

**Dow Inc. NYSE:DOW**

# **FQ4 2022 Earnings Call Transcripts**

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# Call Participants

## EXECUTIVES

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# Presentation

## Operator

[Operator Instructions] As a reminder, this conference is being recorded.

I will now turn it over to Dow Investor Relations Vice President, Pankaj Gupta.

Mr. Gupta, you may begin.

## Pankaj Gupta

*Vice President of Investor Relations*

Good morning. Thank you for joining Dow's fourth quarter earnings call. This call is available via webcast, and we have prepared slides to supplement our comments today. They are posted on the Investor Relations section of Dow's website and through the link to our webcast.

I'm Pankaj Gupta, Dow Investor Relations Vice President. And joining me today on the call are Jim Fitterling, Dow's Chairman and Chief Executive Officer; and Howard Ungerleider, President and Chief Financial Officer.

Please read the forward-looking statement disclaimer contained in the earnings news release and slides. During our call, we'll make forward-looking statements regarding our expectations or predictions about the future. Because these statements are based on current assumptions and factors that involve risks and uncertainties, our actual performance and results may differ materially from our forward-looking statements.

Dow's Forms 10-Q and 10-K include detailed discussions of principal risks and uncertainties, which may cause such differences. Unless otherwise specified, all financials, where applicable exclude significant items. We will also refer to non-GAAP measures. A reconciliation of the most directly comparable GAAP financial measure and other associated disclosures is contained in the Dow earnings release, in the slides that supplement our comments today as well as on the Dow website.

On Slide 2, you will see the agenda for our call. Jim will begin by reviewing our fourth quarter results and operating segment performance. Howard will then share our outlook and modeling guidance. And to close, Jim will then outline our competitive position for long-term value creation. Following that, we will take your questions.

Now let me turn the call over to Jim.

## James R. Fitterling

*Chairman & CEO*

Thank you, Pankaj. Beginning on Slide 3. In the fourth quarter, Team Dow continued to take proactive actions to navigate slower GDP growth, challenging energy markets and customer destocking. We proactively lowered our operating rates to effectively manage working capital, implemented operational mitigation plans and cost saving measures and prioritized higher-value products where demand remained resilient, including in functional polymers and performance silicones as well as in mobility, renewable energy and pharma end markets.

These actions, combined with our continued focus on cash enabled us to deliver cash flow from operations of \$2.1 billion in the quarter. Cash flow conversion was 166%, and we returned \$620 million to shareholders.

Dow's cash generation reflects our continued focus on operational and financial discipline, which was important as we navigated an extremely dynamic year in 2022, as you see on Slide 4. In the first half of the year, we capitalized on strong demand across our diverse global portfolio, while leveraging our derivative and feedstock flexibility and low cost positions to mitigate higher raw material and energy costs.

In the second half of the year, economic conditions deteriorated driven by record inflation, rising interest rates, ongoing pandemic lockdowns in China and continued geopolitical tensions. In the face of these evolving market dynamics, Dow was resilient, generating cash flow from operations of \$7.5 billion for the full year while executing our disciplined and balanced approach to capital allocation. We delivered returns on invested capital of 15%, above our 13% across the economic cycle target, as we prioritized higher return, lower risk and faster payback investments.

We achieved credit rating and outlook upgrades as a result of our strengthened balance sheet, and we have no substantive debt maturities due until 2027. And we returned a total of \$4.3 billion to shareholders, including \$2.3 billion in share repurchases and \$2 billion in dividends.

At the same time, we continue to advance our Decarbonize & Grow strategy and accelerate circularity to create long-term shareholder value as we meet growing customer demand for more sustainable solutions. I'm proud of how Team Dow continues to deliver for our customers, drive shareholder value and support our communities as we progress toward our 2050 carbon neutrality target, and you can see a number of those highlights depicted on this slide.

Now turning to our operating segment performance on Slide 5. In the Packaging & Specialty Plastics segment, net sales were \$6.1 billion, down 16% year-over-year as price gains across all regions and functional polymers were more than offset by lower polyethylene and olefin prices. Volume declines were driven primarily by lower olefins and packaging demand in Europe, which was partly offset by a resilient global demand for functional polymers. Sequentially, net sales were down 17% driven by lower hydrocarbon sales and polyethylene prices.

Operating EBIT for the segment was \$655 million compared to \$1.4 billion in the year ago period, primarily due to lower integrated polyethylene margins. Sequentially, operating EBIT was down \$130 million as lower raw material and energy costs were more than offset by lower polyethylene prices and operating rates.

Moving to the Industrial Intermediates & Infrastructure segment. Net sales were \$3.7 billion, down 20% from the year ago period. Volumes declined primarily due to lower demand in Europe for industrial, consumer durables, and building and construction applications. Sequentially, net sales were down 10% as seasonal demand increases for de-icing fluid were more than offset by declines in building and construction, consumer durables and industrial applications.

Operating EBIT for the segment was \$164 million compared to \$595 million in the year-ago period, driven by lower demand and increasing energy costs, particularly in Europe. Sequentially, operating EBIT margins expanded by 40 basis points as lower energy costs versus the prior quarter were partly offset by lower volumes.

