Dow

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David Begleiter: Next up is Dow, Dow Inc. Very pleased to have with us today Howard Ungerleider, President and, CFO of Dow. And we'll get right into it.

Howard, it's been about 2 months since Dow has reemerged as a public company. Can you discuss why and how new Dow is better and different than old Dow?

Howard Ungerleider: Sure David, and good morning, and thanks for you for hosting today and thanks to everybody for joining us in the room and on the webcast.

So the new Dow is different in many ways. I would say if you think about capital allocation, you think about capital discipline, you think about shareholder remuneration, in all respects we're looking to build on the successful Dow of the past and bring the new Dow forward the next 3 to 5 years.

So you think about our capital allocation, it's really focused. If you think about the Dow over the last 5 years, it was investing in very large greenfield projects. Billions of dollars of CapEx spending well north of D&A. You think about the new Dow, Jim and I and the leadership team have committed to spending at D&A or less for each of the next 3 years, 2019, 2020 and 2021. So our D&A is around $2.8 billion. Actually this year we've committed to spending $2.5 billion or less.

And probably more importantly than the amount of spending, it really is the kind of spending. So instead of the large greenfield multiyear projects, it really is all about incremental brownfield debottlenecking projects fundamentally that are smaller capital intensity, smaller CapEx dollars. As a result they're lower risk, and they typically are higher return on invested capital.

David Begleiter: Very good. Now, in terms of your share price, despite initial positive reception in the marketplace, your shares have underperformed over the last month. They're now yielding a robust 6%. How secure is this dividend in a downturn and even in a recession?

Howard Ungerleider: Yes, we feel really good about the dividend. When we were doing the capital structure of each of the three companies as a part of DowDuPont, we stress tested each of the companies. So when you think about the new Dow on a pro forma basis, we stress tested -- looked at on a pro forma basis, looked back in history and what would that portfolio have done in various macroeconomic and petrochemical or product value chain cycles. And we're looking at a stressed environment of let's say down 30% to 35%. If you want to do a 2008 or 2009 stress case, if you say that's going to happen again, that may be down closer to 39%, 40%.

But if you'd take a look at where we are today, and you know we don't give annual guidance, so let's just use the sell side street estimates for Dow. The sell side estimate's around $8 billion of EBITDA. We've given public disclosure, public guidance for modeling purposes of about $2 billion between interest expense and taxes, you're at $6 billion. We've said we're going to spend no more than $2.5 billion of CapEx, and we've got a $2.1 billion dividend. So there's plenty of room for us to do what we want to do and preserve and protect the dividend. And the dividend is something that we feel very good about and it's very important to our leadership team, the board, as well as the shareholders.

David Begleiter: Very good. Maybe switching to nearer term issues. What are you seeing in your key value chains, end markets around the globe?

Howard Ungerleider: So clearly, if 2 or 3 years ago we were in a spot where it was very much synchronized global growth, I would say we are no longer in a period of synchronized global growth. The US is clearly the bright spot. You've got consumer spending, which is very good, and actually that tends to be good for our portfolio in general. It's about 70% of our products go into ultimately -- that ultimately touch the consumer. We obviously don't sell directly to the consumer.

And then you think about industrial production, though, is slowing. Construction, on the other hand, is a positive, is doing well. Now part of that may be seasonal with northern hemisphere demand. The weather is finally -- I think the sun was shining sort of when I came in this morning, even though it rained here in Chicago overnight. And then you've got automotive that's slowing on the margin, although at a pretty healthy rate in the historical kind of global context of automotive.

And then you go around the world. The US, like I said, is clearly a bright spot. The Chinese consumer seems to have been pulling back. Manufacturing is pulling back in China. And then Europe is slow.

Overall, I would say our view for this year, base case is growth. Slower growth than we had last year, but growth nonetheless.

