CORPORATE PARTICIPANTS
Juan Pelaez Linde plc - Head of IR
Matthew J. White Linde plc - Executive VP & CFO
Stephen F. Angel Linde plc - CEO & Director

CONFERENCE CALL PARTICIPANTS
David L. Begleiter Deutsche Bank AG, Research Division - MD and Senior Research Analyst
Geoffrey Robert Haire UBS Investment Bank, Research Division - MD and Equity Research Analyst
Jeffrey John Zekauskas JP Morgan Chase & Co, Research Division - Senior Analyst
John Patrick McNulty BMO Capital Markets Equity Research - Analyst
Kevin William McCarthy Vertical Research Partners, LLC - Partner
Laurence Alexander Jefferies LLC, Research Division - VP & Equity Research Analyst
Martin Roediger Kepler Cheuvreux, Research Division - Equity Research Analyst
Michael Joseph Harrison Seaport Global Securities LLC, Research Division - MD & Senior Chemicals Analyst
Michael Joseph Sison Wells Fargo Securities, LLC, Research Division - Senior Analyst
Nicola Tang Exane BNP Paribas, Research Division - Analyst
Patrick Duffy Fischer Barclays Bank PLC, Research Division - Director & Senior Chemical Analyst
Peter Anthony John Clark Societe Generale Cross Asset Research - Senior Analyst, Chemicals
Robert Andrew Koort Goldman Sachs Group Inc., Research Division - MD
Vincent Stephen Andrews Morgan Stanley, Research Division - MD

PRESENTATION
Operator

Ladies and gentlemen, thank you for standing by, and welcome to the Q4 and Full Year 2019 Linde Earnings Conference Call. (Operator Instructions) Please be advised that today’s conference is being recorded. (Operator Instructions) I would now like to hand the conference over to your speaker today, Mr. Juan Pelaez, Head of Investor Relations. Thank you. Please go ahead, sir.

Juan Pelaez - Linde plc - Head of IR

Thank you, Daniel. Good afternoon, everyone, and thank you for attending our 2019 fourth quarter earnings call and webcast. Once again, this is Juan Pelaez, Head of Investor Relations, and I’m joined this morning by Steve Angel, Chief Executive Officer; and Matt White, Chief Financial Officer.

Today’s presentation materials are available on our website at linde.com in the Investors section. Please read the forward-looking statement disclosure on Page 2 of the slides, and note that it applies to all statements made during this teleconference.

The reconciliation of the adjusted pro forma numbers are in the appendix to this presentation. Steve and Matt will now give us an update on Linde’s performance, including 2019 highlights and our new 2028 sustainability targets.

We will then be available to answer questions. Let me turn the call over to Steve.
Stephen F. Angel - Linde plc - CEO & Director

So if you had told me a year ago that this is where we would be today as a new company, I would have been delighted. We had the plans in place, but we had a lot of work to do. And I’m pleased to say the team executed beautifully. A few financial highlights for the year. We saw underlying growth of 4%, half price and half volume. Operating margins climbed nicely, 160 basis points to 18.7% and earnings per share grew 23% ex FX.

We had strong cash flow for the year, especially in the second half, which is always a good sign of a healthy and improving business. I’ll let Matt expand more on that. And with that strong cash flow, we invested $4 billion back into the business in CapEx, half for contracted large projects and returned $8 billion to shareholders between dividends, share buybacks and the squeeze out of our minority shareholders.

And return on capital, the single-most important metric for any capital-intensive business, rose 130 basis points to 11.6%.

We also reached a record backlog of projects, $4.4 billion for our sale of gas business and $5.7 billion for our third-party engineering business, $10 billion in total.

I’m pleased to say that we won practically every project we chose to pursue. This provides the foundation for growth in future years as we bring these projects online. And with respect to integration, it’s largely done.

We conducted our first employee survey, and we were pleased with the overall results. This is a good indication of how well the team integrated 2 high-quality companies in a relatively short period of time.

We began implementing our strategy, which is to build network density in core industrial gas geographies, leverage our significant advantage in engineering and technology to win more than our fair share of sale of gas opportunities and capture the full value of the merger, which includes cost and CapEx efficiencies and growth synergies, and it is the latter that we are getting more and more excited about every day.