And in the Performance Materials & Coatings segment, we reported net sales of \$2.1 billion, down 20% year-over-year as local price gains for performance silicones and architectural coatings were more than offset by lower prices for siloxanes and acrylic monomers.

Volume was down as resilient demand in mobility was more than offset by declines primarily in building and construction end markets. Sequentially, net sales were down 22% due to seasonally lower demand for coatings, industrial and building and construction applications as well as local price declines for siloxanes and acrylic monomers.

Operating EBIT for the segment was a loss of \$130 million compared to earnings of \$295 million in the year ago period due to local price declines primarily in siloxane and lower operating rates in the quarter. Sequentially, operating EBIT declined \$432 million, driven by lower prices, demand and operating rates.

I'll now turn it over to Howard to review our outlook and actions on Slide 6.

**Howard I. Ungerleider**  
*President & CFO*

Thank you, Jim, and good morning, everyone. We expect the market dynamics we experienced in late 2022 to continue into early '23. While the pace of inflation has moderated, overall cost levels remain elevated, which has continued to trigger tighter monetary policy in most parts of the world and is weighing on both business investment and consumer sentiment. The majority of economic forecasts are calling for slower GDP growth globally relative to 2022, although dynamics differ by region, with most regions except Europe still forecasting positive year-on-year growth. In the U.S., we see signs of moderating demand and the continuation of year-end destocking trends early in the quarter. Building and construction end markets have been particularly impacted by inflation and rising interest rates with housing starts declining by more than 20% year-over-year in December.

Manufacturing PMI contracted for the third consecutive month of 48, while light vehicle sales in the U.S. were down for the full year by 8 percentage points. Easing inflation is leading to improving consumer confidence, albeit from depressed levels in late 2022, while consumer spending remains resilient.

In Europe, we expect demand to remain constrained despite recent improvements in regional energy prices. While the move to 5-year highs in gas storage is a positive sign, changing weather forecasts are leading to volatility in the futures markets. High inflation and geopolitical tensions continue to weigh on consumer spending and industrial production. December manufacturing PMI has been contracting since July, and construction PMI reached its lowest level since May.

In China, while we're very encouraged by recent shifts in COVID policy to ease restrictions and open up orders, we expect these actions to take some time to improve economic activity. This is an area we're closely monitoring as it has the potential to provide a source of significant demand recovery following the Lunar New Year.

And in Latin America, overall economic growth is expected to slow, driven by political tensions, high inflation, and restrictive monetary policy. Given this dynamic backdrop, we will continue to take a region by region, business-by-business approach to managing our operations and adapting our businesses to the evolving market realities.

Turning to Slide 7. As we highlighted at our last earnings call, we are proactively responding to the current economic environment with a playbook of targeted actions to deliver \$1 billion in cost savings. This begins with maintaining a low cost to serve operating model by implementing actions to optimize our labor and service costs, including a global workforce reduction of approximately 2,000 roles. We will continue to increase productivity with end-to-end process improvements now that our digital foundation is in place, and we will also shut down select assets while further evaluating additional actions across our global asset base, particularly in Europe to ensure long-term competitiveness while also enhancing our cost efficiency.

These structural actions are expected to deliver a total of \$500 million in EBITDA savings this year. Additionally, we will deliver another \$500 million of savings through actions to maximize cash flow while reducing our operational expenses. This includes decreasing turnaround spend, purchased raw materials, logistics and utilities costs. Importantly, we will do this while maintaining safe and reliable operations, which, as always, remains our top priority. These proactive actions will optimize our cost structure in response to the near-term macroeconomic uncertainty while maintaining our long-term value-creation focus.

Turning to our outlook for the first quarter on Slide 8. In the Packaging & Specialty Plastics segment, improving logistics and lower operating rates led to the fifth consecutive month of inventory declines for U.S. polyethylene in December. Reduced global operating rates are continuing to drive feedstock and input costs down, with ongoing destocking through the value chain impacting functional polymer strength and demand in Europe. While lower turnaround costs will be a sequential tailwind, we expect lower demand levels in Asia to impact equity earnings and lower nonrecurring licensing activity from the prior quarter will impact earnings. In total, we expect a \$75 million headwind for the segment sequentially.

In the Industrial Intermediates & Infrastructure segment, demand remains stable for energy markets, and we're monitoring demand for de-icing fluids with a warmer-than-average winter. However, inflationary pressures in contracting PMIs continue to impact industrial demand, and we expect lower seasonal volumes in building construction end markets. We also anticipate an approximately \$25 million headwind due to a third-party outage, which is causing a supply disruption on the U.S. Gulf Coast from Winter Storm Elliott.

In the Performance Materials & Coatings segment, we expect demand recovery for performance silicones following year-end customer destocking as well as improved supply availability and lower costs. However, we also anticipate lower siloxane pricing in the quarter as we continue to see pressure from increased industry supply. We expect higher planned maintenance turnaround costs in this segment at our Deer Park acrylic monomer site in Performance Monomers. All in, we anticipate a \$25 million tailwind for the segment.

In total, we expect the first quarter to be in line with the fourth quarter performance with the \$75 million in discrete headwinds I mentioned.