David Begleiter: Very good. Trade issues, China, Mexico. Maybe first US-China trade dispute. How is it impacting your business? You look at global footprint, I think you're a little more immune than others. Maybe first address the US-China trade issue and impact on Dow.

Howard Ungerleider: Yes. So both the US, China, and even the latest discussion around potential for Mexico, the short answer, on a direct basis the tariffs are not really material. So when you think about US, China, the first round of tariffs is around $40 million or $50 million of EBITDA headwind. So look, I'd rather not have that headwind than have it, but on an $8 billion number using the analyst estimates, it's not really material. If everything gets implemented, you might be looking at another $40 million or $50 million, so now you're up to about $100 million.

On a Mexico basis, we've looked that that, and it's probably $10 million potentially of a headwind if something. And that's if the max were to get implemented. And I think we still got a ways to go before we see exactly what is or isn't going to get implemented there.

So it's not really the direct impact of tariffs that is a concern for me. I think it really is the indirect. This period of uncertainty that I think we're seeing in the capital markets and the financial markets, but I also think in the industrial markets and the consumer-driven markets. If the uncertainty is prolonged, the longer that goes on, the harder it is to make your capital allocation plans, to make your investments. Even people will look to run hand to mouth on inventory, and it just changes the psychology of the entire market. And so that's not going to be helpful, and that's a heck of a lot harder to quantify.

David Begleiter: Right. We are long in this economic expansion. We will eventually have a downturn, a [narrow] recession. You've taken out a lot of costs. How will the new Dow perform in a recession, a normal recession?

Howard Ungerleider: So we have taken out a lot of costs, and thank you for acknowledging that, and we continue to do that. So part of -- going back to your first question of what's different about the new Dow, we are going to be leaner. We are going to be more streamlined. We are going to be more focused. We are taking out $800 million of additional costs between 2019 and 2020 when you add up the additional cost synergies that we are yet to deliver, and then also removing the stranded costs. And when you look at that $800 million, about $600 million of that will come out this year, 2019 versus 2018, and then the remaining $200 million will come out in 2020.

So look, we feel very good about the portfolio. If you think about the last decade plus, the capital investments that we've made, the transactions that we've made, we are the world-leading material science company playing in three market verticals. So we'll be the leader in packaging materials, we'll be the leader in infrastructure materials, and we're the leader in home and personal care materials. So we're more important than ever to those value chains, to those customers. We still believe in innovation catalyst development, process development, ultimately new application, new product development. And every day our team, our sales and our marketing and our technology team, is very focused on earning a seat at the design table at our customers in those value chains that I just talked about.

And so through economic cycles, the new Dow should do very well. Our focus is really all about continuing to be the material stock to own in our sector. And we're off to a good start. Last year, if you look at our peers that we outline, we beat our peers business by business and also at enterprise level for all of 2018. When the fourth quarter slowdown happened, we also were best in class in almost every business. And then we've done well in the first quarter, even though we're dealing with a period with a little bit softer macro and some margin compression in a few of our chains.

David Begleiter: Right. Now you have discussed some earnings upside of $2 billion to $3 billion and I think $3 billion or $4 billion in cash flow from this current base year. What are the drivers of that upside potential over the next I think 3 to 4 years, 3 to 5 years you've sketched out?

Howard Ungerleider: Yes, so that's -- it's between now and year end 2023, so kind of the next 5 years. It really is a combination of the incremental growth project. So finishing, which we've done now, at the end of last year we finished the Wave 1 growth projects. So in 2019 versus 2018, there'll be about 500,000 tons of additional production that's started up so there's no execution risk, but that has to flow through the P&L this year as the projects were started up through the year.

So 500,000 tons of new production this year, and then additional investments in polyethylene. So we're doing the two furnaces in Texas -9. We have several polyethylene reactors that we're building. As well as siloxane debottlenecking and then formulated silicone expansions and then the polyurethane system house area. So, every business has their incremental debottlenecks and growth projects. And so you think about of the $2 billion to $3 billion, you've got $800 million of cost out between the removal of the stranded costs and the cost synergies, and the balance is the incremental growth.

