2033	2033	2033	2028	2028

Assumptions

The Company determines the expected long-term rate of return on plan assets by performing a detailed analysis of key economic and market factors driving historical returns for each asset class and formulating a projected return based on factors in the current environment. Factors considered include, but are not limited to, inflation, real economic growth, interest rate yield, interest rate spreads and other valuation measures and market metrics. The expected long-term rate of return for each asset class is then weighted based on the strategic asset allocation approved by the governing body for each plan. The Company's historical experience with the pension fund asset performance is also considered.

The Company uses the spot rate approach to determine the discount rate utilized to measure the service cost and interest cost components of net periodic pension and other postretirement benefit costs for the United States and other selected countries. Under the spot rate approach, the Company calculates service cost and interest cost by applying individual spot rates from the Willis Towers Watson RATE:Link yield curve (based on high-quality corporate bond yields) for each selected country to the separate expected cash flow components of service cost and interest cost. Service cost and interest cost for all other plans are determined on the basis of the single equivalent discount rates derived in determining those plan obligations.

The discount rates utilized to measure the pension and other postretirement obligations of the U.S. plans are based on the yield on high-quality corporate fixed income investments at the measurement date. Future expected actuarially determined cash flows for the Company's U.S. plans are individually discounted at the spot rates under the Willis Towers Watson U.S. RATE:Link 60-90 corporate yield curve (based on 60th to 90th percentile high-quality corporate bond yields) to arrive at the plan's obligations as of the measurement date.

The Company's mortality assumption used for the U.S. plans is a benefit-weighted version of the Society of Actuaries' RP-2014 base table with future rates of mortality improvement based on a modified version of the assumptions used in the Social Security Administration's 2021 trustees report.

Summarized information on the Company's pension and other postretirement benefit plans is as follows:

Change in Projected Benefit Obligations, Plan Assets and Funded Status of All Significant Plans	*Defined Benefit Pension Plans*		*Other Postretirement Benefit Plans*	
In millions	*2023*	*2022*	*2023*	*2022*
Change in projected benefit obligations:				
Benefit obligations at beginning of year	$ 22,861	$ 32,977	$ 893	$ 1,251
Service cost	272	392	4	6
Interest cost	1,110	680	45	26
Plan participants' contributions	9	12	—	—
Actuarial changes in assumptions and experience	1,086	(8,433)	65	(318)
Benefits paid	(1,385)	(1,539)	(94)	(67)
Plan amendments	6	(25)	—	—
Acquisitions/divestitures/other [1]	6	(602)	—	—
Effect of foreign exchange rates	279	(600)	1	(5)
Termination benefits/settlements [2]	(1,777)	(1)	—	—
Benefit obligations at end of year	$ 22,467	$ 22,861	$ 914	$ 893
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 21,231	$ 28,167	$ —	$ —
Actual return on plan assets	1,228	(4,556)	—	—
Employer contributions	142	235	—	—
Plan participants' contributions	9	12	—	—
Benefits paid	(1,385)	(1,539)	—	—
Settlements [3]	(1,777)	—	—	—
Other [4]	(73)	(592)	—	—
Effect of foreign exchange rates	259	(496)	—	—
Fair value of plan assets at end of year	$ 19,634	$ 21,231	$ —	$ —
Funded status:				
U.S. plans with plan assets	$ (1,192)	$ (545)	$ —	$ —
Non-U.S. plans with plan assets	(1,017)	(473)	—	—
All other plans	(624)	(612)	(914)	(893)
Funded status at end of year	$ (2,833)	$ (1,630)	$ (914)	$ (893)
Amounts recognized in the consolidated balance sheets at Dec 31:				
Deferred charges and other assets	$ 889	$ 1,035	$ —	$ —
Accrued and other current liabilities	(67)	(66)	(86)	(88)
Pension and other postretirement benefits - noncurrent	(3,655)	(2,599)	(828)	(805)
Net amount recognized	$ (2,833)	$ (1,630)	$ (914)	$ (893)
Pretax amounts recognized in accumulated other comprehensive loss at Dec 31:				
Net loss (gain)	$ 7,709	$ 7,045	$ (402)	$ (523)
Prior service credit	(84)	(116)	—	—
Pretax balance in accumulated other comprehensive loss at end of year	$ 7,625	$ 6,929	$ (402)	$ (523)

1. The 2022 impact relates to the transfer of certain benefit obligations in the United States through the purchase of annuity contracts from an insurance company.
2. The 2023 impact primarily relates to the transfer of certain pension benefit obligations in the United States and Canada through the purchase of or conversion to annuity contracts from insurance companies, triggering settlement accounting.
3. The 2023 impact primarily relates to the purchase of annuity contracts associated with the transfer of certain pension benefit obligations to insurance companies, triggering settlement accounting.
4. The 2023 impact primarily relates to a reversion of pension plan funds for a portion of the excess funding of one of its plans in Europe. The 2022 impact primarily relates to the purchase of annuity contracts associated with the transfer of certain pension benefit obligations to insurance companies.

A significant component of the overall decrease in the Company's benefit obligation for the year ended December 31, 2023, was due to the irrevocable transfer of certain benefit obligations to third-party insurance companies, partially offset by the change in weighted-average discount rates, which decreased from 5.18 percent at December 31, 2022, to 4.73 percent at December 31, 2023. A significant component of the overall decrease in the Company's benefit obligation for the year ended December 31, 2022, was due to the change in weighted-average discount rates, which increased from 2.57 percent at December 31, 2021, to 5.18 percent at December 31, 2022.

The accumulated benefit obligation for all significant pension plans was $22.3 billion and $22.6 billion at December 31, 2023 and 2022, respectively.

Pension Plans with Accumulated Benefit Obligations in Excess of Plan Assets at Dec 31 In millions	*2023*	*2022*
Accumulated benefit obligations	$ 18,612	$ 18,300
Fair value of plan assets	$ 14,962	$ 15,723

Pension Plans with Projected Benefit Obligations in Excess of Plan Assets at Dec 31 In millions	*2023*	*2022*
Projected benefit obligations	$ 18,783	$ 18,388
Fair value of plan assets	$ 15,060	$ 15,723

Net Periodic Benefit Cost (Credit) for All Significant Plans for the Year Ended Dec 31	*Defined Benefit Pension Plans*			*Other Postretirement Benefit Plans*		
In millions	*2023*	*2022*	*2021*	*2023*	*2022*	*2021*
Net Periodic Benefit Costs:						
Service cost	$ 272	$ 392	$ 387	$ 4	$ 6	$ 7
Interest cost	1,110	680	594	45	26	23
Expected return on plan assets	(1,539)	(1,686)	(1,724)	—	—	—
Amortization of prior service credit	(26)	(21)	(22)	—	—	—
Amortization of unrecognized (gain) loss	89	658	822	(57)	(15)	(6)
Curtailment/settlement/other [1]	642	—	(18)	—	—	—
Net periodic benefit cost (credit)	$ 548	$ 23	$ 39	$ (8)	$ 17	$ 24
Changes in plan assets and benefit obligations recognized in other comprehensive (income) loss:						
Net (gain) loss	$ 1,395	$ (2,231)	$ (1,980)	$ 64	$ (317)	$ (98)
Prior service cost (credit)	6	(25)	2	—	—	—
Amortization of prior service credit	26	21	22	—	—	—
Amortization of unrecognized gain (loss)	(89)	(658)	(822)	57	15	6
Curtailment and settlement gain (loss) [1]	(642)	—	18	—	—	—
Total recognized in other comprehensive (income) loss	$ 696	$ (2,893)	$ (2,760)	$ 121	$ (302)	$ (92)
Total recognized in net periodic benefit cost and other comprehensive (income) loss	$ 1,244	$ (2,870)	$ (2,721)	$ 113	$ (285)	$ (68)

1. The 2023 impact relates to the settlement of certain pension benefit obligations in the United States and Canada through the purchase of or conversion to annuity contracts from insurance companies. The 2021 impact primarily relates to the freeze of pensionable compensation and credited service amounts for employees that participate in the U.S. Plans.

Net periodic benefit cost, other than the service cost component, is included in "Sundry income (expense) - net" in the consolidated statements of income. See Note 5 for additional information.

Estimated Future Benefit Payments
The estimated future benefit payments, reflecting expected future service, as appropriate, are presented in the following table:

Estimated Future Benefit Payments at Dec 31, 2023 In millions	*Defined Benefit Pension Plans*	*Other Postretirement Benefit Plans*
2024	$ 1,493	$ 88
2025	1,359	86
2026	1,374	83
2027	1,393	82
2028	1,416	80
2029-2033	7,160	348
Total	$ 14,195	$ 767

Plan Assets
Plan assets consist primarily of equity and fixed income securities of United States and foreign issuers, and include alternative investments, such as real estate, private equity and absolute return strategies. Plan assets totaled $19.6 billion at December 31, 2023 and $21.2 billion at December 31, 2022 and included no directly held common stock of Dow Inc.

The Company's investment strategy for plan assets is to manage the assets in relation to the liability in order to pay retirement benefits to plan participants over the life of the plans. This is accomplished by identifying and managing the exposure to various market risks, diversifying investments across various asset classes and earning an acceptable long-term rate of return consistent with an acceptable amount of risk, while considering the liquidity needs of the plans.

The plans are permitted to use derivative instruments for investment purposes, as well as for hedging the underlying asset and liability exposure and rebalancing the asset allocation. The plans use value-at-risk, stress testing, scenario analysis and Monte Carlo simulations to monitor and manage both the risk within the portfolios and the surplus risk of the plans.

Equity securities primarily include investments in large- and small-cap companies located in both developed and emerging markets around the world. Fixed income securities include investment and non-investment grade corporate bonds of companies diversified across industries, U.S. treasuries, non-U.S. developed market securities, U.S. agency mortgage-backed securities, emerging market securities and fixed income related funds. Alternative investments primarily include investments in real estate, private equity and absolute return strategies. Other significant investment types include various insurance contracts and interest rate, equity, commodity and foreign exchange derivative investments and hedges.

The Company mitigates the credit risk of investments by establishing guidelines with investment managers that limit investment in any single issue or issuer to an amount that is not material to the portfolio being managed. These guidelines are monitored for compliance both by the Company and external managers. Credit risk related to derivative activity is mitigated by utilizing multiple counterparties, collateral support agreements and centralized clearing, where appropriate. A short-term investment money market fund is utilized as the sweep vehicle for the U.S. plans, which from time to time can represent a significant investment.

The weighted-average target allocation for plan assets of the Company's pension plans is summarized as follows:

Target Allocation for Plan Assets at Dec 31, 2023 *Asset Category*	*Target Allocation*
Equity securities	20 %
Fixed income securities	53
Alternative investments	26
Other investments	1
Total	100 %

Fair value calculations may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

For pension plan assets classified as Level 1 measurements (measured using quoted prices in active markets), total fair value is either the price of the most recent trade at the time of the market close or the official close price, as defined by the exchange on which the asset is most actively traded on the last trading day of the period, multiplied by the number of units held without consideration of transaction costs.

For pension plan assets classified as Level 2 measurements, where the security is frequently traded in less active markets, fair value is based on the closing price at the end of the period; where the security is less frequently traded, fair value is based on the price a dealer would pay for the security or similar securities, adjusted for any terms specific to that asset or liability. Market inputs are obtained from well-established and recognized vendors of market data and subjected to tolerance and quality checks. For derivative assets and liabilities, standard industry models are used to calculate the fair value of the various financial instruments based on significant observable market inputs, such as foreign exchange rates, commodity prices, swap rates, interest rates and implied volatilities obtained from various market sources. For other pension plan assets for which observable inputs are used, fair value is derived through the use of fair value models, such as a discounted cash flow model or other standard pricing models.

For pension plan assets classified as Level 3 measurements, total fair value is based on significant unobservable inputs including assumptions where there is little, if any, market activity for the investment.

Certain pension plan assets are held in funds where fair value is based on an estimated net asset value per share (or its equivalent) as of the most recently available fund financial statements which are received on a monthly or quarterly basis. These valuations are reviewed for reasonableness based on applicable sector, benchmark and company performance. Adjustments to valuations are made where appropriate to arrive at an estimated net asset value per share at the measurement date. These funds are not classified within the fair value hierarchy.