Turning to the full year. We're continuing to provide our best estimates of several income statement and cash flow drivers. I will highlight a few notable year-over-year inputs. We expect lower equity earnings in the year down approximately \$300 million to \$400 million. Total turnaround spending is anticipated to be down by \$300 million as we implement our playbook of cost savings actions while maintaining safe and reliable operations. We expect share count to remain relatively flat as we plan to continue covering dilution.

And finally, we anticipate increasing our capital expenditures to \$2.2 billion, well within our DNA of \$2.8 billion as we continue to advance our higher return, faster payback projects and continue to execute on our Decarbonize & Grow strategy.

Overall, the macroeconomic backdrop remains dynamic in 2023. We see the potential for additional upside from higher oil to gas spreads, reopening in China following the Lunar New Year, and easing inflation in supply chain constraints. We also continue to pay close attention to a range of indicators, including pressure from higher interest rates on building and construction, PMI levels, global energy markets and geopolitical dynamics. Dow remains well positioned based on our global footprint, feedstock flexibility and the sustainable solutions we provide for our customers. We will continue to leverage these competitive advantages to deliver long-term value for our shareholders.

With that, I'll turn it back to Jim.

**James R. Fitterling**  
*Chairman & CEO*

Thank you, Howard. Moving to Slide 10. While the near-term environment remains challenging, we continue to see attractive secular trends across our market verticals of packaging, infrastructure, consumer and mobility. With resilient cash flow generation and a strong credit profile, we are well positioned to continue advancing our Decarbonize and Grow strategy to capitalize on these opportunities. We delivered on our growth investment commitments outlined in early 2022. These investments are expected to collectively generate \$2 billion in run rate EBITDA by the middle of this

decade.

In Packaging & Specialty Plastics, we mechanically completed and began final commissioning of our FCDh unit in Louisiana in the fourth quarter. This breakthrough propylene technology features up to 25% lower capital outlay while reducing energy usage and greenhouse gas emissions by up to 20% versus conventional PDH units.

In Industrial Intermediates & Infrastructure, our latest alkoxyates capacity investment in the United States was completed in the third quarter of 2022, and our next in Europe will be completed in the first quarter of this year. These projects will further serve high-value markets in home care and pharma and are just a start. Our next wave of alkoxyates capacity investments remain on track. In fact, Dow has already successfully begun locking in supply contract with several consumer and pharmaceutical customers to support the next wave of growth.

And in Performance Materials & Coatings, we completed 16 downstream silicone debottleneck projects in 2022 to meet demand for high performance, building and construction, personal care and mobility applications.

Additionally, we accelerated the delivery of our digitalization initiatives and now expect the full \$300 million run rate EBITDA to fully materialize by the end of 2023, well ahead of our prior target of 2025. As a result, we anticipate our digital sales to comprise 50% of total revenue by 2025.

Looking forward, we expect to continue growth investments in our global operations, including key capital investments in higher-margin polyurethane systems and additional alkoxyates capacity, incremental projects to expand downstream, high-value ethylene derivative capacity and continued coatings and silicone debottlenecking projects. We will also continue progressing our operating investments to improve production capabilities and reliability as we shift our product mix toward higher growth and higher-value markets.

Turning to Slide 11. Decarbonizing our assets and driving circularity remains a significant growth opportunity for Dow. We have a clear road map to reduce carbon emissions by another 5 million metric tons by 2030. We continue to invest in innovative, renewable energy and efficiency technologies, such as our collaborative program with Shell to electrically heat steam cracker furnaces, which is on track to start up in 2025.

In Alberta, we reached a preliminary investment decision for our Path2Zero project, and we are working with the Canadian government to confirm necessary incentives so that we can make a final investment decision by the end of this year. And our Terneuzen 2030 project, where we have a clear road map to reduce carbon emissions at the site by more than 40% by 2030 is making progress as we secure partner and government agreements and subsidies. We are also advancing our transform the waste target to commercialize 3 million metric tons of circular and renewable solutions annually by 2030.

By leveraging our pipeline of strategic partnerships to invest in innovative solutions and scale up production, we are well positioned to meet this growing customer demand in a disciplined and capital-efficient manner.

Most recently, Dow and WM announced a bold new collaboration to address hard-to-recycle plastic films by enabling them to be placed directly into residential curbside recycling. By 2025, the program is expected to divert more than 120,000 metric tons of plastic film from landfills.

We continue to see sustainability as essential for our long-term earnings growth. Altogether, by 2030, we remain on track to deliver \$3 billion in underlying EBITDA improvements while reducing Scope 1 and 2 emissions by 30% compared to our 2005 baseline.

Turning to Slide 12. The actions we've taken since spin to strengthen our balance sheet while improving our financial flexibility and operating cash flow generation are enabling us to be more resilient as we deliver on our capital allocation priorities across the economic cycle. Our free cash flow performance is now more than tripled on a trailing 12-month basis. We substantially improved our liquidity position, ending the year with nearly \$14 billion. And through our disciplined and balanced approach to capital allocation, we've significantly reduced our liability profile with a combined reduction of more than \$11 billion in our net debt and underfunded pension position since spin.