And then you mentioned the cash flow. This is another thing that's I think fundamentally going to be a big value driver from an investor lens for the next several years is in the old Dow, it really was a very few number of people that were really working on cash flow. And one of the things that Jim and I and the leadership team and the board talked about as we were launching the new Dow is getting cash flow embedded in every one of the decision makers that owns a P&L. So we're in the process, this is our first quarter, full quarter as a new Dow. So we're rolling out not only making the change that you know well from EBITDA to EBIT as the profit metric to just reinforce that capital is not free in our businesses. And you and I have talked about that for many years, so I appreciate your thought process there. And that was a big driver of our decision, so thank you, David.

But then also this focus on cash flow. So every P&L leader will also own a balance sheet and a cash flow statement that will roll up to the company or the enterprise cash flow statement. Now that's probably not going to see itself third to the bottom line or the cash flow statement this year, but over the next 5 years, everybody is starting now to make decisions and think differently about CapEx. It is not about spending the CapEx and getting growing EBITDA. It really is about growing EBIT and growing ultimately net income after tax and then driving free cash flow.

So we're working on things like working capital efficiency. So for every one day improvement we get on efficiency, we get more than $100 million of additional free cash flow just releasing that from working capital. So we're looking at DSO, DSI, DPO efficiency. We're also looking at our joint ventures and seeing how we can look at the cash flow from our joint ventures. And we have some idiosyncratic things. Things like the Nova litigation that's been very well publicized out in the media where they owe us more than $1 billion, and we have every intention of going and getting that money.

So there's a lot of things that we can do, a lot of levers we can pull. So we see $2 billion to $3 billion of EBITDA upside, but then that's why there's another $1 billion of free cash flow as we work through all of those levers.

David Begleiter: Right. And on capital allocation, we can keep D&A -- or CapEx below D&A for the next 3 years. Beyond that though, should we expect D&A or CapEx to creep higher, or can we keep D&A and CapEx similar or in the same range longer than 3 years?

Howard Ungerleider: You know, it's a great question. And I would say first, when we started talking about the new Dow, we used the term "near term," and investors were like, well what does that mean? So we said, okay, we're going to define it as 3 years: 2019, 2020, 2021. I would say you shouldn't expect it to go up. I wouldn't expect it to go down. At this point we've got 3 to 5 years' worth of incremental debottleneck growth projects. And so I feel really good about the team's focus on execution, improving our return on invested capital, improving our EBIT generation and improving our free cash flow. And that gives us the next 3 years to assess where are the macros, how are the value chains performing.

Looking at our investments, I would say in terms of where our next investment might come after the 3-year period, it's probably in the lower probability of being a greenfield project, but looking at what technology do we have to reinvest in some of our existing footprint and existing sites where we can go down the cost curve and really drive long-term value creation. And that is the mindset that Jim and I and the leadership team have.

David Begleiter: Okay. In terms of dividend, you're committed to growing dividend over the long term. Is that fair?

Howard Ungerleider: Yes, it is absolutely fair. I would say that when you think about our -- so we've talked about how we're spending the money. And then when you think about the shareholder remuneration, our philosophy is very straightforward. We've been very clear. We want to grow our earnings and grow our free cash flow and then give 65% of that net income back to the owners in the form of primarily dividends, but then stock buyback we'll use as the flywheel. So over the economic cycle, it doesn't mean every year will be 65%, but over the economic cycle, our target is to average 65% of net income. So as the net income grows, then the dividend should grow over time as well.

David Begleiter: Right. And on that flywheel stock buyback, last year you targeted at $500 million. Maybe a little [wide] than some people expected. Given where the share price is, are you being maybe now a little more opportunistic? Can you pull that $500 million forward into the first half of the year, or would you even increase that given how attractive the share price is today?