The following table summarizes the bases used to measure the Company's pension plan assets at fair value for the years ended December 31, 2023 and 2022:

Basis of Fair Value Measurements	*Dec 31, 2023*				*Dec 31, 2022*			
In millions	*Total*	*Level 1*	*Level 2*	*Level 3*	*Total*	*Level 1*	*Level 2*	*Level 3*
Cash and cash equivalents	$ 1,050	$ 987	$ 63	$ —	$ 1,240	$ 989	$ 251	$ —
Equity securities:								
U.S. equity securities	$ 1,443	$ 1,431	$ 11	$ 1	$ 1,855	$ 1,845	$ 7	$ 3
Non - U.S. equity securities	1,720	1,584	132	4	2,120	1,924	193	3
Total equity securities	$ 3,163	$ 3,015	$ 143	$ 5	$ 3,975	$ 3,769	$ 200	$ 6
Fixed income securities:								
Debt - government-issued	$ 4,665	$ 47	$ 4,618	$ —	$ 3,885	$ 57	$ 3,827	$ 1
Debt - corporate-issued	4,277	584	3,692	1	4,231	441	3,790	—
Debt - asset-backed	43	—	43	—	128	44	84	—
Total fixed income securities	$ 8,985	$ 631	$ 8,353	$ 1	$ 8,244	$ 542	$ 7,701	$ 1
Alternative investments:								
Private markets	$ 1	$ —	$ —	$ 1	$ 5	$ —	$ —	$ 5
Real estate	21	21	—	—	48	48	—	—
Derivatives - asset position	190	1	189	—	348	5	343	—
Derivatives - liability position	(223)	—	(223)	—	(479)	(6)	(473)	—
Total alternative investments	$ (11)	$ 22	$ (34)	$ 1	$ (78)	$ 47	$ (130)	$ 5
Other investments	$ 609	$ 3	$ 606	$ —	$ 1,103	$ 16	$ 1,087	$ —
Subtotal	$ 13,796	$ 4,658	$ 9,131	$ 7	$ 14,484	$ 5,363	$ 9,109	$ 12
Investments measured at net asset value:								
Hedge funds	$ 820				$ 964			
Private markets	3,350				3,873			
Real estate	1,741				1,956			
Total investments measured at net asset value	$ 5,911				$ 6,793			
Items to reconcile to fair value of plan assets:								
Pension trust receivables [1]	$ 42				$ 31			
Pension trust payables [2]	(115)				(77)			
Total	$ 19,634				$ 21,231			

1. Primarily receivables for investment securities sold.
2. Primarily payables for investment securities purchased.

The following table summarizes the changes in the fair value of Level 3 pension plan assets for the years ended December 31, 2023 and 2022:

Fair Value Measurement of Level 3 Pension Plan Assets In millions	*Equity Securities*	*Fixed Income Securities*	*Alternative Investments*	*Other Investments*	*Total*
Balance at Jan 1, 2022	$ 6	$ 1	$ 5	$ —	$ 12
Actual return on assets:					
Relating to assets held at Dec 31, 2022	(6)	—	(6)	—	(12)
Purchases, sales and settlements, net	—	—	6	—	6
Transfers into Level 3, net	6	—	—	—	6
Balance at Dec 31, 2022	$ 6	$ 1	$ 5	$ —	$ 12
Actual return on assets:					
Relating to assets held at Dec 31, 2023	1	—	(4)	—	(3)
Purchases, sales and settlements, net	(2)	—	—	—	(2)
Balance at Dec 31, 2023	$ 5	$ 1	$ 1	$ —	$ 7

Defined Contribution Plans

U.S. employees may participate in defined contribution plans by contributing a portion of their compensation, which is partially matched by the Company. Defined contribution plans also cover employees in some subsidiaries in other countries, including Brazil, The Netherlands, Canada, Korea, Spain and the United Kingdom. Expense recognized for all defined contribution plans was $214 million in 2023, $150 million in 2022 and $165 million in 2021.

On March 4, 2021, the Company announced changes to its U.S. tax-qualified and non-qualified defined contribution plans. Effective January 1, 2022, contributions to U.S. tax-qualified and non-qualified defined contribution plans were harmonized across the Company's U.S. eligible employee population. The matching contribution allows all eligible U.S. employees to receive matching contributions of up to 5 percent of their eligible compensation. In addition, beginning on January 1, 2024, all eligible U.S. employees will receive an automatic non-elective contribution of 4 percent of eligible compensation to their respective defined contribution plans.

NOTE 19 – STOCK-BASED COMPENSATION

The Company provides stock-based compensation in the form of the Employee Stock Purchase Plan, which grants eligible employees the right to purchase shares of the Company's common stock at a discounted price. The Company also grants stock-based compensation to employees and non-employee directors under stock incentive plans, in the form of stock options, stock appreciation rights, PSUs and RSUs.

The total stock-based compensation expense included in the consolidated statements of income was $212 million, $211 million and $276 million in 2023, 2022 and 2021, respectively. The income tax benefits related to stock-based compensation arrangements were $47 million, $47 million and $62 million in 2023, 2022 and 2021, respectively.

Accounting for Stock-Based Compensation

The Company grants stock-based compensation awards that vest over a specified period or upon employees meeting certain performance and/or retirement eligibility criteria. The fair value of equity instruments issued to employees is measured on the grant date. The fair value of liability instruments (granted to executive employees subject to stock ownership requirements, that provide the recipient the option to elect to receive a cash payment equal to the value of the stock award on the date of delivery) is measured at the end of each quarter. The fair value of equity and liability instruments is expensed over the vesting period or, in the case of retirement, from the grant date to the date on which retirement eligibility provisions have been met and additional service is no longer required. The Company estimates expected forfeitures based on historical activity.

The Company uses the Black-Scholes option valuation model to estimate the fair value of stock options. The weighted-average assumptions used to calculate total stock-based compensation are included in the following table:

Weighted-Average Assumptions	*2023*	*2022*	*2021*
Dividend yield	4.74 %	4.59 %	4.86 %
Expected volatility	30.30 %	30.20 %	33.40 %
Risk-free interest rate	3.83 %	2.00 %	0.68 %
Expected life of stock options granted during period (years)	6.00	6.25	6.25

The dividend yield assumption was equal to the dividend yield on the grant date, which reflected the Company's quarterly dividend payments of $0.70 per share in 2023, 2022 and 2021 on Dow Inc. common stock. The expected volatility assumptions for the 2023, 2022 and 2021 stock options were based on an equal weighting of the historical daily volatility for the expected term of the awards and current implied volatility from exchange-traded options. The expected volatility assumption for the market portion of the 2023, 2022 and 2021 PSU awards were based on historical daily volatility for the term of the award. The risk-free interest rate was based on the U.S. Treasury strip rates over the expected life of the 2023, 2022 and 2021 options. The expected life of stock options granted was based on an analysis of historical exercise patterns.

Stock Incentive Plan

The Company has historically granted equity awards under various plans (the "Prior Plans"). On February 9, 2012, the TDCC Board of Directors authorized The Dow Chemical Company 2012 Stock Incentive Plan (the "2012 Plan"), which was approved by stockholders at TDCC's annual meeting on May 10, 2012 ("2012 Plan Effective Date"), and became effective on that date. On February 13, 2014, the TDCC Board of Directors adopted The Dow Chemical Company Amended and Restated 2012 Stock Incentive Plan (the "2012 Restated Plan"). The 2012 Restated Plan was approved by stockholders at TDCC's annual meeting on May 15, 2014, and became effective on that date. The Prior Plans were superseded by the 2012 Plan and the 2012 Restated Plan (collectively, the "2012 Plan"). Under the 2012 Plan, the Company granted options, RSUs, PSUs, restricted stock, stock appreciation rights and stock units to employees and non-employee directors, subject to an aggregate limit and annual individual limits. The terms of the grants were fixed at the grant date. TDCC's stock based compensation programs were assumed by DowDuPont and continued in place with the ability to grant and issue DowDuPont common stock until separation.

On April 1, 2019 ("Original Effective Date"), in connection with the separation, the Company adopted the 2019 Stock Incentive Plan (the "2019 Plan"). Under the 2019 Plan, the Company may grant stock options, RSUs, PSUs, stock appreciation rights and stock units to employees and non-employee directors until the tenth anniversary of the Original Effective Date, subject to an aggregate limit and annual individual limits. The terms of the grants are fixed at the grant date. At December 31, 2023, there were approximately 46 million shares of common stock available for grant under the 2019 Plan.

Stock Options

The Company grants stock options to certain employees, subject to certain annual and individual limits, with terms of the grants fixed at the grant date. The exercise price of each stock option equals the market price of the common stock on the grant date. Options vest from one year to three years and have a maximum term of ten years. The following table summarizes stock option activity for 2023:

Stock Options Shares in thousands	*2023* *Shares*	*Exercise Price* [1]
Outstanding at Jan 1, 2023	14,425	$ 53.84
Granted	1,137	$ 59.08
Exercised	(2,156)	$ 38.15
Forfeited/Expired	(103)	$ 58.64
Outstanding at Dec 31, 2023	13,303	$ 56.79
Remaining contractual life in years		4.72
Aggregate intrinsic value in millions	$ 34	
Exercisable at Dec 31, 2023	11,030	$ 56.24
Remaining contractual life in years		3.96
Aggregate intrinsic value in millions	$ 34	

1. Weighted-average per share.

Additional Information about Stock Options In millions, except per share amounts	*2023*	*2022*	*2021*
Weighted-average fair value per share of options granted	$ 12.13	$ 11.08	$ 10.37
Total compensation expense for stock option plans	$ 13	$ 13	$ 14
Related tax benefit	$ 3	$ 3	$ 3
Total amount of cash received from the exercise of options	$ 77	$ 109	$ 217
Total intrinsic value of options exercised [1]	$ 40	$ 73	$ 121
Related tax benefit	$ 9	$ 16	$ 27

1. Difference between the market price at exercise and the price paid by the employee to exercise the options.

Total unrecognized compensation cost related to unvested stock option awards of $4 million at December 31, 2023, is expected to be recognized over a weighted-average period of 1.60 years.

Restricted Stock Units

The Company grants RSUs to certain employees and non-employee directors. The grants vest after a designated period of time, generally three years for employees and two years for non-employee directors. The following table shows changes in nonvested RSUs:

RSU Awards Shares in thousands	*2023* *Shares*	*Grant Date Fair Value* [1]
Nonvested at Jan 1, 2023	3,825	$ 55.13
Granted	2,036	$ 58.39
Vested	(1,851)	$ 52.71
Canceled	(152)	$ 58.69
Nonvested at Dec 31, 2023	3,858	$ 57.87

1. Weighted-average per share.

Additional Information about RSUs In millions, except per share amounts	*2023*	*2022*	*2021*
Weighted-average fair value per share of RSUs granted	$ 58.39	$ 58.60	$ 57.96
Total fair value of RSUs vested [1]	$ 117	$ 102	$ 33
Related tax benefit	$ 26	$ 23	$ 7
Total compensation expense for RSU awards	$ 103	$ 99	$ 95
Related tax benefit	$ 23	$ 22	$ 21

1. Includes the fair value of shares vested in prior years and delivered in the reporting year.

Total unrecognized compensation cost related to RSU awards of $89 million at December 31, 2023 is expected to be recognized over a weighted-average period of 1.83 years. At December 31, 2023, approximately 1.7 million RSUs with a grant date weighted-average fair value per share of $58.76 had previously vested, but were not issued. These shares are scheduled to be issued to employees within six months to three years or to non-employee directors upon retirement.

Performance Stock Units

The Company grants PSUs to certain employees. The grants vest when the Company attains specified performance targets, such as return on capital, cumulative cash from operations, environmental, social and governance metrics, and relative total shareholder return, over a predetermined period, generally one year to three years. Performance and payouts are determined independently for each metric. Compensation expense related to PSU awards is recognized over the lesser of the service or performance period. Changes in the fair value of liability instruments are recognized as compensation expense each quarter.

The following table shows the PSU awards granted:

PSU Awards Shares in thousands		*Target Shares Granted* [1]	*Grant Date Fair Value* [2]
Year	*Performance Period*		
2023	Dec 18, 2023 – Dec 18, 2026	13	$ 54.25
2023	Jan 1, 2023 – Dec 31, 2025	1,233	$ 64.04
2022	Jan 1, 2022 – Dec 31, 2024	1,157	$ 65.83
2021	Jan 1, 2021 – Dec 31, 2023	1,223	$ 61.48

1. At the end of the performance period, the actual number of shares issued can range from zero to 200 percent of target shares granted for the Jan 1 - Dec 31, 2023, 2022 and 2021 awards, and zero to 100 percent of target shares granted for the Dec 18, 2023 - Dec 18, 2026 awards.
2. Weighted-average per share.

The following table shows changes in nonvested PSUs:

PSUs Shares in thousands	*2023*	
	Shares	*Grant Date Fair Value* [1]
Nonvested at Jan 1, 2023	3,640	$ 57.93
Granted	1,247	$ 63.94
Vested	(1,355)	$ 48.35
Canceled	(107)	$ 63.90
Nonvested at Dec 31, 2023	3,425	$ 63.76

1. Weighted-average per share.

Additional Information about PSUs In millions, except share amounts	2023	2022	2021
Total fair value of PSUs vested and delivered [1]	$ 77	$ 51	$ —
Related tax benefit	$ 17	$ 11	$ —
Total compensation expense for PSU awards	$ 67	$ 70	$ 138
Related tax benefit	$ 15	$ 16	$ 31
Shares of PSUs settled in cash (in thousands) [2]	369	162	—
Total cash paid to settle PSUs [3]	$ 21	$ 10	$ —

1. Includes the fair value of shares vested in prior years and delivered in the reporting year.
2. PSU awards vested in prior years and delivered in the reporting year.
3. Cash paid to certain executive employees for PSU awards vested in prior periods and delivered in the reporting year, equal to the value of the stock award on the date of delivery.

Total unrecognized compensation cost related to PSU awards of $26 million at December 31, 2023, is expected to be recognized over a weighted-average period of 1.67 years.