Closing on Slide 13, we have a clear playbook of actions to drive resilient performance in the near and long term. We have plans to achieve \$1 billion in savings through targeted actions to increase efficiency and maintain a low-cost structure that is best in class. We're maintaining a strong financial position with a continued focus on disciplined and balanced capital allocation, and we're advancing our Decarbonize and Grow and circularity strategies, delivering incremental run rate EBITDA improvements through the end of the decade, positioning us for economic recovery while lowering our carbon dioxide emissions.

As we leverage our competitive advantages, operational agility and focus on cash flow generation that has served us well since spin, we will continue to deliver long-term value for our shareholders.

With that, I'll turn it back to Pankaj to open up the Q&A.

**Pankaj Gupta**

*Vice President of Investor Relations* Thank you, Jim. Now let's move on to your questions. I would like to remind you that our forward-looking statements apply to both our prepared remarks and the following Q&A. Operator, please provide the Q&A instructions.

# Question and Answer

## Operator

[Operator Instructions] Your first question comes from Vincent Andrews of Morgan Stanley.

### **Vincent Stephen Andrews**

*Morgan Stanley, Research Division*

Wondering if you could just unpack the outlook for Performance Materials & Coatings a little bit. And it sounds like there's just a lot of moving parts right now with weak China in the fourth quarter but now reopening, some issues with new supply coming into the market. So obviously, uncertainty about how far and how fast China will reopen. But could you give us sort of the range of outcomes for how this segment might recover as we move through the year, representing that it could be a wide range? .

### **James R. Fitterling**

*Chairman & CEO*

Sure. Vince, thanks for the question. First, I think it's important to look back at the fourth quarter on PM&C and understand the fourth quarter. Coatings & Performance Monomers kind of got back to the normal fourth quarter seasonality that we would see, which a year ago was very different because we were still recovering from all the supply disruptions from winter storm Uri and everything else that was associated with that. So I think you'll see that they'll come back to a more normal season in 2023.

And you also saw the impact of destocking. Destocking in the fourth quarter represented, and this is across the businesses, about 50% to 60% of the slowdown that we saw in the fourth quarter. So I think the destocking is going to work itself through in the first quarter. And then I think you'll see us get back to normal seasonality there.

I do think positively on China for Coatings & Performance Monomers, I do think we're seeing China opening up. We're not seeing issues with people coming to work. So I think we're optimistic that the government will probably try to stimulate the construction economy there, and we'll start to see that take off through the year.

On silicones and siloxanes, you had 2 impacts. One was the market impact of things slowing, which was the lower siloxane prices. That hit hardest in China, obviously, at the end of the year. The other one was self-inflicted. We happen to have all 3 of the silicone pillar plants with siloxanes pillar plant down at some point in the fourth quarter. And that lower operating rate really hurt us. They're, all 3 back up and running. So I think that issue is behind us. So I would expect you'll start to see siloxanes demand pick back up. We saw destocking in all the downstream areas in silicones, personal care, home consumer goods, and we also saw it, obviously, in building and construction. I think that will start to rebound as the year progresses.

## Operator

The next question comes from David Begleiter of Deutsche Bank.

### **David L. Begleiter**

*Deutsche Bank AG, Research Division*

Jim, Howard, given the recent decline in European natural gas prices, how are you thinking about the competitiveness of

the European operations going forward? .

**James R. Fitterling**

*Chairman & CEO*

David, very good question. Obviously, the European situation has been tough on all the European producers over this past year. In fact, if you think about the year-over-year performance for Dow for the full year, 60% of the decline in EBIT was related to Europe and that energy situation. So this is very targeted.

Incrementally, we saw a step change in the fourth quarter, obviously driven by the warmer winter and the inventory levels being back up. And they've done an admirable job, especially in Germany, of switching away from Russian natural gas over to other sources. So that has helped. But we still have to take a look at long-term energy policies and work with the governments, both EU and the member states on energy policies because we're a long way away from long-term competitiveness in Europe.

I would say the decisions we announced today around restructuring, right now, we've looked at locations that are going to be challenged in any scenario long term, and we'll take actions on those. But on large sites, like our large cracker sites, we're still able to run cash flow positive, and we're working hard on that energy situation. We'll continue to analyze that through this year and see what kind of work we can do with the governments there to make them more competitive long term.

**Operator**

The next question comes from Hassan Ahmed of Alembic Global.

**Hassan Ijaz Ahmed**

*Alembic Global Advisors*

A nearer-term question around your guidance. First part of the question is, it seems you guys, as I look at segment level guidance, you're guiding to Q1 EBITDA of \$1.2 billion. So first part of that question is, is that correct?

And then part and parcel with that question, it seems that there are 2, \$0.05 a pound price hike announcements for polyethylene in the U.S. for January and February. And then, obviously, we've seen these precipitous declines in natural gas prices in Europe. So in this \$1.2 billion EBITDA guidance that you guys have given for Q1, how much of those U.S. polyethylene price hikes have you factored in? And how should we think about factoring in for Q1, those declines in nat gas prices in Europe.

**James R. Fitterling**

*Chairman & CEO*

Hassan, good question. Obviously, the outlook -- I would go back to integrated margins and take a look at our outlook and our expectations for integrated margins in the quarter. We think both in the U.S. and in Europe, they'll be up about \$0.04 on integrated polyethylene margins.