Howard Ungerleider: It's going to be a combination I would say, David, of a balanced approach, and then also clearly looking at being opportunistic on an intrinsic value basis. And so we set that target of $500 million just based on our view of the operational free cash flow, as well as a balanced approach, because we do still want to do a little bit of additional deleveraging.

So we did $2 billion of deleveraging on April 1st when Dow spun out, so you'll see that in our SEC filings once we report the second quarter results. But we did the $2 billion, and then the goal is to do a little bit more. So a balanced approach. And then we'll see how some of these other idiosyncratic cash flow levers, how fast we're able to do that. I think $500 million is a good, still a good target for this year, and if we have the fire power to do more, we will. But we also want to retain a very strong investment-grade credit rating, and that's also very important to us. So it's going to be a balanced approach.

David Begleiter: Right. On M&A, first, what are your thoughts about Dow's role in M&A? And maybe even broader, your views on the industry M&A potential. Potential transaction was [uphold] for the market this week, other asset or in the marketplace. Are we going go to see further, large consolidation in chemicals in your view going forward?

Howard Ungerleider: I think M&A is always a lever that industries, sectors, companies utilize to create, or attempt to create, value creation. I would say I feel good about -- Dow has been a very active player. If you think about the last decade plus in terms of the Styron transaction, the Olin RMT, the Dow Corning ownership restructure, selling the refinery, selling our polypropylene business, acquiring the Dow Corning, the silicones piece. And then obviously this last transaction that spent the better part of 3 years working on with creating DowDuPont to ultimately create new Dow, new Dupont and Corteva.

When I think about the next 3 to 5 years, I would say M&A is going to be bolt-on and bolt-off. So I would think about that in millions; not billions. And really where we're not the best owner, or where we are the best owner, we would look at that. And I think if you look back at the most successful transactions, it really was utilizing that best owner lens and that mindset of who is the better owner. And that's how we have been thinking about the portfolio and that's how we're going to continue to think about it. But no big bang is on the horizon.

David Begleiter: Very clear. Are there any questions from the audience for Howard? If not, I'll keep on going. Innovation, always been a hallmark of Dow, the old Dow Chemical and new Dow Inc. Discuss your innovation-based growth strategy and what are your strengths in potential newer and blockbuster products down the road.

Howard Ungerleider: So I think we've always been a real leader when it comes to catalyst technology and process technology and product technology. When you think about all of the evolution and revolutions that we've done over the decades in polyolefins and elastomers: our metallocene technology, for example; our AFFINITY product line; our ENGAGE; our INFUSE product line, the olefin block copolymers that we've launched in recent history. So that's been a real key strength of ours.

I think the exciting part of bringing in the silicone franchise, which really looks a lot like Dow when you think about the cost, when you think about the capital intensity. You think about the silicone metal to the siloxane, big pillar plants that look an awful lot like hydrocarbon cracker from a capital intensity standpoint, to the emulsion, formulated silicone emulsion plants that look a lot like polyolefin reactors. And you think about where those markets, where the silicone technology goes, it goes into packaging, it goes into infrastructure, it goes into home and personal care.

So what excites our CTO, Sreeram, and the technology organization, along with the marketing and sales organization, is hybrid chemistry. And I think that is not certainly going to -- if you're looking to put a number in a spreadsheet on a model, a financial model for 2020, probably not going to move the needle in 2020. But this is something over the next many decades, you look at we now have a leadership position in polyolefins and polyurethanes and acrylics, and those are all carbon-based molecules, and now we have the silicone franchise. And we have the ability to create hybrid chemistries that have let's say more of a cost structure like a carbon molecule, but the performance of a silicone molecule. And that's pretty darn exciting over the next 5, 7, 10 years, and we've got a lot of active projects on there, and that gets everybody pretty darn excited.

David Begleiter: Okay. Maybe not as exciting, or plastics recycling has become the issue in chemicals the last 18 months. What's Dow's role in advancing this issue for the industry and potential threat do you believe to plastics demand growth over the next decade from plastic recycling and reuse?