Employee Stock Purchase Plan

The Board unanimously approved the Dow Inc. 2021 Employee Stock Purchase Plan (the "2021 ESPP"), which was approved by the Company's stockholders at the 2021 Annual Meeting of Stockholders held on April 15, 2021. Under the 2023 ESPP offering, most employees were eligible to purchase shares of common stock of Dow Inc. valued at up to 10 percent of their annual total base salary or wages. The number of shares purchased was determined using the amount contributed by the employee divided by the plan price. The plan price of the stock was equal to 85 percent of the fair market value (closing price) of the common stock at May 1, 2023 (beginning) or November 3, 2023 (ending) of the offering period, whichever was lower.

In 2023, employees subscribed to the right to purchase approximately 2.6 million shares at a weighted-average price of $42.27 per share. The plan price was fixed upon the close of the offering period. The shares were delivered to employees in the fourth quarter of 2023.

In 2022, employees subscribed to the right to purchase approximately 2.7 million shares at a weighted-average price of $37.75 per share. The plan price was fixed upon the close of the offering period. The shares were delivered to employees in the fourth quarter of 2022.

Additional Information about Employee Stock Purchase Plan In millions, except per share amounts	2023	2022
Weighted-average fair value per share of purchase rights granted	$ 11.75	$ 14.28
Total compensation expense for ESPP	$ 29	$ 29
Related tax benefit	$ 6	$ 7
Total amount of cash received from the exercise of purchase rights	$ 111	$ 103
Total intrinsic value of purchase rights exercised [1]	$ 20	$ 18
Related tax benefit	$ 4	$ 4

1. Difference between the market price at exercise and the price paid by the employee to exercise the purchase rights.

NOTE 20 – FINANCIAL INSTRUMENTS

Refer to Note 21 for a summary of the fair value of financial instruments at December 31, 2023 and 2022.

Debt Securities

The Company's investments in debt securities are primarily classified as available-for-sale. The following table provides the investing results from available-for-sale securities for the years ended December 31, 2023, 2022 and 2021.

Investing Results In millions	*2023*	*2022*	*2021*
Proceeds from sales of available-for-sale securities	$ 985	$ 543	$ 424
Gross realized gains	$ 89	$ 43	$ 50
Gross realized losses	$ 26	$ 45	$ 12

The following table summarizes the contractual maturities of the Company's investments in debt securities:

Contractual Maturities of Debt Securities at Dec 31, 2023 In millions	*Cost*	*Fair Value*
Within one year	$ 66	$ 62
One to five years	1,124	970
Six to ten years	443	407
After ten years	505	421
Total	$ 2,138	$ 1,860

Portfolio managers regularly review the Company's holdings to determine if any investments in debt securities are other-than-temporarily impaired. The analysis includes reviewing the amount of the impairment, as well as the length of time it has been impaired.

The credit rating of the issuer, current credit rating trends, the trends of the issuer's overall sector, the ability of the issuer to pay expected cash flows and the length of time the security has been in a loss position are considered in determining whether unrealized losses represent an other-than-temporary impairment. The Company did not have any credit-related losses in 2023, 2022 or 2021.

The following table provides the fair value and gross unrealized losses of the Company's investments in debt securities that were deemed to be temporarily impaired at December 31, 2023 and 2022, aggregated by investment category:

Temporarily Impaired Debt Securities at Dec 31 In millions	*Less than 12 months*		*12 months or more*		*Total*	
	Fair Value	*Unrealized Losses*	*Fair Value*	*Unrealized Losses*	*Fair Value*	*Unrealized Losses*
2023						
Government debt [1]	$ 37	$ (2)	$ 546	$ (105)	$ 583	$ (107)
Corporate bonds	255	(98)	660	(93)	915	(191)
Total temporarily impaired debt securities	$ 292	$ (100)	$ 1,206	$ (198)	$ 1,498	$ (298)
2022						
Government debt [1]	$ 273	$ (37)	$ 333	$ (96)	$ 606	$ (133)
Corporate bonds	818	(110)	158	(49)	976	(159)
Total temporarily impaired debt securities	$ 1,091	$ (147)	$ 491	$ (145)	$ 1,582	$ (292)

1. U.S. Treasury obligations, U.S. agency obligations, U.S. agency mortgage-backed securities and other municipalities' obligations.

Equity Securities
There were no material adjustments to the carrying value of the not readily determinable investments for impairment or observable price changes for the year ended December 31, 2023. The net unrealized gain recognized in earnings on equity securities totaled $7 million for the year ended December 31, 2023 ($8 million net unrealized loss for the year ended December 31, 2022).

Investments in Equity Securities In millions	*Dec 31, 2023*	*Dec 31, 2022*
Readily determinable fair value	$ 17	$ 10
Not readily determinable fair value	$ 171	$ 186

Risk Management
The Company's business operations give rise to market risk exposure due to changes in foreign exchange rates, interest rates, commodity prices and other market factors such as equity prices. To manage such risks effectively, the Company enters into hedging transactions, pursuant to established guidelines and policies that enable it to mitigate the adverse effects of financial market risk. Derivatives used for this purpose are designated as hedges per the accounting guidance related to derivatives and hedging activities, where appropriate. A secondary objective is to add value by creating additional non-specific exposure within established limits and policies; derivatives used for this purpose are not designated as hedges. The potential impact of creating such additional exposure is not material to the Company's results. Accounting guidance requires companies to recognize all derivative instruments as either assets or liabilities at fair value.

The Company's risk management program for interest rate, foreign currency and commodity risks is based on fundamental, mathematical and technical models that take into account the implicit cost of hedging. Risks created by derivative instruments and the mark-to-market valuations of positions are strictly monitored at all times, using value-at-risk and stress tests. Counterparty credit risk arising from these contracts is not significant because the Company minimizes counterparty concentration, deals primarily with major financial institutions of solid credit quality, and the majority of its hedging transactions mature in less than three months. In addition, the Company minimizes concentrations of credit risk through its global orientation by transacting with large, internationally diversified financial counterparties. It is the Company's policy to not have credit risk-related contingent features in its derivative instruments. No significant concentration of counterparty credit risk existed at December 31, 2023. The Company does not anticipate losses from credit risk, and the net cash requirements arising from counterparty risk associated with risk management activities are not expected to be material in 2024.

The Company revises its strategies as market conditions dictate and management reviews its overall financial strategies and the impacts from using derivatives in its risk management program with the Company's senior leadership who also reviews these strategies with the Board and/or relevant committees thereof.

Derivative Instruments
The notional amounts of the Company's derivative instruments at December 31, 2023 and 2022, were as follows:

Notional Amounts [1] In millions	*Dec 31, 2023*	*Dec 31, 2022*
Derivatives designated as hedging instruments		
Interest rate contracts	$ 3,000	$ 1,500
Foreign currency contracts	$ 2,316	$ 2,408
Derivatives not designated as hedging instruments		
Interest rate contracts	$ 59	$ 3
Foreign currency contracts	$ 5,824	$ 8,837

1. Notional amounts represent the absolute value of open derivative positions at the end of the period. Multi-leg option positions are reflected at the maximum notional position at expiration.

The notional amounts of the Company's commodity derivatives at December 31, 2023 and 2022, were as follows:

Commodity Notionals [1]	*Dec 31, 2023*	*Dec 31, 2022*	*Notional Volume Unit*
Derivatives designated as hedging instruments			
Hydrocarbon derivatives	3.7	19.2	million barrels of oil equivalent
Derivatives not designated as hedging instruments			
Hydrocarbon derivatives	1.4	—	million barrels of oil equivalent

1. Notional amounts represent the net volume of open derivative positions outstanding at the end of the period.

Maturity Dates of Derivatives Designated as Hedging Instruments	*Year*
Interest rate contracts	2025
Foreign currency contracts	2025
Commodity contracts	2026

Interest Rate Risk Management
The main objective of interest rate risk management is to reduce the total funding cost to the Company and to alter the interest rate exposure to the desired risk profile. To achieve this objective, the Company hedges using interest rate swaps, “swaptions,” and exchange-traded instruments.

Foreign Currency Risk Management
The global nature of the Company's business requires active participation in the foreign exchange markets. The Company has assets, liabilities and cash flows in currencies other than the U.S. dollar. The primary objective of the Company's foreign currency risk management is to optimize the U.S. dollar value of net assets and cash flows. To achieve this objective, the Company hedges on a net exposure basis using foreign currency forward contracts, over-the-counter option contracts, cross-currency swaps and nonderivative instruments in foreign currencies. Exposures primarily relate to assets, liabilities and bonds denominated in foreign currencies, as well as economic exposure, which is derived from the risk that currency fluctuations could affect the dollar value of future cash flows related to operating activities.

Commodity Risk Management
The Company has exposure to the prices of commodities in its procurement of certain raw materials. The primary purpose of commodity hedging activities is to manage the price volatility associated with these forecasted inventory purchases.

Derivatives Not Designated in Hedging Relationships
Foreign Currency Contracts
The Company also uses foreign exchange forward contracts, options and cross-currency swaps that are not designated as hedging instruments primarily to manage foreign currency exposure.

Commodity Contracts
The Company utilizes futures, options and swap instruments that are effective as economic hedges of commodity price exposures, but do not meet hedge accounting criteria for derivatives and hedging, to reduce exposure to commodity price fluctuations on purchases of raw materials and inventory.

Interest Rate Contracts
The Company uses swap instruments that are not designated as hedging instruments to manage interest rate exposures. The Company uses interest rate swaps, "swaptions," and exchange-traded instruments to accomplish this objective.

Accounting for Derivative Instruments and Hedging Activities

Cash Flow Hedges

For derivatives that are designated and qualify as cash flow hedging instruments, the gain or loss on the derivative is recorded in AOCL; it is reclassified to income in the same period or periods that the hedged transaction affects income. The unrealized amounts in AOCL fluctuate based on changes in the fair value of open contracts at the end of each reporting period. The Company anticipates volatility in AOCL and net income from its cash flow hedges. The amount of volatility varies with the level of derivative activities and market conditions during any period.

The portion of the mark-to-market effects of the foreign currency contracts is recorded in AOCL; it is reclassified to income in the same period or periods that the underlying item affects income, except for amounts excluded from the assessment of effectiveness that are recognized in earnings through an amortization approach.

Commodity swaps, futures and option contracts with maturities of not more than 60 months are utilized and designated as cash flow hedges of forecasted commodity purchases. The designated portion of the mark-to-market effect of the cash flow hedge instrument is recorded in AOCL; it is reclassified to income in the same period or periods that the underlying commodity purchase affects income.

Fair Value Hedges

For interest rate instruments that are designated and qualify as fair value hedges, the gain or loss on the derivative as well as the offsetting loss or gain on the hedge item attributable to the hedged risk are recognized in current period income and reflected as “Interest expense and amortization of debt discount” in the consolidated statements of income, except for amounts excluded from the assessment of effectiveness that are recognized in earnings through an amortization approach.

Net Foreign Investment Hedges

The Company designates derivatives that qualify as effective net foreign investment hedges, the results of which are presented in the effect of derivative instruments table. The Company also utilizes non-derivative instruments as net foreign investment hedges. The Company had outstanding foreign-currency denominated debt designated as a hedge of net foreign investment of $2,629 million at December 31, 2023 ($152 million at December 31, 2022).

The following tables provide the fair value and balance sheet classification of derivative instruments at December 31, 2023 and 2022:

Fair Value of Derivative Instruments	*Dec 31, 2023*			*Dec 31, 2022*		
In millions	*Gross*	*Counterparty and Cash Collateral Netting* [1]	*Net* [2]	*Gross*	*Counterparty and Cash Collateral Netting* [1]	*Net* [2]
Asset derivatives						
Derivatives designated as hedging instruments						
Interest rate contracts [3]	$ 73	$ (73)	$ —	$ 351	$ (246)	$ 105
Interest rate contracts [4]	59	(56)	3	—	—	—
Foreign currency contracts [3]	21	(5)	16	58	(39)	19
Foreign currency contracts [4]	5	—	5	—	—	—
Commodity contracts [3]	27	(21)	6	199	(148)	51
Commodity contracts [4]	2	(1)	1	—	—	—
Total	$ 187	$ (156)	$ 31	$ 608	$ (433)	$ 175
Derivatives not designated as hedging instruments						
Interest rate contracts [3]	$ 4	$ (3)	$ 1	$ —	$ —	$ —
Foreign currency contracts [3]	33	(16)	17	146	(50)	96
Commodity contracts [3]	33	(28)	5	22	(1)	21
Total	$ 70	$ (47)	$ 23	$ 168	$ (51)	$ 117
Total asset derivatives	$ 257	$ (203)	$ 54	$ 776	$ (484)	$ 292
Liability derivatives						
Derivatives designated as hedging instruments						
Interest rate contracts [5]	$ 95	$ (73)	$ 22	$ 246	$ (246)	$ —
Interest rate contracts [6]	56	(56)	—	—	—	—
Foreign currency contracts [5]	8	(5)	3	58	(39)	19
Commodity contracts [5]	34	(22)	12	258	(198)	60
Commodity contracts [6]	2	(1)	1	—	—	—
Total	$ 195	$ (157)	$ 38	$ 562	$ (483)	$ 79
Derivatives not designated as hedging instruments						
Interest rate contracts [5]	$ 3	$ (3)	$ —	$ —	$ —	$ —
Foreign currency contracts [5]	38	(16)	22	61	(50)	11
Commodity contracts [5]	34	(28)	6	12	(11)	1
Total	$ 75	$ (47)	$ 28	$ 73	$ (61)	$ 12
Total liability derivatives	$ 270	$ (204)	$ 66	$ 635	$ (544)	$ 91

1. Counterparty and cash collateral amounts represent the estimated net settlement amount when applying netting and set-off rights included in master netting arrangements between the Company and its counterparties and the payable or receivable for cash collateral held or placed with the same counterparty.
2. Represents the net amounts included in the consolidated balance sheets.
3. Included in "Other current assets" in the consolidated balance sheets.
4. Included in "Deferred charges and other assets" in the consolidated balance sheets.
5. Included in "Accrued and other current liabilities" in the consolidated balance sheets.
6. Included in "Other noncurrent obligations" in the consolidated balance sheets.