Coming out of this year, we definitely expect to see additional growth from merger synergies on top of base industrial production, price and project start ups. And beyond that, beyond the typical 3-year kind of post-merger phase, I believe the greatest and most enduring value created from our merger will come from the sharing of our collective knowledge, experience and capabilities.

We also wanted to establish a strong foundation of operational excellence. Our safety performance continues to trend positively with best-in-class performance in many categories. Another key priority for this year was to implement a robust productivity initiative, and we made a lot of progress towards that end.

Productivity initiatives need to be revitalized from time to time, and we see the expansion of our digital tools and capabilities driving continuous improvement in our company for years to come.

Let’s talk about 2020. Yes, it is an uncertain world. We gave you a chart in the back, so you can understand our exposure on a country-by-country basis.

It’s never a bad idea to have nearly 1/3 of your sales and operating profit in the United States. It is a good time for me to remind you of the resiliency of our business model. We generate strong cash flow through the economic cycle. When the economy is strong, we invest more in CapEx for growth. And when it is weaker, we return more of that cash to shareholders. Add to that, the value created by our merger, and you can see why I am confident in our ability to continue to generate double-digit earnings growth.

Regarding climate change. Everyone wants to know if you’re a part of the problem or part of the solution. Here at Linde, we are definitely part of the solution. We have a long track record of success in sustainability having been recognized in the Dow Jones Sustainability World Index Chemicals Sector for 17 consecutive years, the only chemical company in 2019 that can make that claim.
We are also aligned with the aspirations of the Paris Climate Accord. However, this requires many parties, government, industry and society as a whole to come together and play an active role.

I can tell you that as a leading industrial company, we will certainly continue to do our part to make our world more sustainable. In fact, that is our mission statement, making our world more productive. Through our solutions, technologies and services, we are making our customers more successful and helping to protect and sustain our planet.

At Linde, we make products that are beneficial to our environment and society as a whole. In fact, over 50% of our sales today come from our sustainability portfolio, that is products that bring environmental and social benefits. We make high-purity oxygen for medical needs and to purify water for drinking. We produce krypton that is used for insulation. We make nitrogen that helps keep our customers' operations safer. We manufacture coatings for turbine blades that make aircraft engines more energy efficient. And we make hydrogen to desulfurize and decarbonize transportation fuels to meet ever stricter environmental standards.

In terms of greenhouse gas impact, the products we provide, enable our customers to avoid more than twice as much greenhouse gas emissions as Linde emits as an entire company. That is a track record we are proud of, and we certainly want to continue to live out our mission statement of making our world more productive.

But in addition to that, we want to set new sustainability goals. By the year 2028, which marks 10 years from the date of our merger, we will invest at least $1 billion in new decarbonization capital projects. Examples of that would be carbon capture and sequestration; hydrogen mobility, like the agreement we just signed to build hydrogen refueling stations in South Korea; green hydrogen projects for industrial customers; and hydrogen to produce renewable fuels.

We will spend at least 1/3 of our R&D annual budget on decarbonization. We will continue to develop industry leading technologies, like dry reforming, which uses CO2 as a feedstock in lieu of steam to produce syngas. This is a technology we developed in conjunction with BASF. And we want to continue to advance our own carbon capture technologies to make them more economically viable. We will continue to invest in promising green hydrogen technologies, like our $50 million investment in ITM to scale up their electrolyzer technology for industrial and hydrogen mobility applications.

We will double our annual purchases of renewable power. How much is that, you might ask? Today, we buy about 16 terawatts of renewable power or about $1 billion of renewable power purchased each year. That is enough electricity to power 4.7 million homes here in Germany. And our goal is to double the amount of renewable power we will purchase. As a result, we will lower our greenhouse gas emissions intensity by 35%. Why not more, you might ask? We would love to, but that’s going to be a function of the availability and reliability of renewable power, which is far from certain today in many of the countries we operate in around the world.

I can tell you that everyone at Linde, all 80,000 of us, are excited and passionate about what we can do to make our world more sustainable.