I would say, yes, natural gas costs have come off. We see a fair amount of benefit in that, obviously, from PMC, which is a large energy user. And so that helps in a location like Stade. But we only really are cracking natural gas to any big degree in Terneuzen and some in Tarragona. So it has a little bit more limited effect there. Most of the rest of the economics are naphtha.

I do think prices -- obviously, fourth quarter to first quarter, you've got to remember, we start the quarter with a lower

base and then we build up from there. So you're going to have some of that lag effect that bakes into it. That's part of the guidance. And then we also are expecting a little bit of destocking to still continue into the quarter from a volume and operating rate perspective. So those are the big things that went into the guidance. Anything else you want to add, Howard?

**Howard I. Ungerleider**  
*President & CFO*

Yes. Thanks, Jim. And Hassan, thanks for the question. Yes, I would say you got the number right. I mean, it's around [ \$1.2 billion ]. At a high level, there's really 3 moving parts -- we expect Q1 on balance to look pretty much like Q4 with 3 discrete items. So as you know, our licensing business is lumpy. We had a large sale in the fourth quarter of \$75 million that will not repeat in Q1. We're dealing with a third-party gas supplier in the Gulf Coast that's still having issues post winter storm Elliott that's impacting our [ DIS ] business, which is in our Industrial Intermediates segment. That's a \$25 million sequential headwind.

And then there's a \$25 million sequential positive tailwind on lower turnaround expenses. At the enterprise level that's a \$50 million tailwind in P&SP, but offset by a \$25 million headwind in PM&C, which is the Deer Park asset.

**Operator**

The next question comes from P.J. Juvekar of Citigroup.

**Prashant N. Juvekar**  
*Citigroup Inc., Research Division*

Jim, it seems like the European chemical capacity is now the high-cost marginal capacity instead of China. And European capacity will be flexed with demand ups and downs. Would you agree with that statement?

And then in polyethylene, as you mentioned, China reopening is positive. Assuming that -- do you expect somewhat of a snapback in polyethylene as a result? Or is it more of a gradual recovery in first half?

**James R. Fitterling**  
*Chairman & CEO*

Yes, P.J. both good questions. I would say in Europe, I would think about it in 2 ways. First, I would think about the crackers. And I would say from a cracker economic standpoint, yes, on a naphtha basis, they have become incrementally the highest cost on the assets that are able to crack LPGs like Terneuzen and Tarragona and where utility costs are lower like in Spain. They probably are fairly competitive with that Asian situation.

So we haven't flexed as much up and down in Europe on the cracker operations. They've run at pretty steady rates throughout. We did flex up and down a bit when it got into our II&I business like polyols, polyurethanes, isocyanates in Europe, where the energy cost at Stade and Germany are much, much higher. And so what you would see there is we have some amount of that energy cost, that is very competitive and at a low rate, but then the increment is much higher. So we would run to that competitive rate. And I think that is what still continues to be in the front window and the thing that we have to address with the government.

I would say on -- second part of the question, remind...

**Howard I. Ungerleider**  
*President & CFO*

China, China recovery.

**James R. Fitterling**  
*Chairman & CEO*

China. Yes. Look, I think it's going to be positive. We had growth in the fourth quarter in packaging, especially plastics and industrial solutions. The places that were weakest for us were anything related to building and construction, so polyurethanes, construction chemicals, coatings and monomers, although that was fairly even quarter-over-quarter. And then Consumer Solutions because of the, as I mentioned, siloxane prices and also our asset being down there.

For the year, we had growth in Packaging & Specialty Plastics, Consumer Solutions and Industrial Solutions, pretty good growth. And it was really construction businesses that were the most impacted.

Construction is 25% of China's economy. It was off 40% last year. I'm certain that the government is going to try to stimulate that and get that going again. I don't know how fast it will happen. But as I mentioned, we're not seeing any big COVID spreads that are unmanageable right now. People are reporting into work and I'm hearing this from other CEOs as well. People reporting into work. Things are moving as expected. So I do expect we're going to see a little bit of positive move from China.

**Operator**

The next question comes from Jeff Zekauskas of JPMorgan.

**Jeffrey John Zekauskas**  
*JPMorgan Chase & Co, Research Division*

Two-part question. Your local price in Industrial Intermediates & Infrastructure was down 1%. Was that a combination of puts and takes, that is, some chemicals were up and some chemicals were down? And can you talk about MDI pricing?

And then secondly, for Howard, what kind of working capital benefits do you expect for 2023? Can you -- you have a working capital inflow of \$500 million or \$1 billion? Can you size that?

**James R. Fitterling**  
*Chairman & CEO*

Jeff, good questions. On II&I, we actually had higher prices in polyurethanes and construction chemicals and it was volume that was the offset there. And remember, that business has a fairly large footprint in Europe and the input costs are much higher there and so that was part of it.

We also saw that Industrial Solutions pricing held up relatively well. And again, it was volume that slowed. So both of them had very resilient prices but saw some volume slowdown and a little bit of currency impact. I'll let you answer the second part of that, Howard.

**Howard I. Ungerleider**  
*President & CFO*

Yes. Thanks, Jeff. Look, let's start with the fourth quarter on working capital. That was actually a tailwind versus the prior quarter. So sequentially of \$1 billion and more than \$400 million versus same quarter last year. I would say it really depends on what's going to happen with feedstock costs and revenue growth. We're certainly expecting some volume growth as we move through the year, especially with Jim's comments on China reopening.