Assets and liabilities related to forward contracts, interest rate swaps, currency swaps, options and other conditional or exchange contracts executed with the same counterparty under a master netting arrangement are netted. Collateral accounts are netted with corresponding assets or liabilities, when applicable. The Company posted cash collateral of $22 million at December 31, 2023 ($80 million at December 31, 2022). No cash collateral was posted by counterparties with the Company at December 31, 2023 ($2 million at December 31, 2022).

The following table summarizes the gain (loss) of derivative instruments in the consolidated statements of income and comprehensive income for the years ended December 31, 2023, 2022 and 2021:

Effect of Derivative Instruments	*Gain (loss) recognized in OCI* [1]			*Gain (loss) recognized in income* [2]		
In millions	*2023*	*2022*	*2021*	*2023*	*2022*	*2021*
Derivatives designated as hedging instruments:						
Fair value hedges:						
Interest rate contracts [3, 4]	$ —	$ —	$ —	$ —	$ —	$ (25)
Excluded components [3, 5]	(18)	—	2	—	—	—
Cash flow hedges:						
Interest rate contracts [3]	5	239	(62)	(10)	(10)	(9)
Foreign currency contracts [6]	20	5	13	2	13	(15)
Commodity contracts [6]	(152)	166	133	(242)	310	62
Excluded components [5, 6]	(4)	—	—	—	—	—
Net foreign investment hedges:						
Foreign currency contracts	60	34	31	—	—	—
Excluded components [5, 7]	36	59	54	29	44	11
Total derivatives designated as hedging instruments	$ (53)	$ 503	$ 171	$ (221)	$ 357	$ 24
Derivatives not designated as hedging instruments:						
Interest rate contracts [3]	$ —	$ —	$ —	$ —	$ (1)	$ (8)
Foreign currency contracts [7]	—	—	—	(156)	(249)	(253)
Commodity contracts [6]	—	—	—	1	48	(46)
Total return swap [6]	—	—	—	14	—	—
Total derivatives not designated as hedging instruments	$ —	$ —	$ —	$ (141)	$ (202)	$ (307)
Total derivatives	$ (53)	$ 503	$ 171	$ (362)	$ 155	$ (283)

1. OCI is defined as other comprehensive income (loss).
2. Pretax amounts.
3. Included in "Interest expense and amortization of debt discount" in the consolidated statements of income.
4. Gain (loss) recognized in income of derivatives is offset by gain (loss) recognized in income of the hedged item.
5. The excluded components are related to the time value of the derivatives designated as hedges.
6. Included in "Cost of sales" in the consolidated statements of income.
7. Included in "Sundry income (expense) - net" in the consolidated statements of income.

The following table provides the net after-tax gain (loss) expected to be reclassified from AOCL to income within the next 12 months:

Expected Reclassifications from AOCL within the next 12 months	*Dec 31, 2023*
Cash flow hedges:	
Interest rate contracts	$ (7)
Commodity contracts	$ (9)
Foreign currency contracts	$ 2
Excluded components	$ (3)
Net foreign investment hedges:	
Excluded components	$ 2

NOTE 21 – FAIR VALUE MEASUREMENTS

Fair Value Measurements on a Recurring Basis

The following table summarizes the bases used to measure certain assets and liabilities at fair value on a recurring basis:

Fair Value Measurements on a Recurring Basis		Dec 31, 2023				Dec 31, 2022			
In millions	Fair Value Level	Cost	Gain	Loss	Fair Value	Cost	Gain	Loss	Fair Value
Assets at fair value:									
Cash equivalents:									
Held-to-maturity securities [1]	Level 2	$ 485	$ —	$ —	$ 485	$ 872	$ —	$ —	$ 872
Money market funds	Level 2	663	—	—	663	355	—	—	355
Marketable securities [2]	Level 2	1,361	—	(61)	1,300	927	12	—	939
Nonconsolidated affiliates [3]	Level 3				7				7
Other investments:									
Debt securities: [4]									
Government debt [5]	Level 2	766	3	(107)	662	754	1	(133)	622
Corporate bonds	Level 1	24	—	(3)	21	38	—	(3)	35
Corporate bonds	Level 2	1,148	17	(99)	1,066	1,236	10	(156)	1,090
Corporate bonds	Level 3	200	—	(89)	111	—	—	—	—
Equity securities [4, 6]	Level 1	5	12	—	17	5	5	—	10
Derivatives relating to: [7]									
Interest rates	Level 2	—	136	—	136	—	351	—	351
Foreign currency	Level 2	—	59	—	59	—	204	—	204
Commodities	Level 1	—	2	—	2	—	63	—	63
Commodities	Level 2	—	60	—	60	—	158	—	158
Total assets at fair value					$ 4,589				$ 4,706
Liabilities at fair value:									
Long-term debt including debt due within one year [8]	Level 2	$ (15,024)	$ 1,089	$ (747)	$ (14,682)	$ (15,060)	$ 1,683	$ (498)	$ (13,875)
Guarantee liability [9]	Level 3				(178)				(199)
Derivatives relating to: [7]									
Interest rates	Level 2	—	—	(154)	(154)	—	—	(246)	(246)
Foreign currency	Level 2	—	—	(46)	(46)	—	—	(119)	(119)
Commodities	Level 1	—	—	(2)	(2)	—	—	(103)	(103)
Commodities	Level 2	—	—	(68)	(68)	—	—	(167)	(167)
Total liabilities at fair value					$ (15,130)				$ (14,709)

1. The Company's held-to-maturity securities primarily included treasury bills and time deposits.
2. The Company's investments in marketable securities are included in "Other current assets" in the consolidated balance sheets.
3. Estimated asset for an investment in a limited liability company included in "Investment in nonconsolidated affiliates" in the consolidated balance sheets.
4. The Company's investments in debt securities, which are primarily available-for-sale, and equity securities are included in "Other investments" in the consolidated balance sheets.
5. U.S. Treasury obligations, U.S. agency obligations, U.S. agency mortgage-backed securities and other municipalities' obligations.
6. Equity securities with a readily determinable fair value.
7. See Note 20 for the classification of derivatives in the consolidated balance sheets.
8. Cost includes fair value hedge adjustment gains of $49 million at December 31, 2023 and $46 million at December 31, 2022 on $4,479 million of debt at December 31, 2023 and $2,279 million of debt at December 31, 2022. See Note 20 for information on fair value measurements of long-term debt.
9. Estimated liability for TDCC's guarantee of Sadara's debt which is included in "Other noncurrent obligations" in the consolidated balance sheets. See Note 14 for additional information.

Cost approximates fair value for all other financial instruments.

For assets and liabilities classified as Level 1 measurements (measured using quoted prices in active markets), total fair value is either the price of the most recent trade at the time of the market close or the official close price, as defined by the exchange on which the asset is most actively traded on the last trading day of the period, multiplied by the number of units held without consideration of transaction costs.

For assets and liabilities classified as Level 2 measurements, where the security is frequently traded in less active markets, fair value is based on the closing price at the end of the period; where the security is less frequently traded, fair value is based on the price a dealer would pay for the security or similar securities, adjusted for any terms specific to that asset or liability, or by using observable market data points of similar, more liquid securities to imply the price. Market inputs are obtained from well-established and recognized vendors of market data and subjected to tolerance and quality checks.

For derivative assets and liabilities, standard industry models are used to calculate the fair value of the various financial instruments based on significant observable market inputs, such as foreign exchange rates, commodity prices, swap rates, interest rates and implied volatilities obtained from various market sources. Market inputs are obtained from well-established and recognized vendors of market data and subjected to tolerance/quality checks.

For all other assets and liabilities for which observable inputs are used, fair value is derived through the use of fair value models, such as a discounted cash flow model or other standard pricing models. See Note 20 for further information on the types of instruments used by the Company for risk management.

There were no transfers between Levels 1 and 2 in the years ended December 31, 2023 and 2022.

For assets classified as Level 3 measurements, fair value is based on significant unobservable inputs including assumptions where there is little, if any, market activity. The Level 3 asset value represents the fair value of an investment in a corporate bond, accounted for as a debt security and an investment in a limited liability company, accounted for as an investment in nonconsolidated affiliates. There was no unfunded commitment on the investment in a limited liability company at December 31, 2023 and 2022.

The following table summarizes the changes in fair value measurements of the investment in a corporate bond using Level 3 inputs for the year ended December 31, 2023:

Fair Value Measurements Using Level 3 Inputs for Investment in Corporate Bond at Dec 31, In millions	*2023*
Balance at Jan 1	$ —
Recognition of asset [1]	200
Loss included in AOCL [2]	(89)
Balance at Dec 31	$ 111

1. Included in "Other investments" in the consolidated balance sheets.
2. Included in "Accumulated other comprehensive loss" in the consolidated balance sheets.

For liabilities classified as Level 3 measurements, the fair value is based on significant unobservable inputs including assumptions where there is little, if any, market activity. The fair value of the Company's accrued liability related to the guarantee of Sadara's debt is in proportion to the Company's 35 percent ownership interest in Sadara. The estimated fair value of the guarantee was calculated using a "with" and "without" method. The fair value of the debt was calculated "with" the guarantee less the fair value of the debt "without" the guarantee. The "with" and "without" values were calculated using a discounted cash flow method based on contractual cash flows as well as projected prepayments made on the debt by Sadara. See Note 14 for further information on guarantees classified as Level 3 measurements. The following table summarizes the changes in fair value measurements using Level 3 inputs for the years ended December 31, 2023 and 2022:

Fair Value Measurements Using Level 3 Inputs for Accrued Liability of Sadara Guarantee at Dec 31, In millions	*2023*	*2022*
Balance at Jan 1	$ (199)	$ (220)
Gain included in earnings [1]	21	21
Balance at Dec 31	$ (178)	$ (199)

1. Included in "Equity in earnings (losses) of nonconsolidated affiliates" in the consolidated income statements.

For equity securities calculated at net asset value per share (or its equivalent), the Company had $86 million in private equity and $18 million in real estate at December 31, 2023 ($92 million in private equity and $20 million in real estate at December 31, 2022). There are no redemption restrictions and the unfunded commitments on these investments were $75 million at December 31, 2023 ($54 million at December 31, 2022).

Fair Value Measurements on a Nonrecurring Basis

The following table summarizes the bases used to measure certain assets at fair value on a nonrecurring basis in the consolidated balance sheets:

Basis of Fair Value Measurements on a Nonrecurring Basis at Dec 31 In millions	*(Level 3)*	*Total Losses*
2023		
Assets at fair value:		
Long-lived assets and other assets	$ 9	$ 191

2023 Fair Value Measurements on a Nonrecurring Basis

As part of the 2023 Restructuring Program, the Company has or will shut down a number of manufacturing facilities, corporate facilities and miscellaneous assets around the world. The assets associated with this plan were written down to zero. Impairments of leased, non-manufacturing facilities, which were classified as Level 3 measurements, resulted in a write-down of right-of-use assets to a fair value of $9 million using unobservable inputs. The impairment charges related to the 2023 Restructuring Program, totaling $191 million, were included in "Restructuring and asset related charges - net" in the consolidated statements of income and related to Packaging & Specialty Plastics ($1 million), Industrial Intermediates & Infrastructure ($50 million), Performance Materials & Coatings ($49 million) and Corporate ($91 million).

See Note 4 for additional information on the Company's restructuring activities.

The Company's fair value measurements on a nonrecurring basis were insignificant in 2022 and 2021.

NOTE 22 – VARIABLE INTEREST ENTITIES

Consolidated Variable Interest Entities ("VIEs")

The Company holds a variable interest in the following joint ventures or entities for which it is the primary beneficiary:

Asia Pacific Joint Ventures

The Company has variable interests in two joint ventures that own and operate manufacturing and logistics facilities, which produce chemicals and provide services in Asia Pacific. The Company's variable interests in these joint ventures relate to arrangements between the joint ventures and the Company, involving the majority of the output on take-or-pay terms with pricing ensuring a guaranteed return to the joint ventures.

Ethylene Storage Joint Venture

The Company has variable interests in a joint venture that provides ethylene storage in Alberta, Canada. The Company's variable interests relate to arrangements involving a majority of the joint venture's storage capacity on take-or-pay terms with pricing ensuring a guaranteed return to the joint venture; and favorably priced leases provided to the joint venture. The Company provides the joint venture with operation and maintenance services and utilities.