And now I’ll turn it over to Matt.

Matthew J. White - Linde plc - Executive VP & CFO

Thanks, Steve, and good afternoon, everyone. I’d like to start by providing a summary of the fourth quarter results, which can be found on Slide 5. Sales of $7.1 billion increased 1% over both prior year and third quarter. Versus 2018, underlying sales improved 3% due to 1% more volume and 2% higher pricing. Price improvements are broad-based across every region and in line with global weighted inflation rates. The volume increase is mostly driven by project startup activity as organic volumes were relatively stable due to growth in Americas and engineering, mostly offset by weaker economic conditions in Europe and South Pacific. Furthermore, Asia volumes declined from lower activity in the electronics end market and prior year equipment sales.

Comparing to third quarter 2019, underlying sequential sales improved 1%, primarily from timing in the Engineering business. Note that we continue to experience positive sequential pricing, but the rounding has resulted in 0%. We have included more detailed information in the appendix,
including Slide 10, which provides 2019 sales by key geography. This information is intended to clarify Linde country exposure and the overall portfolio mix.

Two points to note on Slide 10 are that gases and engineering account for 84% and 10% of global sales, respectively, and that the top 12 gas geographies represent over 3/4 of global sales. These top geographies are comprised of 10 different countries and 2 subregions of Continental Europe.

Referring back to Slide 5. Operating profit of $1.35 billion or 19% of sales, increased 17% from prior year and resulted in a 250 basis point margin improvement. This margin expansion was largely attributed to the significant productivity efforts from all employees managing local price and cost inflation.

Sequentially, operating profit declined 3%, and operating margin decreased 80 basis points. This decline was anticipated due to timing of engineering project completions. However, sequential operating margins increased in all geographic segments, as management actions continued to improve business quality.

Year-over-year EPS improved 25% compared to the 17% increase in operating profit. The difference relates to how we have been deploying the divestiture proceeds, either to reduce net interest expense or lower share count.

The balance sheet still has significant cushion versus our target A credit rating, so we have ample dry powder for both growth investments and distributions back to shareholders.

In fact, you can see that fourth quarter operating cash flow of $2.2 billion is 16% above the third quarter and represents approximately 105% of fourth quarter EBITDA. Obviously, a very strong cash performance, which I’ll speak to more on the next slide.

CapEx increased 6% sequentially due to base CapEx. This increase was primarily driven by growth investments that do not meet the backlog criteria, such as small on-site plants.

And as a reminder, base CapEx represents any capital spending that is not directly listed in the $4.4 billion sale of gas project backlog. That would include maintenance, replacement and other growth initiatives.

The last figure shows return on capital, which is one of the most important metrics for this industry. It improved 40 basis points from third quarter and 130 basis points from 2018, due to pricing, cost management and project contribution over a relatively stable capital base.

Please turn to Slide 6 for further details on 2019 full year cash flow. The left side shows operating cash flow by quarter, summing to $6.1 billion, including a $0.8 billion outflow related to one-time merger and restructuring payments. You can see a substantial improvement from the first half, which averaged $1 billion per quarter to the second half, which averaged $2 billion per quarter.

There are 3 primary drivers to this improvement. First, as anticipated, the merger-related cash outflows reduced from $516 million in the first half, to $287 million in the second half. In fact, the fourth quarter had only $92 million as we expect this number to continue to decline. Second, there is inherent seasonality in the cash flows due to timing of cash bonus, tax and interest payments, where first half has more outflows than the second half. Finally, the improved operating results and working capital management supported stronger cash flow in the back-half of the year.

Looking ahead, I still anticipate full year operating cash flow to EBITDA ratios in the high 70 to low 80 percentile range, after adjusting for any merger-related cash outflows.

The combination of the $6.1 billion operating cash flow, $5.1 billion divestiture proceeds and $0.4 billion, primarily from debt, provided $11.6 billion of capital available for deployment in 2019.
The pie chart to the lower right shows how we allocated that capital, with almost $8 billion going to shareholders in the form of dividends and share repurchases, including the one-time merger squeeze out payment. We also reinvested $4 billion back into the business, with half supporting secured growth.