And overall, global GDP growth is still expected to be positive of around 1.5%, which should drive some industrial production and should drive some growth. You know that since spin, we've been very focused on working capital. We're continuing to target a couple of days of structural working capital improvement. So I would say, at a bare minimum, we're looking at \$200 million to \$300 million of working capital improvement 2023 versus 2022.

I'm very proud of the Dow team on their focus on cash flow. When you look at what we've been able to do since spin, we have actually improved our cash from ops every single year, 2019 through 2022. And last year was \$7.5 billion of cash from ops and \$400 million better overall than 2021. And so one of the ways we do that is work on working capital.

We're also working on other unique-to-Dow cash flow levers. I estimate that is around -- inclusive of that \$200 million to \$300 million working capital. We're focused on \$1 billion of -- pulling on \$1 billion of unique-to-Dow levers. Working capital is certainly one of them. The other one, as you saw in the fourth quarter, we successfully concluded one of the two big Nova litigations that we have. We're hopeful that we can solve the second one -- or resolve the second one in calendar year 2023. That could be another up to as much as \$0.5 billion of unique-to-Dow cash that we expect. And then we've got a few other projects that are in the works to round out that \$1 billion.

### **Operator**

The next question comes from John McNulty of BMO.

### **John Patrick McNulty**

*BMO Capital Markets Equity Research*

So it seemed like the destocking was kind of at really accelerated levels in the fourth quarter. Can you give us a little bit of color as to which of the segments do you feel like you're largely through that? And if anything, you may be -- maybe we're even at a balance side or even a restock phase? And I guess tied to that, can you speak to the operating rates you saw in the fourth quarter and how you expect that to change as we look to 1Q?

### **James R. Fitterling**

*Chairman & CEO*

Sure. John, Good Question. I would say it accelerated in December. We've made an announcement in October that we were going to reduce some operating rates in ethylene, polyethylene because of some logistics constraints and other things that happen. We saw better logistics in December.

December was our best export month of the year for Marine Packed Cargo, so that's positive. But at the same time, manufacturing activity in the last half of December really slowed. And so you could see that in the order pattern. And that stayed relatively slow the first half of January.

I do think we're seeing manufacturing activity come back right now. We're seeing that in the order book. I would not say that we're at a restocking state yet. But I do think as the quarter progresses, we will get there because second and third quarter are typically are our highest volume quarters. And there is not a lot of excess inventory anywhere in the change right now. So I do think it's coming, but it isn't here as we sit here right now today.

### **Operator**

The next question comes from Mike Sison of Wells Fargo.

### **Michael Joseph Sison**

*Wells Fargo Securities, LLC, Research Division*

What was the impact from the lower operating rates in the fourth quarter on EBITDA, meaning if you were at normal operating rates, what would that be?

And then is that impact similar for the first quarter? And when do you think you can see your operating rates sort of improve back to normal rates in '23?

**James R. Fitterling**  
*Chairman & CEO*

Yes. Just to give you an idea, I would say, probably you saw -- because of destocking, you probably saw a 10% lower operating rate due to destocking. Rough numbers, Howard, where do you think that's around [indiscernible] ...

**Howard I. Ungerleider**  
*President & CFO*

Yes, I would say 10 percentage points. And that's -- I mean, when you think about every percentage point -- yes, look, I would say it this way, Mike. When you look at the sequential decline in EBITDA, probably 2/3 of that EBITDA drop was because of the destocking. And then the other balance was really the seasonal -- just a seasonal sequential decline because we're a more of a Northern Hemisphere business. And obviously, our coatings business typically is a seasonal low point in the fourth quarter.

**Operator**

The next question comes from [ Steve Byrne ] of Bank of America.

**Stephen V. Byrne**  
*BofA Securities, Research Division*

Yes. That 2,000 headcount reduction, how much of that is these assets in Europe that you're planning to shutter? Or can you highlight what operations, is this commercial or back-office headcount?

And then just one other quick one. Your partnership with Mura, when that's at scale, and you're using the pyrolysis oil as cracker feedstock, how would you expect the profitability of that versus naphtha or ethane-based feedstock?

**James R. Fitterling**  
*Chairman & CEO*

Sure. Steve, good questions. 2,000 headcount reduction is not all specific to Europe, although Europe is a big part of the earnings decline that's driving us to take these actions. The site and asset decisions we've made so far are really smaller locations, smaller scale location where we know they will be challenged through the year. We haven't released a list of those. We're working through that with the European Works Councils, et cetera, but we will be doing that as we get toward the end of this quarter.

But the \$1 billion is really made up of 2 buckets. \$500 million is structural cost reductions. That's the headcount reductions, that's productivity via end-to-end process improvement. So we're really building off that digital work we've done, and that would work on improving processes and customer service and then the asset decisions. And then \$500 million will just be reduced spending, turnaround spend, which Howard had mentioned, \$300 million, leveraging our volume on lower purchased raw materials, logistics and utilities because we do see some supply/demand imbalances and the ability to do that and just tightening the belt to this environment.