Accounts Receivable Monetization

The Company holds a variable interest in an entity created to monetize accounts receivable of select European entities. The Company is the primary beneficiary of this entity as a result of holding subordinated notes while maintaining servicing responsibilities for the accounts receivable.

Assets and Liabilities of Consolidated VIEs

The Company's consolidated financial statements include the assets, liabilities and results of operations of VIEs for which the Company is the primary beneficiary. The other equity holders' interests are reflected in "Net income attributable to noncontrolling interests" in the consolidated statements of income and "Noncontrolling interests" in the consolidated balance sheets.

The following table summarizes the carrying amounts of these entities' assets and liabilities included in the Company's consolidated balance sheets at December 31, 2023 and 2022:

Assets and Liabilities of Consolidated VIEs at Dec 31 In millions	*2023*	*2022*
Cash and cash equivalents	$ 26	$ 17
Other current assets	130	36
Net property	139	157
Other noncurrent assets	15	17
Total assets [1]	$ 310	$ 227
Current liabilities	$ 26	$ 30
Other noncurrent obligations	12	12
Total liabilities [2]	$ 38	$ 42

1. Restricted assets totaled $216 million and $227 million at December 31, 2023 and 2022, respectively.
2. All liabilities were nonrecourse at December 31, 2023 and 2022.

Amounts presented in the consolidated balance sheets and the table above as restricted assets or nonrecourse obligations relating to consolidated VIEs at December 31, 2023 and 2022, are adjusted for intercompany eliminations.

Nonconsolidated VIEs

The Company holds a variable interest in the following entities for which the Company is not the primary beneficiary:

Silicon Joint Ventures

The Company holds minority voting interests in certain joint ventures that produce silicon inputs for the Company. These joint ventures operate under supply agreements that sell inventory to the equity owners using pricing mechanisms that guarantee a return, therefore shielding the joint ventures from the obligation to absorb expected losses. As a result of the pricing mechanisms of these agreements, these entities are determined to be VIEs. The

Company is not the primary beneficiary, as it does not hold the power to direct the activities that most significantly impact the economic performance of these entities; therefore, the entities are accounted for under the equity method of accounting. The Company's maximum exposure to loss as a result of its involvement with these variable interest entities is determined to be the carrying value of the investment in these entities. At December 31, 2023, the Company's investment in these joint ventures was $134 million ($113 million at December 31, 2022), classified as "Investment in nonconsolidated affiliates" in the consolidated balance sheets, representing the Company's maximum exposure to loss.

NOTE 23 – RELATED PARTY TRANSACTIONS

TDCC has committed to fund Dow Inc.'s dividends paid to common stockholders and share repurchases, as approved by the Board from time to time, as well as certain governance expenses. Funding is accomplished through intercompany loans. TDCC's Board of Directors reviews and determines a dividend distribution to Dow Inc. to settle the intercompany loans. The following table summarizes cash dividends TDCC declared and paid to Dow Inc. for the years ended 2023, 2022 and 2021.

TDCC Cash Dividends Declared and Paid In millions	*2023*	*2022*	*2021*
Cash dividends declared and paid	$ 2,510	$ 4,375	$ 3,264

At December 31, 2023 and 2022, TDCC's intercompany loan balance with Dow Inc. was insignificant.

NOTE 24 – SEGMENTS AND GEOGRAPHIC REGIONS

Sales are attributed to geographic region based on customer location; long-lived assets are attributed to geographic region based on asset location.

Geographic Region Information In millions	*United States*	*EMEAI*	*Rest of World*	*Total*
2023				
Sales to external customers	$ 15,328	$ 14,537	$ 14,757	$ 44,622
Long-lived assets	$ 15,012	$ 2,681	$ 3,373	$ 21,066
2022				
Sales to external customers	$ 19,336	$ 19,631	$ 17,935	$ 56,902
Long-lived assets	$ 14,638	$ 2,578	$ 3,226	$ 20,442
2021				
Sales to external customers	$ 18,083	$ 19,746	$ 17,139	$ 54,968
Long-lived assets	$ 14,425	$ 2,703	$ 3,427	$ 20,555

See Part I, Item 1. Business for further discussion of the Company's segments.

Dow’s measure of profit/loss for segment reporting purposes is Operating EBIT as this is the manner in which the CODM assesses performance and allocates resources. The Company defines Operating EBIT as earnings (i.e., "Income before income taxes") before interest, excluding the impact of significant items. Operating EBIT by segment includes all operating items relating to the businesses; items that principally apply to Dow as a whole are assigned to Corporate.

Segment Information In millions	*Pack. & Spec. Plastics*	*Ind. Interm. & Infrast.*	*Perf. Materials & Coatings*	*Corp.*	*Total*
2023					
Net sales	$ 23,149	$ 12,538	$ 8,497	$ 438	$ 44,622
Restructuring and asset related charges - net [1]	1	50	49	428	528
Equity in earnings (losses) of nonconsolidated affiliates	130	(276)	20	7	(119)
Operating EBIT [2]	2,700	124	219	(265)	2,778
Depreciation and amortization	1,285	524	778	24	2,611
Total assets	28,692	11,993	12,080	5,202	57,967
Investments in nonconsolidated affiliates	705	384	136	42	1,267
Capital expenditures	1,457	477	422	—	2,356
2022					
Net sales	$ 29,260	$ 16,606	$ 10,764	$ 272	$ 56,902
Restructuring and asset related charges - net [1]	8	73	6	31	118
Equity in earnings (losses) of nonconsolidated affiliates	359	(91)	10	(10)	268
Operating EBIT [2]	4,110	1,418	1,328	(266)	6,590
Depreciation and amortization	1,396	550	789	23	2,758
Total assets	30,017	12,883	13,028	4,675	60,603
Investments in nonconsolidated affiliates	846	454	115	174	1,589
Capital expenditures	1,069	385	369	—	1,823
2021					
Net sales	$ 28,128	$ 16,851	$ 9,672	$ 317	$ 54,968
Restructuring and asset related charges (credits) - net [1]	8	1	10	(13)	6
Equity in earnings (losses) of nonconsolidated affiliates	490	471	7	7	975
Operating EBIT [2]	6,638	2,282	866	(253)	9,533
Depreciation and amortization	1,358	612	842	30	2,842
Total assets	30,556	13,750	13,810	4,874	62,990
Investments in nonconsolidated affiliates	1,230	670	111	34	2,045
Capital expenditures	808	359	334	—	1,501

1. See Note 4 for information regarding the Company's restructuring programs and other asset related charges.
2. Operating EBIT for TDCC in 2023, 2022 and 2021, is substantially the same as that of Dow Inc. and therefore is not disclosed separately in the table above. A reconciliation of "Net income" to Operating EBIT is provided in the following table.

Reconciliation of "Net income" to Operating EBIT In millions	*2023*	*2022*	*2021*
Net income	$ 660	$ 4,640	$ 6,405
+ Provision (credit) for income taxes	(4)	1,450	1,740
Income before income taxes	$ 656	$ 6,090	$ 8,145
- Interest income	229	173	55
+ Interest expense and amortization of debt discount	746	662	731
- Significant items	(1,605)	(11)	(712)
Operating EBIT	$ 2,778	$ 6,590	$ 9,533

The following tables summarize the pretax impact of significant items by segment that are excluded from Operating EBIT:

Significant Items by Segment for 2023 In millions	*Pack. & Spec. Plastics*	*Ind. Interm. & Infrast.*	*Perf. Materials & Coatings*	*Corp.*	*Total*
Restructuring, implementation and efficiency costs, and asset related charges - net [1]	$ (1)	$ (50)	$ (67)	$ (623)	$ (741)
Litigation related charges, awards and adjustments [2]	106	(177)	—	—	(71)
Argentine peso devaluation [3]	(52)	(16)	—	(109)	(177)
Pension settlement charges [4]	—	—	—	(642)	(642)
Indemnification and other transaction related costs [5]	—	—	—	26	26
Total	$ 53	$ (243)	$ (67)	$ (1,348)	$ (1,605)

1. Includes restructuring charges and implementation and efficiency costs associated with the Company's 2023 Restructuring Program, partially offset by a credit related to a prior restructuring program. Also includes certain gains and losses associated with previously impaired equity investments.
2. Includes a loss associated with legacy agricultural products groundwater contamination matters, partially offset by a gain associated with a legal matter with Nova Chemicals Corporation. See Note 14 for additional information.
3. Foreign currency losses and inventory valuation impacts related to the devaluation of the Argentine peso by the Argentina government in December 2023.
4. Non-cash settlement charges related to the purchase of nonparticipating group annuity contracts for certain Company pension plans in the United States and Canada. See Note 18 for additional information.
5. Primarily related to charges associated with agreements entered into with DuPont and Corteva as part of the separation and distribution which, among other matters, provides for cross-indemnities and allocations of obligations and liabilities for periods prior to, at and after the completion of the separation.

Significant Items by Segment for 2022 In millions	*Pack. & Spec. Plastics*	*Ind. Interm. & Infrast.*	*Perf. Materials & Coatings*	*Corp.*	*Total*
Digitalization program costs [1]	$ —	$ —	$ —	$ (230)	$ (230)
Restructuring, implementation costs and asset related charges - net [2]	—	—	—	(40)	(40)
Russia / Ukraine conflict charges [3]	(8)	(73)	(6)	(31)	(118)
Loss on early extinguishment of debt [4]	—	—	—	(8)	(8)
Litigation related charges, awards and adjustments [5]	321	—	—	60	381
Indemnification and other transaction related costs [6]	—	—	—	4	4
Total	$ 313	$ (73)	$ (6)	$ (245)	$ (11)

1. Includes costs associated with implementing the Company's Digital Acceleration program.
2. Includes costs associated with implementing the Company's 2020 Restructuring Program.
3. Asset related charges due to the Russia and Ukraine conflict. See Note 4 for additional information.
4. The Company redeemed outstanding long-term debt resulting in a loss on early extinguishment. See Note 13 for additional information.
5. Includes a gain associated with a legal matter with Nova Chemicals Corporation and a gain related to an adjustment of the Dow Silicones breast implant liability. See Note 14 for additional information.
6. Primarily related to charges associated with agreements entered into with DuPont and Corteva as part of the separation and distribution which, among other matters, provides for cross-indemnities and allocations of obligations and liabilities for periods prior to, at and after the completion of the separation.

Significant Items by Segment for 2021 In millions	*Pack. & Spec. Plastics*	*Ind. Interm. & Infrast.*	*Perf. Materials & Coatings*	*Corp.*	*Total*
Digitalization program costs [1]	$ —	$ —	$ —	$ (169)	$ (169)
Restructuring, implementation costs and asset related charges - net [2]	(8)	(1)	(10)	(50)	(69)
Loss on early extinguishment of debt [3]	—	—	—	(574)	(574)
Net gain on divestitures and asset sale [4]	16	—	—	—	16
Litigation related charges, awards and adjustments [5]	—	54	—	—	54
Indemnification and other transaction related costs [6]	—	—	—	30	30
Total	$ 8	$ 53	$ (10)	$ (763)	$ (712)

1. Includes costs associated with implementing the Company's Digital Acceleration program.
2. Includes costs associated with implementing the Company's 2020 Restructuring Program, and asset related charges, which include other asset impairments. See Note 4 for additional information.
3. The Company redeemed outstanding long-term debt resulting in a loss on early extinguishment. See Note 13 for additional information.
4. Includes post-closing adjustments on a previous divestiture.
5. Related to an arbitration award received from Luxi Chemical Group Co., Ltd. See Note 14 for additional information.
6. Primarily related to charges associated with agreements entered into with DuPont and Corteva as part of the separation and distribution which, among other matters, provides for cross-indemnities and allocations of obligations and liabilities for periods prior to, at and after the completion of the separation.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures
As of the end of the period covered by this Annual Report on Form 10-K, Dow Inc. and The Dow Chemical Company (the "Companies") carried out an evaluation, under the supervision and with the participation of the Companies' Disclosure Committee and the Companies' management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of the Companies' disclosure controls and procedures pursuant to paragraph (b) of Exchange Act Rules 13a-15 and 15d-15. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Companies' disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting
There were no changes in the Companies' internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 and 15d-15 that was conducted during the quarter ended December 31, 2023, that have materially affected, or are reasonably likely to materially affect, the Companies' internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting
Management is responsible for establishing and maintaining adequate internal control over financial reporting. The Companies' internal control framework and processes are designed to provide reasonable assurance to management and the Board regarding the reliability of financial reporting and the preparation of the Companies' consolidated financial statements in accordance with accounting principles generally accepted in the United States of America.

The Companies' internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Companies;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Companies are being made only in accordance with authorizations of management and Directors of the Companies; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Companies' assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, any system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements.