Overall, the very strong cash generation in 2019, coupled with a disciplined capital allocation process, enabled us to pursue all opportunities that met our investment criteria, while returning the surplus to investors.

I'd like to wrap up by reviewing earnings guidance on Slide 7.

Full year 2020 EPS guidance range is $8 to $8.25, or 10% to 13% growth rate when excluding an assumed 1% currency headwind. The key drivers to this range can be found in the bottom left section of the slide. Incremental productivity initiatives are anticipated to have the greatest impact on EPS growth, as we continue to see opportunities to optimize the base business. Pricing actions, net of cost inflation, will also deliver incremental earnings. Furthermore, share repurchases and project backlog round up the positive factors.

Recall that project backlog represents incremental sales and earnings growth, underpinned by long-term customer contracts with a fixed payment structure.

Note that these top 4 EPS growth drivers are from either management actions or deployed capital, and thus are independent of macroeconomic or geopolitical effects.

The final factor of base volume and FX would be impacted by the macro-economic climate, and thus leads to most of the variability.

Industrial production and the U.S. dollar average spot rate are the primary indicators. As you can see, the current guidance range assumes no help from the economy, in fact, it is currently estimated to be a headwind. Of course, this is just an assumption at this stage. If the economy is better, we will capture that value, but we believe this assumption is prudent in light of recent economic trends.

For the first quarter, we are estimating EPS in the range of $1.86 to $1.94 or an increase of 11% to 16%, excluding a 1% currency headwind. This range assumes normal seasonality, in addition to headwinds in our Chinese merchant and package volumes due to the coronavirus outbreak. While it's still too early to assess the overall effect of the virus, this range incorporates the most recent estimate of our customers' impact.

In summary, 2019 marked a successful inaugural year, despite only having 10 months since the effective merger date. 80,000 employees worldwide came together as one and worked tirelessly to deliver on our commitments and integrate two great companies into one.

Looking ahead, we're excited about additional opportunities to create further value through business optimization, technology sharing and portfolio enhancements. And while the economic outlook may be unclear, we have confidence in our ability to continue growing earnings per share double-digit percent.

I'd now like to turn the call over to Q&A.
Patrick Duffy Fischer  - Barclays Bank PLC, Research Division - Director & Senior Chemical Analyst

First question, just want to touch on some of the carbon footprint stuff that you highlighted, which is admirable. But one way to think about it, if you think between now and 2028, you'll probably spend north of $40 billion in total capital and the capital number you put in there was $1 billion or a little bit more than $1 billion. Can you kind of rectify those numbers? That's a relatively small percent. Does that signify that you don't think there's real capital investment in some of these new green technologies or that you're going to want others? So can you just talk about what that does to your footprint as you move to this lower carbon aspiration?

Stephen F. Angel  - Linde plc - CEO & Director

Well, yes, the $40 billion, you're just taking $4 billion and extrapolating it over 10 years, that'd be $40 billion, half of that would be large projects. So just about everything we would be talking about in that $1 billion kind of number would be large projects. I do think that there's a very good chance that the number is going to be larger than that based on the projects that I'm looking at today. They're all in various stages, some of them are very early stages, but some of the size of the projects are quite significant. So I think that's a good number to start with, and we'll continue to reevaluate that over time.

Patrick Duffy Fischer  - Barclays Bank PLC, Research Division - Director & Senior Chemical Analyst

Great. And then would you expect the returns on that $1 billion? Or if the number is larger than $1 billion to be in the same range as what the historic Linde-Praxair was? Or would they get a different discount rate applied to them?

Stephen F. Angel  - Linde plc - CEO & Director

No, I expect them to be the same returns. So just got to be clear about that. But if you look at IRR, we always are looking to earn a good spread above our cost to capital, risk adjusted.

Operator

Our next question comes from Nicola Tang with Exane.

Nicola Tang  - Exane BNP Paribas, Research Division - Analyst

The first one was on the outlook and the sort of headwinds you're flagging on the base volume and FX side. I was wondering on the base volume side, could you be more specific in terms of the outlook by either geography or by specific end markets? I think in your comments, you mentioned the Q1 headwinds in China, but perhaps you could expand across the regions?