So I would say I don't -- it's not a haircut 5% of the workforce. It will be targeted, and we target around asset decisions, it will be targeted around businesses that need to tighten. It will be targeted around -- it's not just Dow headcount. We will have contractor reductions as well at the sites. And so we'll look at it that way.

On Mura, on our transform the waste target, right now, when we talk to you at Investor Day in 2021, the premiums vary by technology. But they continue to be greater than about \$1,000 a metric ton. And the supply demand -- the demand is out there right now, and it's in excess of the supply.

I think as the supply increases, there will be pressure on that, obviously. But there's a big imbalance right now between what the consumer brand owners want and what's available out there. So I do think you'll see margin expansion in that part of the segment. There will be some higher costs with doing that, but there will -- I think the premiums will more than cover that.

### **Operator**

The next question comes from Kevin McCarthy of Vertical Research Partners.

**Kevin William McCarthy**  
*Vertical Research Partners, LLC*

Jim, I'd welcome your thoughts on the supply side of polyethylene. We've seen spot prices start to percolate higher over the last 3 or 4 weeks. So I was wondering if you could comment on where you see downstream inventory levels among converters at this point?

And also if I rewind to maybe September, we had a lot of purposeful throttling back of operating rates from Dow and others that dovetailed into winter storm Elliott in late December. I think at least one of your competitors has declared force majeure on a tornado of all things. So if we look at that holistically, do you think there's enough supply [ disruption ] to kind of rebalance the polyethylene market and move higher from here?

**James R. Fitterling**  
*Chairman & CEO*

Kevin, I think there has been enough, obviously, to give good momentum to these price increases in the first quarter. And so I think we will see the margins expand, as I mentioned earlier on one of the other questions. From a supply side standpoint, it's also worth mentioning that I'm really proud of the team. After winter storm Uri, we took our playbook and we said, how do we -- if this happens again, how do we make sure that we don't have any production losses due to freeze. And we were able to navigate this freeze with winter storm Elliott, and we had no problems with polyethylene plants or crackers.

And right now, as we sit here, about 37% of the ethylene capacity in the Gulf Coast is still off-line. And so that's advantage to us. And as Howard mentioned, the only issue we've had is with an industrial gas supplier at one of our sites in Louisiana for our Industrial Solutions business. That's been our only blip, and I don't think they did the same kind of work.

I do think China, to P.J.'s question earlier, China is making an impact. We saw that in December. I think we're going to continue to see that in the first quarter. Inventories there are managed well. Inventories here, 5 consecutive months of reduction in the ACC inventory data. Inventory is 45 days. That's pretty standard inventory levels. And I think everybody, not just converters, but consumers, brand owners, everybody in the value chain at the end of the year was watching inventories and managing cash into a slow end of the year.

We had a pretty strong end of the year in 2021. And in 2022, we kind of reverted more to the normal slower end of the year dynamics. We do have to keep an eye on capacity coming on. But I would say our outlook for the year is probably about the same amount of capacity off-line as last year. And so if demand kicks back up here and there's some restocking that happens, that will set us up well for second and third quarter.

**Howard I. Ungerleider**  
*President & CFO*

I would also just add that another bright spot that we see as we head into 2023 is the improving situation marine pack cargo and the ability to export out of North America. I mean, I can't speak for our peers, but certainly, we certainly have ramped our capability. And so that really should not be a bottleneck at least for the first half of the year. And don't have the visibility in the second half, but certainly as we ramp through, the balance of Q1 into Q2, we should see increased marine pack cargo exports out of the U.S. .

### **Operator**

The next question comes from John Roberts of Credit Suisse.

**Matthew Stephen Skowronski**  
*Crédit Suisse AG, Research Division*

This is Matt Skowronski on for John. Two commodities that Dow participates in, siloxanes and MDI, have had competitor capacity come online recently? You called out weaker pricing in siloxanes in your guide for the first quarter. But can you just talk about how long you expect it to take for pricing these commodities to recover?

**James R. Fitterling**  
*Chairman & CEO*

Yes, and thank you for the question. I think we'll see a little bit of demand improvement. But siloxanes prices have fallen to their lowest levels in some time at the end of the year, and so we start the year at those levels. I don't think we're expecting any immediate improvement. The downstream demand still continues to be good.

Building and construction will be the thing that I think will start to tip it to the positive. So if we see a good rebound in building and construction in China, that should start to pull things to the positive and lift things up.

North America has been fairly resilient. And North America and Europe are typically slightly higher than the Chinese prices, and that continues to be the same case today. So I -- that's my outlook on siloxanes on.

On MDI, I would say the biggest difference between what's reported in the markets on MDI, in our view, is just what you believe about the RTO timing of some of the Chinese competitions, new plants that are coming online. I think our view is that, that's going to be stretched out over a longer period of time.

Most of what's reported would have all that 4 world-scale MDI facilities coming on in 2023. I don't think that's our view of how that's going to happen. That would be more spread over the 2023 to 2025 time period. And so I think that will take some of that pressure off of MDI.

Downstream demand for MDI and for systems and the application that it goes into is really good. So I don't feel worried about that. That's purely what your assumptions are about -- that our new demand coming -- or new supply coming online and the time frame.

## Operator

The next question comes from Christopher Parkinson of Mizuho.