Management assessed the effectiveness of the Companies' internal control over financial reporting and concluded that, as of December 31, 2023, such internal control is effective. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework (2013).*

The Companies' independent auditors, Deloitte & Touche LLP, with direct access to the Board of Directors through the Audit Committee of Dow Inc., have audited the consolidated financial statements prepared by the Companies. Their reports on the consolidated financial statements are included in Part II, Item 8. Financial Statements and Supplementary Data. Deloitte & Touche LLP's reports on the Companies' internal control over financial reporting are referenced therein and included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Dow Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Dow Inc. and subsidiaries (the "Company") as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements as of and for the year ended December 31, 2023, of the Company and the financial statement schedule listed in the Index at Item 15(a)2 and our report dated January 31, 2024, expressed an unqualified opinion on those financial statements and financial statement schedule.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

Midland, Michigan
January 31, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholder and the Board of Directors of The Dow Chemical Company

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of The Dow Chemical Company and subsidiaries (the "Company") as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements as of and for the year ended December 31, 2023, of the Company and the financial statement schedule listed in the Index at Item 15(a)2 and our report dated January 31, 2024, expressed an unqualified opinion on those financial statements and financial statement schedule.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

Midland, Michigan
January 31, 2024

ITEM 9B. OTHER INFORMATION

None.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information relating to Directors, certain executive officers and certain corporate governance matters (including identification of members of the Audit Committee of the Board and financial expert(s)) is contained in the definitive Proxy Statement for the 2024 Annual Meeting of Stockholders of Dow Inc. and is incorporated herein by reference. See also the information regarding executive officers of the registrant set forth in Part I, Item 1. Business under the caption "Executive Officers of the Registrant" in reliance on General Instruction G to Form 10-K.

This information is omitted for The Dow Chemical Company pursuant to General Instruction I of Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

Information relating to executive compensation and the Company's equity compensation plans is contained in the definitive Proxy Statement for the 2024 Annual Meeting of Stockholders of Dow Inc. and is incorporated herein by reference.

This information is omitted for The Dow Chemical Company pursuant to General Instruction I of Form 10-K.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information with respect to beneficial ownership of Dow Inc. common stock by each Director and all Directors and executive officers of the Company as a group is contained in the definitive Proxy Statement for the 2024 Annual Meeting of Stockholders of Dow Inc. and is incorporated herein by reference.

Information relating to any person who beneficially owns in excess of 5 percent of the total outstanding shares of Dow Inc. common stock is contained in the definitive Proxy Statement for the 2024 Annual Meeting of the Stockholders of Dow Inc. and is incorporated herein by reference.

Information with respect to compensation plans under which equity securities are authorized for issuance is contained in the definitive Proxy Statement for the 2024 Annual Meeting of Stockholders of Dow Inc. and is incorporated herein by reference.

This information is omitted for The Dow Chemical Company pursuant to General Instruction I of Form 10-K.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Reportable relationships and related transactions, if any, as well as information relating to director independence are contained in the definitive Proxy Statement for the 2024 Annual Meeting of Stockholders of Dow Inc. and are incorporated herein by reference.

This information is omitted for The Dow Chemical Company pursuant to General Instruction I of Form 10-K.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Independent Registered Public Accountants
Information with respect to fees and services related to the Company's independent auditors, Deloitte & Touche LLP ("Deloitte"), and the disclosure of the preapproval policies and procedures of the Audit Committee of the Board are contained in the definitive Proxy Statement for the 2024 Annual Meeting of Stockholders of Dow Inc. and are incorporated herein by reference.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

(1) The Company's 2023 Consolidated Financial Statements and the Report of Independent Registered Public Accounting Firm (PCAOB ID: 34) are included in Part II, Item 8. Financial Statements and Supplementary Data.

(2) Financial Statement Schedules – The following Financial Statement Schedule should be read in conjunction with the Consolidated Financial Statements and Report of Independent Registered Public Accounting Firm included in Part II, Item 8. Financial Statements and Supplementary Data:

Schedule II Valuation and Qualifying Accounts

Schedules other than the one listed above are omitted due to the absence of conditions under which they are required or because the information called for is included in the Consolidated Financial Statements or the Notes to the Consolidated Financial Statements.

(3) The following exhibits are filed with or incorporated by reference into this Annual Report on Form 10-K:

Exhibit No.	Description of Exhibit
2.1	Separation and Distribution Agreement, effective as of April 1, 2019, by and among Dow Inc., DuPont de Nemours, Inc. (formerly known as DowDuPont Inc.), and Corteva, Inc. (incorporated by reference to Exhibit 2.1 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
2.2	Amended and Restated Shareholders' Agreement, effective as of March 25, 2021, between Excellent Performance Chemicals Company and Dow Saudi Arabia Holding B.V. (portions of this exhibit have been omitted because it is both (i) not material and (ii) the type of information that The Dow Chemical Company treats as private or confidential) (incorporated by reference to Exhibit 99.1 to Dow Inc. and The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on April 23, 2021).
2.3	Transaction Agreement, dated as of December 10, 2015, among The Dow Chemical Company, Corning Incorporated, Dow Corning Corporation and HS Upstate Inc. (incorporated by reference to Exhibit 2.1 to The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on December 11, 2015).
2.3.1	Tax Matters Agreement, dated as of December 10, 2015, among The Dow Chemical Company, Corning Incorporated, Dow Corning Corporation and HS Upstate Inc. (incorporated by reference to Exhibit 2.2 to The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on December 11, 2015).
3.1	Amended and Restated Certificate of Incorporation of Dow Inc. (incorporated by reference to Exhibit 3.1 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
3.2	Amended and Restated Bylaws of Dow Inc. (incorporated by reference to Exhibit 3.2 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
3.3	Amended and Restated Certificate of Incorporation of The Dow Chemical Company (incorporated by reference to Exhibit 3.1 to The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on September 1, 2017).
3.4	Amended and Restated Bylaws of The Dow Chemical Company (incorporated by reference to Exhibit 3.2 to The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on September 1, 2017).
4.1	Indenture, dated as of April 1, 1992 (the "1992 Indenture"), between The Dow Chemical Company and the First National Bank of Chicago, as trustee (incorporated by reference to Exhibit 4.1 to The Dow Chemical Company's Registration Statement on Form S-3, File No. 333-88617, filed with the SEC on October 8, 1999 (the "S-3 Registration Statement")).

4.1.1	Supplemental Indenture, dated as of January 1, 1994, between The Dow Chemical Company and The First National Bank of Chicago, as trustee, to the 1992 Indenture (incorporated by reference to Exhibit 4.2 to the S-3 Registration Statement).
4.1.2	Second Supplemental Indenture, dated as of October 1, 1999, between The Dow Chemical Company and Bank One Trust Company, N.A. (formerly The First National Bank of Chicago), as trustee, to the 1992 Indenture (incorporated by reference to Exhibit 4.3 to the S-3 Registration Statement).
4.1.3	Third Supplemental Indenture, dated as of May 15, 2001, between The Dow Chemical Company and Bank One Trust Company, N.A. (formerly The First National Bank of Chicago), as trustee, to the 1992 Indenture (incorporated by reference to Exhibit 4.4 to The Dow Chemical Company's Registration Statement on Form S-4, File No. 333-67368 filed with the SEC on August 13, 2001).
4.2	Indenture, dated May 1, 2008 (the "2008 Indenture"), between The Dow Chemical Company and The Bank of New York Trust Company, N.A., as trustee, (incorporated by reference to Exhibit 4.1 to Post-Effective Amendment No. 1 to The Dow Chemical Company's Registration Statement on Form S-3, File No. 333-140859, filed with the SEC on May 6, 2008).
4.2.1	First Supplemental Indenture, dated November 30, 2018, between The Dow Chemical Company, Dow Inc. (formerly known as Dow Holdings Inc.), and The Bank of New York Mellon Trust Company, N.A., as trustee, to the 2008 Indenture (incorporated by reference to Exhibit 4.1 to The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on December 3, 2018).
4.2.2	Second Supplemental Indenture, dated May 20, 2019, between The Dow Chemical Company, Dow Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, to the 2008 Indenture (incorporated by reference to Exhibit 4.1 to The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on May 20, 2019).
4.3	Indenture, dated July 26, 2019 (the "2019 Indenture"), between The Dow Chemical Company and The Bank of New York Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.3 to Dow Inc. and The Dow Chemical Company's Annual Report on Form 10-K filed with the SEC on February 7, 2020).
4.4	Dow Inc. agrees to provide the SEC, on request, copies of all other such indentures and instruments that define the rights of holders of long-term debt of Dow Inc. and its consolidated subsidiaries, including The Dow Chemical Company, pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K.
4.5	Description of Securities registered under Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.5 to Dow Inc. and The Dow Chemical Company's Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.1	Tax Matters Agreement, effective as of April 1, 2019, by and among Dow Inc., DuPont de Nemours, Inc. (formerly known as DowDuPont Inc.), and Corteva Inc. (incorporated by reference to Exhibit 10.1 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
10.2	Employee Matters Agreement, effective as of April 1, 2019, by and among Dow Inc., DuPont de Nemours, Inc. (formerly known as DowDuPont Inc.), and Corteva, Inc. (incorporated by reference to Exhibit 10.2 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
10.3	Intellectual Property Cross-License Agreement, effective as of April 1, 2019, by and among Dow Inc. and DuPont de Nemours, Inc. (formerly known as DowDuPont Inc.) (incorporated by reference to Exhibit 10.3 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
10.4	Intellectual Property Cross-License Agreement, dated as of April 1, 2019, by and among Dow Inc. and Corteva, Inc. (incorporated by reference to Exhibit 10.4 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 2, 2019).
10.5	Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).
10.5.1	Form of Performance Stock Unit Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4.1 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).

10.5.2	Form of Restricted Stock Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4.2 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).
10.5.3	Form of Restricted Stock Unit Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4.3 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).
10.5.4	Form of Stock Appreciation Right Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4.4 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).
10.5.5	Form of Stock Option Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4.5 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).
10.5.6	Form of Restricted Stock Unit Award Agreement (Director) under the Dow Inc. 2019 Stock Incentive Plan effective as of April 1, 2019 (incorporated by reference to Exhibit 4.4.6 to Dow Inc.'s Registration Statement on Form S-3 filed with the SEC on April 1, 2019).
10.5.7	An Amendment to the Dow Inc. 2019 Stock Incentive Plan effective as of April 15, 2021 (incorporated by reference to Exhibit 10.5.7 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 16, 2021).
10.5.8	Form of Performance Stock Unit Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of December 13, 2023 (incorporated by reference to Exhibit 10.5.8 to Dow Inc.’s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.5.9	Form of Restricted Stock Unit Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of December 13, 2023 (incorporated by reference to Exhibit 10.5.9 to Dow Inc.’s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.5.10	Form of Stock Appreciation Right Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of December 13, 2023 (incorporated by reference to Exhibit 10.5.10 to Dow Inc.’s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.5.11	Form of Stock Option Award Agreement under the Dow Inc. 2019 Stock Incentive Plan effective as of December 13, 2023 (incorporated by reference to Exhibit 10.5.11 to Dow Inc.’s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.6	The Dow Chemical Company Executives' Supplemental Retirement Plan - Restricted and Cadre Benefits, restated and effective as of January 1, 2024 (incorporated by reference to Exhibit 10.6 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.7	The Dow Chemical Company Executives' Supplemental Retirement Plan - Supplemental Benefits, restated and effective as of January 1, 2024 (incorporated by reference to Exhibit 10.7 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.8	The Dow Chemical Company Elective Deferral Plan (Pre-2005), restated and effective as of April 1, 2019 (incorporated by reference to Exhibit 10.8 to Dow Inc. and The Dow Chemical Company's Quarterly Report on Form 10-Q filed with the SEC on May 3, 2019).
10.9	The Dow Chemical Company Elective Deferral Plan (Post 2004), restated and effective as of January 1, 2024 (incorporated by reference to Exhibit 10.9 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on January 30, 2024).
10.10	Dow Inc. Voluntary Deferred Compensation Plan for Non-Employee Directors, restated and effective as of April 1, 2019 (incorporated by reference to Exhibit 10.10 to Dow Inc. and The Dow Chemical Company's Quarterly Report on Form 10-Q filed with the SEC on May 3, 2019).
10.11	Dow Inc. 2021 Employee Stock Purchase Plan effective as of April 15, 2021 (incorporated by reference to Exhibit 10.11 to Dow Inc.'s Current Report on Form 8-K filed with the SEC on April 16, 2021).
21*	Subsidiaries of Dow Inc.
23.1.1*	Consent of Independent Registered Public Accounting Firm for Dow Inc.
23.1.2*	Consent of Independent Registered Public Accounting Firm for The Dow Chemical Company.

23.2*	Ankura Consulting Group, LLC's Consent.
31.1*	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97*	Compensation Clawback Policy effective as of December 1, 2023.
101.INS	The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	The cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.