And then the second question was also actually on the sustainability targets. You mentioned the 35% reduction in greenhouse gases in the next 10 years, could you give us the sort of reference point for your CO2 equivalent emissions per dollar of EBITDA today?

Stephen F. Angel  - Linde plc - CEO & Director

So as far as the volume assumptions, what we're looking at is a weak industrial production, particularly in Europe. And I think all of you -- or many people here are aware of what the December numbers were in Germany. IP was down -- I think it was 3% sequentially and about 7% year-over-year. So declining industrial production certainly in Europe. In the U.S., industrial production is quite weak today. And then if I look at the rest of the world, I think clearly, the start for China is not a positive due to some very unfortunate reasons for them. So I think just based on what we see in the world today, that's kind of our view. Now I could throw South Pacific in that too. Australia is not doing particularly well. So no matter where
you look around the world, it’s a slow IP growth world. And if it does better, we’ll certainly be able to capitalize on that, and it will be reflected in our top line and our bottom line numbers.

With respect to the greenhouse gas, was your question, what is our footprint today? Was that your question?

Nicola Tang - Exane BNP Paribas, Research Division - Analyst

Yes. It was, what’s the sort of base reference point on CO2 emissions of EBITDA today?

Stephen F. Angel - Linde plc - CEO & Director

Yes. Well, we published that in our sustainability report. The number is about 40 million metric tons of CO2 equivalent annually. And a big percent of that is what they call scope 2 emissions, which basically means if you buy electricity and some of that electricity is produced by carbons, that’s just what’s available on the grid, then as an electrical consumer, you are penalized, so to speak, with that CO2 emission. So that’s why the number ends up being something of that magnitude.

Nicola Tang - Exane BNP Paribas, Research Division - Analyst

Okay. But it also includes scope 3, is that correct?

Stephen F. Angel - Linde plc - CEO & Director

No. Scope 1 and scope 2 includes in that number.

Nicola Tang - Exane BNP Paribas, Research Division - Analyst

It doesn’t include that, okay.

Stephen F. Angel - Linde plc - CEO & Director

Yes.

Operator

And our next question comes from Mike Sison with Wells Fargo.

Michael Joseph Sison - Wells Fargo Securities, LLC, Research Division - Senior Analyst

Nice end of the year. Steve, you talked about sales synergy is one of the areas that could accelerate in 2020. I don’t see that in the EPS drivers, if you will, but is it part of the productivity area? Where does that show up? And maybe give us a little bit of color on what excites you in terms of the sales synergy going forward?
Stephen F. Angel - Linde plc - CEO & Director

Yes. It is not on that graph. So we did not attempt to display that. And I said, really kind of coming out of this year, meaning 2020, I was not referring to 2019, I expected to see more contributions. And what excites me is, we just had a global leadership conference, we spent a good part of that conference talking about growth, looking at the combination of applications we have, the strength of our product line portfolio and the work that’s being done to optimize that even further going forward.

I look at decarbonization and what both parties bring to the equation in terms of being able to capitalize on some of the growth opportunities that will be there, and I talked a little bit about that in my comments. And then you just kind of get into cross-selling and a lot of other areas that we can take advantage of. So it is something I'm getting more excited about as I see the potential. I do believe that, I've said before, it's hard to put a number on it, but I do think we're going to start seeing it coming out this year and going forward.

Michael Joseph Sison - Wells Fargo Securities, LLC, Research Division - Senior Analyst

Right. And then a quick follow-up in terms of pricing. What are you looking for in 2020? And how much of that is just pricing from the base business as well as maybe improving the pricing culture on the Linde side as you head into 2020?

Stephen F. Angel - Linde plc - CEO & Director

Well, I think, again, if you look at that little Christmas tree chart that we put together for you. I mean, you could infer from that, that we're looking at another 2% price in 2020, and I think that's about the right number at this point. This is something we'll continue to work. It's not a 1 year and done thing. So I think we're making good progress.

Operator

And our next question comes from Jeff Zekauskas with JPMorgan.