Howard Ungerleider: No, I think it's like everything; it's both a threat and an opportunity. And I think if you take a step back and look at the big picture, polyolefins have grown. The ethylene chain has grown at 1.5 times GDP for multiple decades because it is the most sustainable molecule from a total lifecycle assessment standpoint and total carbon perspective.

Now, there's certainly a real issue with plastic waste, so we acknowledge that and we have to be a leader in that. So that's why our CEO, Jim Fitterling, worked with several other players in our sector, as well as in the value chain, to create this Alliance to End Plastic Waste. It's a 501(c)(3). We've raised over $1 billion with the goal and with about 30, 35 companies so far committed. The goal is to get it up to $1.5 billion and about 300 companies across brand owners, recyclers, solid waste solution providers, as well as petrochemical players. And so we're making good progress.

There's several pillars. One, we got to clean up the waste. That has to be one of the key things, and we have to, as the Alliance to End Plastic Waste, help do that and be a leader in that. Two, we have to work -- there's about, if you think about 5 countries and 10 rivers in Southeast Asia that contribute about 70% to 80% of that plastic waste because they do not have yet solid waste solutions that we have in the United States or Western Europe, and we have to work with those countries and those governments to establish solid waste solutions.

And ultimately, it's not just plastic that is ending up in the oceans, but because of the density issue it's more visible. There's plenty of metal, there's plenty of glass, there's plenty of paper and cardboard, but because of the density issues and the weight, it tends to sink to the bottom and so people don't see it. So we got to clean up the waste. We've got to stop new plastic waste or new waste in general from going into those rivers and oceans.

And then the other thing that we're really have to do is really close the loop, to your point about recycling. And do the -- really create some big applications for a circular economy in plastics. And so things like real time, in Freeport, Texas, one of our largest manufacturing facilities, we've got recycled plastic modified roads that we have paved. We're actually doing that also now in our parking lot at our headquarters in Midland. So the next time you come --

David Begleiter: A plastic parking lot?

Howard Ungerleider: A plastic, recycled plastic modified parking lot. But coming up with really large volume applications that can draw value from the polymers and really close the loop.

The other thing that we're working on both as Dow but also with the Alliance is coming up with different recycling strategies. If you think about where polymer recycling has historically been, it really is in mechanical recycling. So taking a PETE bottle, which we don't play into, and then turning it into another bottle or turning it into a polyester fiber. Can we go back, like some of the other materials, back further in the chain and develop feedstock recycling. And I think that's something that it's in early days. We have some pilot work that we're doing. Nothing to announce on a webcast yet, but we're optimistic that we can solve that over the next several years.

And I think it's an opportunity. Our -- when you think about where we generally play with our polyolefins, it really typically is in the higher performance, higher property game. And so if you're going to use more recycled content, you will need more Dow polymer to be able to utilize that, to be able to make a product, a recycled product that can act as -- have as good a performance or similar performance to a virgin material.

So net-net we're excited about it, we're optimistic about it, but it's something we have to tackle together as a value chain.

David Begleiter: Very good. Going back to share price, it's only been 2 months. What do investors even not fully appreciating about the new Dow, not give you credit for or resisting, in your view, about what's really out there?

Howard Ungerleider: I would say this that we're not ones to chase a multiple. We're not ones to chase a stock price. We have tried very hard to lay out our strategy, to lay out our capital allocation priorities, to lay out the $2 billion to $3 billion of EBITDA growth, a $3 billion to $4 billion of cash flow growth. We've been very clear on spending within D&A and giving 65% of that net income back to our owners, primarily with dividends, and then using stock buyback as a flywheel.

And I think it really is a matter of we have to deliver on that. We're a new company. We have won semi earnings under our belt with the first quarter earnings, but really that was still a -- we were still a materials science division of DowDuPont. And so over the next 4, 8, 12, 16 quarters, I think as we deliver on that strategy and we stay disciplined on our capital allocation and we stay aligned with the priorities that we have lined out, I believe the share price and the multiple will come. That's all we can do.