*Filed herewith

A copy of any exhibit can be obtained via the Internet through the Investor Relations section of the Company's website (*www.dow.com/investors*), or the Company will provide a copy of any exhibit upon receipt of a written request for the particular exhibit or exhibits desired. All requests should be addressed to the Controller and Vice President of Controllers and Tax of the Company at the address of the Company’s principal executive offices. The referenced website and its content are not deemed incorporated by reference into this report.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

Dow Inc. and Subsidiaries

The Dow Chemical Company and Subsidiaries

Valuation and Qualifying Accounts

Schedule II

(In millions) For the years ended Dec 31,	*2023*	*2022*	*2021*
Accounts Receivable - Allowance for Doubtful Receivables			
Balance at beginning of year	$ 110	$ 54	$ 51
Additions charged to expenses	21	61	16
Deductions from reserves [1]	(50)	(5)	(13)
Balance at end of year	$ 81	$ 110	$ 54
Inventory - Obsolescence Reserve			
Balance at beginning of year	$ 57	$ 14	$ 23
Additions charged to expenses	20	50	3
Deductions from reserves [2]	(7)	(7)	(12)
Balance at end of year	$ 70	$ 57	$ 14
Reserves for Other Investments and Noncurrent Receivables			
Balance at beginning of year	$ 1,950	$ 2,033	$ 2,093
Additions charged to expenses [3]	31	17	19
Deductions from reserves [4]	(230)	(100)	(79)
Balance at end of year	$ 1,751	$ 1,950	$ 2,033
Deferred Tax Assets - Valuation Allowance			
Balance at beginning of year	$ 1,269	$ 1,391	$ 1,302
Additions charged to expenses [5]	1,864	120	201
Deductions from reserves	(185)	(242)	(112)
Balance at end of year	$ 2,948	$ 1,269	$ 1,391

1. Deductions included write-offs, recoveries, currency translation adjustments and other miscellaneous items, including a $23 million reclassification to "Reserves for Other Investments and Noncurrent Receivables" in 2023.
2. Deductions included disposals and currency translation adjustments.
3. Additions included a $23 million reclassification from "Accounts Receivable - Allowance for Doubtful Receivables" in 2023.
4. Deductions included $143 million in 2023 related to the Company's investment in AgroFresh Solutions Inc., which was converted to cash, and $77 million in 2023, 2022 and 2021 related to the Company's investment in Sadara. See Note 10 to the Consolidated Financial Statements for additional information.
5. Additions in 2023 include increases in valuation allowances related to foreign tax assets that are expected to expire without being utilized.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, on January 31, 2024.

DOW INC.
THE DOW CHEMICAL COMPANY

/s/ RONALD C. EDMONDS
Ronald C. Edmonds, Controller and Vice President of Controllers and Tax (Authorized Signatory and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below on January 31, 2024, by the following persons on behalf of the registrant and in the capacities indicated.

/s/ SAMUEL R. ALLEN
Samuel R. Allen, Director, Dow Inc.

/s/ GAURDIE E. BANISTER JR.
Gaurdie E. Banister Jr., Director, Dow Inc.

/s/ WESLEY G. BUSH
Wesley G. Bush, Director, Dow Inc.

/s/ RICHARD K. DAVIS
Richard K. Davis, Lead Director, Dow Inc.

/s/ JERRI DEVARD
Jerri DeVard, Director, Dow Inc.

/s/ DEBRA L. DIAL
Debra L. Dial, Director, Dow Inc.

/s/ RONALD C. EDMONDS
Ronald C. Edmonds, Controller and Vice President of Controllers and Tax, Dow Inc. and TDCC (Authorized Signatory and Principal Accounting Officer)

/s/ JEFF M. FETTIG
Jeff M. Fettig, Director, Dow Inc.

/s/ JIM FITTERLING
Jim Fitterling, Director, Chair and Chief Executive Officer, Dow Inc. and TDCC (Principal Executive Officer)

/s/ JACQUELINE C. HINMAN
Jacqueline C. Hinman, Director, Dow Inc.

/s/ LUIS ALBERTO MORENO MEJIA
Luis Alberto Moreno Mejia, Director, Dow Inc.

/s/ JEFFREY L. TATE
Jeffrey L. Tate, Chief Financial Officer, Dow Inc. and TDCC; Director, TDCC (Principal Financial Officer)

/s/ JILL S. WYANT
Jill S. Wyant, Director, Dow Inc.

/s/ DANIEL W. YOHANNES
Daniel W. Yohannes, Director, Dow Inc.

Trademark Listing

The following trademarks or service marks of The Dow Chemical Company and certain affiliated companies of Dow appear in this report: ACOUSTICRYL, ACRYSOL, ACUSOL, AMPLIFY, AQUASET, AVANSE, CARBOWAX, DECARBIA, DOW, DOWANOL, DOWSIL, DOWTHERM, ECOFAST, ECOSENSE, EVOQUE, EVOWASH, FASTRACK, FORMASHIELD, LP OXO, LUXSENSE, MAINCOTE, MOBILITYSCIENCE, PRIMAL, RENUVA, REVOLOOP, RHOPLEX, SENTRY, SILASTIC, SUNSPHERES, SURLYN, SYL-OFF, TAMOL, TERGITOL, TRITON, UCAR, UCON, UNIFINITY, VERSENE, WALOCEL

The following registered service mark of American Chemistry Council in the United States appears in this report: Responsible Care®

The following trademark of the Business Intelligence Group™ appears in this report: BIG Innovation Awards

The following trademark of Clarivate™ appears in this report: Top 100 Global Innovators™

The following registered trademark of US Business Leadership Network, Inc. appears in this report: Disability Equality Index™, Best Places to Work for Disability Inclusion™

The following trademark of The Edison Awards™ appears in this report: Edison Awards™

The following trademark of Evonik Operations GmbH appears in this report: HYPROSYN™

The following trademarks and registered trademarks of Great Place to Work® Institute, Inc. appears in this report: Great Place to Work®, Fortune 100 Best Companies to Work For®

The following trademarks of Ti Gotham Inc. appears in this report: PEOPLE®, PEOPLE® Companies that Care

The following registered trademark of InspereX Holdings LLC appears in this report: InterNotes®

The following trademark of Mura Technology Limited appears in this report: HydroPRS™

® ™ Trademark of The Dow Chemical Company ("TDCC") or an affiliated company, except as otherwise specified.

Selected Exhibits Follow

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jim Fitterling, certify that:

1. I have reviewed this Annual Report on Form 10-K of Dow Inc. and The Dow Chemical Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrants as of, and for, the periods presented in this report;

4. The registrants' other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrants and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrants, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrants' disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrants' internal control over financial reporting that occurred during the registrants' most recent fiscal quarter (the registrants' fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrants' internal control over financial reporting; and

5. The registrants' other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrants' auditors and the audit committee of registrants' board of directors (or persons performing the equivalent function):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrants' ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrants' internal control over financial reporting.

/s/ JIM FITTERLING

Jim Fitterling

Chair and Chief Executive Officer

January 31, 2024

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jeffrey L. Tate, certify that:

1. I have reviewed this Annual Report on Form 10-K of Dow Inc. and The Dow Chemical Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrants as of, and for, the periods presented in this report;

4. The registrants' other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrants and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrants, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrants' disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrants' internal control over financial reporting that occurred during the registrants' most recent fiscal quarter (the registrants' fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrants' internal control over financial reporting; and

5. The registrants' other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrants' auditors and the audit committee of registrants' board of directors (or persons performing the equivalent function):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrants' ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrants' internal control over financial reporting.

/s/ JEFFREY L. TATE

Jeffrey L. Tate
Chief Financial Officer
January 31, 2024

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Jim Fitterling, Chair and Chief Executive Officer of Dow Inc. and The Dow Chemical Company (the "Companies"), certify that:

1. The Annual Report on Form 10-K of the Companies for the year ended December 31, 2023, as filed with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Companies.

/s/ JIM FITTERLING
Jim Fitterling
Chair and Chief Executive Officer
January 31, 2024

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

I, Jeffrey L. Tate, Chief Financial Officer of Dow Inc. and The Dow Chemical Company (the "Companies"), certify that:

1. The Annual Report on Form 10-K of the Companies for the year ended December 31, 2023, as filed with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Companies.

/s/ JEFFREY L. TATE
Jeffrey L. Tate
Chief Financial Officer
January 31, 2024

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Appendix

Significant Items Impacting Results

In millions, except per share amounts (Unaudited)	Pretax Impact [1]			Net Income [2]			EPS - Diluted [3]		
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**	**2023**	**2022**	**2021**	**2023**	**2022**	**2021**
Reported results	$ 656	$ 6,090	$ 8,145	$ 589	$ 4,582	$ 6,311	$ 0.82	$ 6.28	$ 8.38
Less: Significant items									
Restructuring, implementation and efficiency costs, and asset related charges - net [4]	(741)	(40)	(69)	(583)	(32)	(55)	(0.81)	(0.04)	(0.07)
Litigation related charges, awards and adjustments [5]	(71)	381	54	(51)	288	42	(0.07)	0.40	0.06
Argentine peso devaluation [6]	(177)	—	—	(67)	—	—	(0.09)	—	—
Pension settlement charges [7]	(642)	—	—	(493)	—	—	(0.70)	—	—
Digitalization program costs	—	(230)	(169)	—	(183)	(132)	—	(0.25)	(0.17)
Russia / Ukraine conflict charges [8]	—	(118)	—	—	(86)	—	—	(0.11)	—
Loss on early extinguishment of debt	—	(8)	(574)	—	(6)	(471)	—	(0.01)	(0.63)
Net gain on divestitures and asset sale	—	—	16	—	—	16	—	—	0.02
Indemnification and other transaction related costs [9]	26	4	30	29	4	30	0.04	0.01	0.04
Income tax related items [10]	—	—	—	151	25	111	0.21	0.03	0.15
Total significant items	$ (1,605)	$ (11)	$ (712)	$ (1,014)	$ 10	$ (459)	$ (1.42)	$ 0.03	$ (0.60)
Operating results (non-GAAP)	$ 2,261	$ 6,101	$ 8,857	$ 1,603	$ 4,572	$ 6,770	$ 2.24	$ 6.25	$ 8.98

1. "Income before income taxes."
2. "Net income available for Dow Inc. common stockholders." The income tax effect on significant items was calculated based upon the enacted tax laws and statutory income tax rates applicable in the tax jurisdiction(s) of the underlying non-GAAP adjustment.
3. "Earnings per common share – diluted," which includes the impact of participating securities in accordance with the two-class method.
4. The twelve months ended December 31, 2023 includes restructuring charges and implementation and efficiency costs associated with the Company's 2023 Restructuring Program, partially offset by a credit from a prior restructuring program. Also includes certain gains and losses associated with previously impaired equity investments. The twelve months ended December 31, 2022 and 2021 includes restructuring charges, asset related charges, and costs associated with implementing the Company's 2020 Restructuring Program.
5. The twelve months ended December 31, 2023 includes a loss associated with legacy agricultural products groundwater contamination matters, partially offset by a gain associated with a legal matter with Nova Chemicals Corporation. The twelve months ended December 31, 2022 includes a gain associated with a legal matter with Nova Chemicals Corporation as well as a gain related to an adjustment of the Dow Silicones breast implant liability.
6. Foreign currency losses and inventory valuation impacts related to the devaluation of the Argentine peso by the Argentina government in December 2023.
7. Non-cash settlement charges related to the purchase of nonparticipating group annuity contracts for certain Company pension plans in the United States and Canada.
8. Asset related charges including inventory write-downs, bad debt reserves, and impairments of other assets related to the conflict between Russia and Ukraine.
9. Primarily related to charges associated with agreements entered into with DuPont and Corteva as part of the separation and distribution which, among other matters, provides for cross-indemnities and allocations of obligations and liabilities for periods prior to, at and after the completion of the separation.
10. The twelve months ended December 31, 2023 related to deferred tax assets in a foreign jurisdiction partially offset by a remeasurement of uncertain tax positions and an adjustment to certain foreign tax reserves. The twelve months ended December 31, 2021 includes reversals of certain tax valuation allowances partially offset by charges related to uncertain tax positions.

Reconciliation of "Net income" to "Operating EBIT" and "Operating EBITDA"

In millions (Unaudited)			
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**
Net income (GAAP)	$ 660	$ 4,640	$ 6,405
+ Provision (credit) for income taxes	(4)	1,450	1,740
Income before income taxes	$ 656	$ 6,090	$ 8,145
- Interest income	229	173	55
+ Interest expense and amortization of debt discount	746	662	731
- Significant items	(1,605)	(11)	(712)
Operating EBIT (non-GAAP)	$ 2,778	$ 6,590	$ 9,533
Depreciation and amortization	2,611	2,758	2,842
Operating EBITDA (non-GAAP)	$ 5,389	$ 9,348	$ 12,375

Reconciliation of "Earnings per common share - diluted" to "Operating Earnings Per Share"

In millions (Unaudited)			
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**
Earnings per common share - diluted (GAAP)	$ 0.82	$ 6.28	$ 8.38
Less: Significant items	(1.42)	0.03	(0.60)
Operating Earnings Per Share (non-GAAP)	$ 2.24	$ 6.25	$ 8.98

Reconciliation of "Cash provided by operating activities - continuing operations" to "Free Cash Flow" and "Cash Flow Conversion"

In millions (Unaudited)			
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**
Cash provided by operating activities - continuing operations (GAAP)	$ 5,164	$ 7,486	$ 7,069
Capital expenditures	(2,356)	(1,823)	(1,501)
Free Cash Flow (non-GAAP)	$ 2,808	$ 5,663	$ 5,568
Net income (GAAP)	$ 660	$ 4,640	$ 6,405
Cash flow from operations to net income (GAAP)	782 %	161 %	110 %
Operating EBITDA (non-GAAP)	$ 5,389	$ 9,348	$ 12,375
Cash Flow Conversion (Cash flow from operations to Operating EBITDA) (non-GAAP)	96 %	80 %	57 %

Reconciliation of Operating Return on Capital (ROC)

In millions (Unaudited)			
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**
Net income available for Dow Inc. common stockholders (GAAP)	$ 589	$ 4,582	$ 6,311
- Significant items, after tax	(1,017)	(22)	(459)
Operating Net Income Available for Dow Inc. Common Stockholders (non-GAAP)	$ 1,606	$ 4,604	$ 6,770
Net income attributable to noncontrolling interests	71	58	94
Gross interest expense	834	725	790
Imputed interest expense - operating leases	62	56	67
Tax on gross interest expense	(232)	(179)	(211)
Operating Net Operating Profit After Tax (non-GAAP)	$ 2,341	$ 5,264	$ 7,510
Average Total Capital (non-GAAP)	$ 36,800	$ 34,935	$ 33,481
Operating Return on Capital (non-GAAP)	6 %	15 %	22 %

Reconciliation of Net Debt

In millions (Unaudited)			
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**
Notes payable	$ 62	$ 362	$ 161
Long-term debt due within one year	117	362	231
Long-term debt	14,907	14,698	14,280
Gross debt (GAAP)	$ 15,086	$ 15,422	$ 14,672
- Cash and cash equivalents	2,987	3,886	2,988
- Marketable securities [1]	1,300	939	245
Net debt (non-GAAP)	$ 10,799	$ 10,597	$ 11,439

1. The Company's investments in marketable securities are included in "Other current assets" in the consolidated balance sheets.