Jeffrey John Zekauskas - JP Morgan Chase & Co, Research Division - Senior Analyst

In your vision for 2020, do you expect volumes to grow on a consolidated basis or no?

Matthew J. White - Linde plc - Executive VP & CFO

Jeff, this is Matt. So right now, when you look at the range that we laid out on the project backlog, absolutely, yes. When you look at the economic inclusive of the FX, if the FX were 0, the upper end may have negligible to slightly positive growth. And again, this is just an IP look at this stage. As Steve mentioned, there are actions to try and grow above IP, even on the base merchant and package with some of the technology. You may view this outlook as conservative, but this is how we've looked at it at this point. And that section there is what's driving most of the range at this stage. But rest assured, if the economy performs better, we will absolutely capture that. Remember, it’s a contractual business even in the merchant and to a large extent, package and we obviously would also be taking appropriate actions to try and mitigate any down decline in various markets. So -- but right now, the view is, is that the base would be slightly up to negative and then the project contributions will continue to come through as expected.

Jeffrey John Zekauskas - JP Morgan Chase & Co, Research Division - Senior Analyst

Okay. In terms of your, I guess, cost reduction and cash flows, it looks like your cash outflows for restructuring will drop, I don't know, $400 million next year or something like that. So should your cash flows benefit by that? In other words, whatever you generated this year in operating cash...
flow should be another $400 million, $500 million because of the smaller cash outflows, plus you're going to grow on top of it. It seems like your cost cutting is ahead of schedule over a 3-year period. Is that right? And -- so could you comment on that?

Matthew J. White - Linde plc - Executive VP & CFO

So this is Matt, again, Jeff. I can answer the first part of the question. Absolutely, you're right. You are correct. The $800 million that we had in 2019 will be much lower in 2020. I would say, at least $500 million. Because to your exact point, a lot of the merger costs are behind us on a cash basis. There are going to be some small ones on some of the final divestitures that occurred here in the back half of the year. You just have some late either income taxes or payments of invoices. And so that part will have some effect in the first half, but then from here on out, it'll be mostly restructuring. And I think as it's been discussed in prior calls, Asia was probably the first out of the gate and corporate Americas. We are in the midst of some in Europe. So I think you will still see some of that effect going through definitely through 2020. And possibly, depending upon the economies, could extend it to 2021, that will be to be determined. But at this stage, from a cash perspective, absolutely would be a decline from 2019 to 2020.

Peter Anthony John Clark - Societe Generale Cross Asset Research - Senior Analyst, Chemicals

I have 2 questions on EMEA, if I can? Obviously, a healthy sequential price again. I'm just wondering, particularly in terms of the cylinders, how things are going? Because clearly, the added value you can have through pushing on the cylinder side is probably pretty impressive, I think, when you look at the Linde portfolio that came in. And then the second one on the synergies, you alluded to this, I think, but it's, obviously, Asia first out of the gate, a lot of synergies last year, it's probably the biggest kicker regionally. Would I be right in thinking maybe Europe proportionately produces most on the synergy front in 2020?

Stephen F. Angel - Linde plc - CEO & Director

Yes. Thanks, Peter. Yes, 3% price year-over-year, another price sequentially. And as you've heard me say this before, it's always good to be seeing price on a trending basis. 50% of this business is packaged gases. So you don't move prices that well unless you're doing a good job on a transaction basis in a lot of, -- with a lot of customers.

Yes, the Eastern European business that was -- the old Linde AG business is now part of Linde plc, is a great franchise. I think you appropriately pointed that out.

With respect to productivity, Matt started talking about, yes, Asia was out of the gates quickly, corporate moved pretty well, Americas moved pretty quickly and EMEA is a little bit slower in terms of addressing some of the personnel adjustments that are part of the merger. And we knew that coming into this, we need to work through the European Works Councils, work through the local works councils, and that's something that we've been doing on a very constructive basis. But there will be more to come as a result of the negotiations that have taken place to date.

Operator

And our next question comes from David Begleiter with Deutsche Bank.
David L. Begleiter - Deutsche Bank AG, Research Division - MD and Senior Research Analyst

Steve, just on your balance sheet, you entered the year still underlevered, what's your thinking and Matt's thinking on perhaps leveraging off the balance sheet a little bit more to maybe buy back a little bit more stock?