David Begleiter: Fair enough. Switching to the ethylene chain, we have some new competitors coming on stream this year: [Loddy Westlake] as we speak; Formosa Sasol, a very large cracker is back half of the year. Are you expecting ethylene chain margins to come under pressure in the back half of the year? And if they do, what's the extent or depth and duration of this downturn you think we'll see in the US and even globally?

Howard Ungerleider: We're in a margin compression period already. When you look at what happened last year in the fourth quarter, it was interesting in Q4 going backwards, everybody thought margins weren't going to compress because oil was shooting up. Remember oil touched $80 a barrel in September of last year. And I think some leading third party consultants, when ethane hit a peak, said it's going to be at that level, that's a new normal for that level. And we did end up having margin compression, but very differently because oil went from $80 to $50. Ethane started to come off and prices just dropped a little bit faster.

The reality is we're -- this year we're in the final phase, if you want to call it a Phase 1 of all those Gulf Coast expansions. So I really think it comes down to, to answer your question directly, it comes down to how the macro looks. If we still have positive GDP growth, I would say you should see margins construct in polyolefins starting in the back half of the year, moving into 2020. If your base case -- and that's our base case. If your base case is more of macroeconomic recession, then obviously it's going to take longer. You need 4 to 5 world-scale crackers every year, 7 or 8 world-scale polymer reactors just to keep pace with demand in kind of a 2.5% global GDP environment.

So over the next 3 to 5 years, margins should improve from where we were in kind of Q4 and Q1. It probably happens faster in polyolefins than it does in isocyanates. Then in isocyanates, it probably happens a little bit faster in MDI than it does in TDI. And then certainly in silicones, we've seen siloxanes come off, and that was really more I think related to the movement of siloxane molecules with the US-China trade. Not from Dow, but from some of the other players that were in China that were -- who were moving those molecules around, that they had to reallocate that capacity to different countries to be able to deal with that. And you're starting to see that come back.

So I would say I'm cautiously optimistic. I would say in some of the, when you look at what's happened here in polyethylene, we got $0.03 in April. We got a rollover in May. My understanding is some of those third party consultants are now readjusting their forecast for the back half of the year. We have said, look, we're in this earnings ridge. There's going to be this margin compression because of the new capacity, to your point. And as long as GDP holds up, then demand will hold up. That will absorb that additional capacity. We've been adding -- the Gulf Coast has been adding a significant amount of capacity in 2016 and 2017 and 2018, and we've gone through that in a very nice earnings ridge, also supported by shale.

And when you look at ethane or you look at NGLs, and you look over the next 3 to 5 years, there should be more supply than demand of the NGLs. And that doesn't mean there won't be dislocations if a cracker starts up or a fractionation capacity doesn't, you well have dislocations. But overall in the next 3 years, you have more supply of NGLs than demand.

David Begleiter: Very good. Switching to Sadara. The JV has not performed as you expected. Why is this, and what are you doing to try to fix it?

Howard Ungerleider: No, it's a fair comment. I would say that project was authorized back in 2011. And so if you go back to 2011, oil price was $110, and the view was it was heading higher. We obviously know what happened since then. Oil rate now, Brent basis is probably in a $60 to $80 a barrel band. So that was probably the biggest [double] change of what happened. I would also say candidly, the project took about a year longer to come to full startup than we had expected. So both of those things combined.

I would say the assets themselves are very good assets. So, 2018 was a startup year. It was the first full year of all 26 unit operations running. The grid ran hard. We had 3 years to pass the lender reliability test. Candidly, we were expecting not to pass it in the first go because you've got -- it's a pretty stringent set of tests where you have to run each unit hard, and then you have to run the full grid, all 26 units, hard over 100 different tests over a 60-plus day period. And we passed that in the first go in the fourth quarter of last year. So it actually, last year, even though that was a startup year, even though we were kind of going through the punch list of items to get ready to pass the LRT and we passed the LRT, it was still about a mid-teen operating EBITDA margin even in this margin environment, even in this oil environment.