Operating Net Income Returned to Shareholders

	Twelve Months Ended December 31				**Three Months Ended**		
In millions (Unaudited)	**2023**	**2022**	**2021**	**2020**	**Dec 31, 2019**	**Sep 30, 2019**	**Jun 30, 2019**
Net income (loss) available for Dow Inc. common stockholders (GAAP)	$ 589	$ 4,582	$ 6,311	$ 1,225	$ (2,323)	$ 333	$ 75
- Significant items, after tax	(1,017)	(22)	(459)	(8)	(2,900)	(346)	(574)
Operating Net Income Available for Dow Inc. Common Stockholders (non-GAAP)	$ 1,606	$ 4,604	$ 6,770	$ 1,233	$ 577	$ 679	$ 649
Dividends paid to stockholders	1,972	2,006	2,073	2,071	517	516	517
Share repurchases	625	2,325	1,000	125	94	101	305
Return to shareholders	$ 2,597	$ 4,331	$ 3,073	$ 2,196	$ 611	$ 617	$ 822
Operating Net Income returned to shareholders (non-GAAP) [1]	162 %	94 %	45 %	178 %	106 %	91 %	127 %
Cumulative Operating Net Income returned to shareholders since spin (non-GAAP)	88 %						

1. Operating Net Income returned to shareholders is defined as "Return to shareholders" (dividends paid to stockholders plus share repurchases) divided by "Operating Net Income."

Dow Inc. Consolidated Statements of Income

In millions, except per share amounts (Unaudited)			
TWELVE MONTHS ENDED DECEMBER 31	**2023**	**2022**	**2021**
Net sales	$ 44,622	$ 56,902	$ 54,968
Cost of sales	39,742	48,338	44,191
Research and development expenses	829	851	857
Selling, general and administrative expenses	1,627	1,675	1,645
Amortization of intangibles	324	336	388
Restructuring and asset related charges - net	528	118	6
Equity in earnings (losses) of nonconsolidated affiliates	(119)	268	975
Sundry income (expense) - net	(280)	727	(35)
Interest income	229	173	55
Interest expense and amortization of debt discount	746	662	731
Income before income taxes	656	6,090	8,145
Provision (credit) for income taxes	(4)	1,450	1,740
Net income	660	4,640	6,405
Net income attributable to noncontrolling interests	71	58	94
Net income available for Dow Inc. common stockholders	$ 589	$ 4,582	$ 6,311
Per common share data:			
Earnings per common share - basic	$ 0.82	$ 6.32	$ 8.44
Earnings per common share - diluted	$ 0.82	$ 6.28	$ 8.38
Weighted-average common shares outstanding - basic	705.7	721.0	743.6
Weighted-average common shares outstanding - diluted	709.0	725.6	749.0

Definitions

Non-GAAP Financial Measures

This document includes financial information that does not conform to 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 GAAP disclosures and should not be viewed as alternatives to 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.

Cash Flow Conversion is defined as "Cash provided by 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 provided by operating activities - continuing operations" less capital expenditures. Under this definition, Free Cash Flow represents the cash generated by the Company from operations after investing in its asset base. Free Cash Flow, combined with cash balances and other sources of liquidity, represent the cash available to fund obligations and provide returns to shareholders. 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." The Company believes Net Debt is the best representation of its financial leverage at this point in time.

Operating Earnings Per Share is defined as "Earnings per common share - diluted" excluding the after-tax impact of significant items.

Operating EBIT is defined as earnings (i.e., "Income before income taxes") before interest, excluding the impact of significant items.

Operating EBITDA is defined as earnings (i.e., "Income before income taxes") before interest, depreciation and amortization, excluding the impact of significant items.

Operating Net Income is defined as net income, excluding the after-tax impact of significant items.

Operating Return on Invested Capital ("ROC") is defined as net operating profit after tax, excluding the impact of significant items, divided by total average capital, also referred to as ROIC.

Peer Groups

To assess the diversity of Dow's leadership team, we examined the boards of directors and executive leadership teams of industry peers and the compensation peer group to determine the percentage of female and U.S. ethnic minority representatives.

"Industry peers" refers to Arkema SA, Borealis Exploration Ltd, Celanese Corporation, Chevron Phillips, Covestro AG, Eastman Chemical Co., Exxon Chemicals, Huntsman Corporation, LyondellBasell Industries N.V., Shin-Etsu Chemical Co. Ltd. and Wacker Chemie AG.

Environmental, Social and Governance Definitions

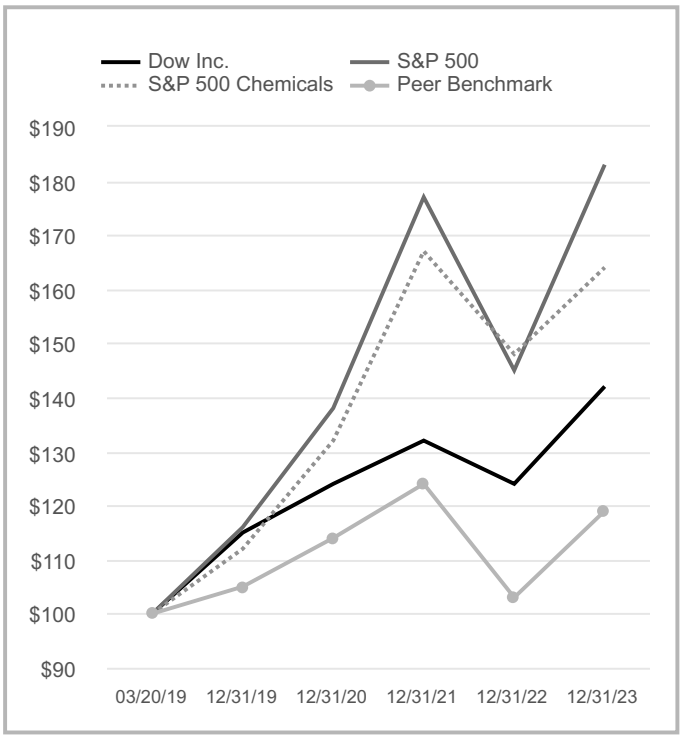
"Zero-carbon emissions" refers to Scope 1+2+3 carbon emissions, including offsets from product benefits and technology advancements.

"Net-zero carbon" refers to Scope 1 and 2 carbon dioxide emissions, including offsets from technology advancements.

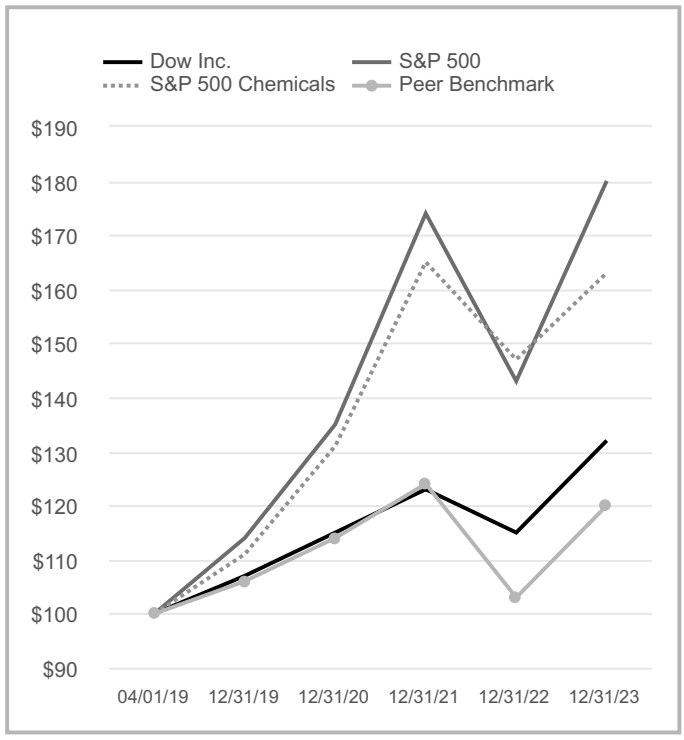
Stockholder Return

The chart below illustrates the cumulative total return to Dow stockholders following the spin of Dow Inc. from DowDuPont on April 1, 2019. It depicts a hypothetical $100 investment in Dow common stock on April 1, 2019, and shows the value of that investment over time (assuming the reinvestment of dividends) until December 31, 2023. Hypothetical investments of $100 in the Standard & Poor's ("S&P") 500 Stock Index, the S&P 500 Chemicals Index and the Peer Benchmark are shown for comparison.

Mar. 20, 2019 - Dec. 31, 2023 Cumulative Total Return - When Issued Trading



Apr. 1, 2019 - Dec. 31, 2023 Cumulative Total Return - Regular Way Trading



	Dow	S&P 500	S&P 500 Chemicals	Peer Benchmark
March 20, 2019	$100	$100	$100	$100
December 31, 2019	$115	$116	$112	$105
December 31, 2020	$124	$138	$132	$114
December 31, 2021	$132	$177	$167	$124
December 31, 2022	$124	$145	$148	$103
December 31, 2023	$142	$183	$164	$119

	Dow	S&P 500	S&P 500 Chemicals	Peer Benchmark
April 1, 2019	$100	$100	$100	$100
December 31, 2019	$107	$114	$111	$106
December 31, 2020	$115	$135	$131	$114
December 31, 2021	$123	$174	$165	$124
December 31, 2022	$115	$143	$147	$103
December 31, 2023	$132	$180	$163	$120

The form of the chart presented above is in accordance with requirements of the U.S. Securities and Exchange Commission. Stockholders are cautioned against drawing any conclusions from the data contained therein, as past results are not necessarily indicative of future performance. This does not reflect the Company's forecast of future financial performance.

The S&P 500 Chemicals Index includes producers of industrial gases and commodity, diversified, fertilizers, agricultural, and specialty chemicals. As of January 2024, the Index included Air Products and Chemicals Inc., Albemarle Corporation, Celanese Corporation, CF Industries Holdings Inc., Corteva Inc., Dow Inc., DuPont de Nemours Inc., Eastman Chemical Company, Ecolab Inc., FMC Corporation, International Flavors & Fragrances Inc., Linde PLC, LyondellBasell Industries N.V., Mosaic Company, PPG Industries Inc., and Sherwin-Williams Company.

The Peer Benchmark reflects peers the Company utilizes for financial benchmarking activities. The Company will utilize this peer group for compilation of the TSR information on a forward basis as well as for purposes of the pay versus performance disclosures included in the annual Proxy filing. The Peer Benchmark consists of the following companies: Arkema SA, BASF Corporation, Convestro AG, Eastman Chemical Company, Huntsman Corporation, LyondellBasell Industries N.V., and Wacker Chemie AG.

Stockholder Reference

General Information

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Website: www.computershare.com/dow

For more stockholder information, please contact the transfer agent or visit Dow's stockholder information website: https://investors.dow.com/en/investor-resources/stockholder-information.

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; any global and regional economic impacts of a pandemic or other public health-related risks and events on Dow's business; any sanctions, export restrictions, supply chain disruptions or increased economic uncertainty related to the ongoing conflicts between Russia and Ukraine and in the Middle East; 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 time frame, including the completion and success of its integrated ethylene cracker and derivatives facility in Alberta, Canada; 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 public sentiment and political leadership; increased concerns about plastics in the environment and lack of a circular economy for plastics at scale; 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 conflicts between Russia and Ukraine and in the Middle East; weather events and natural disasters; disruptions in Dow's information technology networks and systems, including the impact of cyberattacks; 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, 2023, and the Company's subsequent Quarterly Reports on Form 10-Q. 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 Inc. and The Dow Chemical Company ("TDCC") assume 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.

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Form No. 161-00883