### **Christopher S. Parkinson**

*Mizuho Securities USA LLC, Research Division*

You have a very helpful slide given all your growth expansions on Slide 10. And obviously, there's been a lot going on regarding the P&SP, as seen the polyethylene side over the last few years. But when we all take a step back, just given all the volatility and the macro headwinds, how should investors now be thinking about normalized earnings that we own, we're thinking about '24 when we're looking out to '25 or even, perhaps, especially in the context of potentially lower NGL prices. Just do you have any updated thoughts on that? .

### **James R. Fitterling**

*Chairman & CEO*

Good question, Chris. I would go back -- that -- this is the basis of, obviously, the earnings corridor slide that we put together and we shared last year and at earnings day back in 2021. And so if you look at it, I think we look at the midrange of the kind of the through-the-cycle range as being what we target for the growth. And that's kind of how we report the growth.

And then peak potential would be, when you would see those scenarios like you mentioned with lower NGL prices and high oil prices. Now like we got into with 2021 and the first half of 2022, that was kind of peak levels for plastics.

I do think the possibility exists that oil price is going to continue to be driving higher because we've had underinvestment in oil production, inventories at the bottom of their 5-year average. And if you started investing in oil production today, it would be 3 to 5 years before you would see any movement in that number. And I do think that any demand pull on that is going to start to move oil prices up and anything speculative that happens will move it up quickly because those inventory levels are so low.

Meanwhile, NGL production is continuing to grow at a pretty good clip. I think it's going to be up pretty substantially here in the United States this year. And so that keeps costs down on NGLs. And so that's positive.

So Canada, U.S., Argentina, I feel good about the positions we have there. Obviously, Kuwait, Saudi Arabia, we feel good about that. Our cracking in Terneuzen and Spain, I think that's positive. So you've seen the high watermark for plastics, delivered \$8 billion of EBITDA which is right in line with what we've got here with peak potential, EBITDA range. And I think we're trying to get in other segments up to that peak potential as well.

So I feel good about where we're going long term, and that's also one of the reasons we wanted to make the investment in Canada -- if all the conditions are right, we want to make that investment to continue to leverage that position.

Hard to say what's going to happen with all that energy policy, plays a big part in it. I think the one thing that governments aren't correctly addressing is that all the things we've passed for IRA, for new alternative technologies, that's all great. We're very supportive. It's a fantastic package. We also need some support for conventional oil and gas production because we are going to need a reliable power, and natural gas is going to provide the low-carbon reliable power for the foreseeable, near future.

### **Howard I. Ungerleider**

*President & CFO*

I would also just say that, I mean, when you think about that earnings corridor of 6% to 12% and then moving to the middle of the decade into the \$7 billion to \$13 billion range with all the CapEx and OpEx investments we're making, if you just want to look at the mathematical average, right now, that's about a \$9 billion normalized through the cycle. And then by the middle of the decade, that should be in the \$10 billion range by the middle of -- in terms of the mathematical average in a normalized view by the middle of the decade.

**Operator**

Thank you. The next question comes from Frank Mitsch of Fermium Research.

**Frank Joseph Mitsch**  
*Fermium Research, LLC*

And Howard, thank you so much for giving us the mathematical average for 6% to 12% and \$7 billion to \$13 billion, I was having difficulty crunching that number. I want to come back to the cost savings, the \$1 billion. You mentioned that in the first quarter, you can take a charge of \$550 million plus. And I was wondering how much of that is cash versus noncash?

And then also on that slide, you mentioned that you're going to be reducing turnaround spending in '23 versus '22. And I'm curious if you could order -- give us an order of magnitude there? And does that suggest perhaps that 2024 will see an above average spend on turnarounds?

**James R. Fitterling**  
*Chairman & CEO*

Howard, do you want to take it?

**Howard I. Ungerleider**  
*President & CFO*

Yes. Yes, Frank, you're welcome. I just -- that really -- my answer on the previous question was really targeted, all The Mets and The Jets fans out there. I just want to let you know that, make sure that you can do that math. Just a joke.

Look, the \$1 billion as we look at the end of the year run rate exiting into 2024, that \$1 billion should become about \$1.4 billion. We haven't set the turnaround budget for 2024 yet, obviously. But I could imagine, if we just revert to a normalized turnaround and that could be -- the turnarounds could be potentially \$150 million or maybe \$200 million higher in 2024 than 2023, if we do 1 more cracker turnaround. So that would be the order of magnitude that I would expect. But still improving. Overall, the cost improving versus 2023.

**James R. Fitterling**  
*Chairman & CEO*

And how much was the cash charge on that?

**Howard I. Ungerleider**  
*President & CFO*

Oh, the cash -- we expect the cash outlay over the course of 2023 and 2024 to be roughly \$800 million to \$1 billion, in that range, about half this year probably and then the balance -- the other half in 2024.

**Pankaj Gupta**

*Vice President of Investor Relations*

I think that's all the time we have for today. The -- for your reference, a copy of our transcript will be posted on Dow's website within approximately 48 hours. This concludes our call. Thanks, everyone, for your time this morning.

**Operator**Ladies and gentlemen, this does conclude the conference call for today. We thank you for your participation and ask that you please disconnect your lines.

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