Now the capital structure is challenged because it was project financed. So it was 65/35 originally because it was late. It's higher than 65 today. Debt finance, you know we own 35% of the equity. And if you look at the next kind of 7, 8 years, you've got about $1 billion of principal a year that's coming due.

So it can -- Sadara, even at the current margin levels, can handle the operating costs, but it's going to be challenged to be able to pay all that principal back early. And so what we're -- Dow and Aramco are very aligned on improving the capitalization structure, and we're looking at a range of options. And we don't have anything to announce, but we're working on to get something done by the end of this year on getting the capitalization in a better place so it can be long term self-sustained.

David Begleiter: And you're a more normal amortization schedule, a more backend-loaded, is that fair?

Howard Ungerleider: Yes, both fair points.

David Begleiter: Okay. And perhaps the change in the feedstock play as well. Maybe a little more ethane into the cracker, would that be an opportunity?

Howard Ungerleider: Yes, we're looking at everything. So one of the benefits of running the LRT and successfully passing it, we proved ourselves that we can run the assets harder. So now we have to make sure we've got enough feedstock to be able to run the assets at that higher level.

I also think -- we use four words around Dow for many, many decades: sell out the assets and sell up the assets. So we've sold out the assets, but you tend to sell out the assets on the lower margin product line. And now every P&L leader who touches Sadara, just like every one of our assets around the world, they get a quarterly look of margin velocity per reactor hour or per hour of production. The goal for every P&L leader is always to cut the fourth quartile and try to get as much volume and margin in the first or second quartile. And so that's something that's not going to be done in a quarter or a year, but over the next 3 to 5 years, our ability to sell up that grid is a really good value lever.

And I also think we have to take additional cost out. And so Sadara the JV is also focused on taking some cost out now that we've passed the LRT. So it's not going to be one silver bullet. It'll be -- as most large, complicated challenges, it's a multi-pronged approach to improving the profitability of Sadara.

David Begleiter: Right. And lastly, going back to the US cost advantage in this ethylene cycle, what's your view on ethane availability and supply in the US? How large is this? And will ethane exports eat into that US ethane advantage longer term, do you think?

Howard Ungerleider: I think it certainly can. What I would say though is ethane, it's much more difficult, much more capital intensive for it to be fungible. So it can be fungible, but then you're talking about dedicated export terminals, dedicated marine vessels, dedicated import terminals. Then if you're not at the coast of wherever you're going to, then you have to have dedicated transportation or pipelines to get it to where it needs to go if you're inland.

So we've seen some pockets where that ethane exports work. We've looked at that for our crackers, for example, in Europe. And for our purposes, we just don't see how the economics or risking that kind of CapEx through all of those steps in the chain makes sense for Dow. If you've got a coastal cracker, perhaps it makes more sense. But you're making a large bet that it's going to be advantaged even after you put all that capital intensity in.

For us, LPG cracking has been a much more value creating path. So right now in a naphtha world, our European assets, we can crack more than 60% LPG. And we're looking at incremental projects on how we can increase that number further, because we see that as a -- that is much more of a fungible commodity. You do not need dedicated CapEx.

So I think for the US Gulf Coast, there is going to be abundance of ethane. I think there is a real need for the US economy. We are one of the few sectors that are export. And while you could export the ethane, you're going to lose 8:1 from a GDP value magnification if you keep the jobs and the manufacturing in the Gulf Coast. And then you can certainly export if you want the ultimate end product. You'll get a lot bigger value multiplier if you keep it here.

David Begleiter: Very good. With that we'll stop. Howard, thank you very, very much.

Howard Ungerleider: Thanks, Dave.