Stephen F. Angel - Linde plc - CEO & Director

I'll let Matt answer that.

Matthew J. White - Linde plc - Executive VP & CFO

So David, you're exactly right. I mean, we are looking for a target rating of A/ A2, and our current balance sheet has significant room to go -- to reach there, as I mentioned in the prepared remarks. So we ended the year at a net debt figure of around $11 billion. Clearly, we're going to raise that. My view is probably $2 billion is kind of a round number that I think we would, at a minimum, look to raise it possibly more. It depends on conditions, a lot of different conditions. But I think when you look at -- like I mentioned in 2019, I mean, we were able to distribute and utilize almost $12 billion of capital. So I think we had a good start, and we were able to -- proceeds were higher-than-anticipated, cash was higher-than-anticipated. Those are good problems to have. So we probably got a little bit behind on deploying the capital, but that just gives us more ample dry powder and opportunity as we look forward. So nobody knows what will happen in the markets, but we will continue to have a very strong balance sheet that we can leverage and utilize, and that's something we'll continue to do.

David L. Begleiter - Deutsche Bank AG, Research Division - MD and Senior Research Analyst

Perfect. And Steve and Matt, just on the merger cost synergies. I know they're kind of embedded in productivity. But can you talk about what are the incremental merger cost synergies in 2020 versus `19?

Stephen F. Angel - Linde plc - CEO & Director

I don't -- David, I don't really try to separate those out anymore in terms of buckets. I'm just looking at operating margins, larger productivity buckets. I don't try to distinguish as to whether it came out of a merger bucket or it came out of the productivity bucket. So to me a cost -- a cost saving is a cost saving, and that really is the way we're looking at it. And the way you and everybody else will know that we're accomplishing what we hope to do coming in this merger is if operating margins continue to expand, they are. If you -- if I just do the math, with the fourth quarter gas margins ex engineering 20%. So we're starting to make some good progress. I think that's going to continue. Matt has been talking about cash flow this morning as well, and that's obviously a very good sign that a merger is working and that the costs are coming out and the cash flow is flowing.

Operator

Our next question comes from Laurence Alexander with Jefferies.

Laurence Alexander - Jefferies LLC, Research Division - VP & Equity Research Analyst

Could you touch on 2 things. One, I guess, can you directly address the investor concern about Linde's ability to pass through carbon prices to the extent that they're enacted in different parts of the world? And secondly, as you think about the impact of a softer end market environment, is this showing or accelerating any process to rationalize the broader Linde footprint?
Stephen F. Angel - Linde plc - CEO & Director

As far as the footprint itself, I mean, we have spent a lot of time looking at the footprint, we look at all the countries that we're in as a result of the combination. We look at some of the businesses that we both have been in that we brought to the merger, and we have plans around all of that. Now some of that takes time. Usually, it takes longer than I like, but we have a process. We're working through it diligently. We know what we want to do. I'm not really familiar with the point on not being able to pass through higher carbon prices. I mean that is something that we have contractually around the world, and we've been aware that this was something that could happen. I'd say, going back 5 or 6 years, we started making sure that our contracts had provisions that if there is any environmental legislation of any type that might cause some type of carbon tax as a result of electricity consumption or making hydrogen and CO2 as the byproduct or what have you, that we would be able to pass that through and customers accept those terms.

Operator

Our next question comes from Bob Koort with Goldman Sachs.

Robert Andrew Koort - Goldman Sachs Group Inc., Research Division - MD

Just wondering if you could talk, Steve, on Slide 7, the Christmas tree, you called it, the drivers of growth in 2020. How do those look different than what happened in 2019 when you had the slightly higher earnings growth, what were the variances year-on-year there in terms of contribution.

Matthew J. White - Linde plc - Executive VP & CFO

Bob, it's Matt. I can probably answer that. I think when you look at the price cost inflation, productivity, those -- you can look at it either way. Do you put price net of inflation or do you put productivity net of inflation. But I would say, the combination of those 2 were -- contributed the largest amount. If you want to call it the management self-help. I think from a backlog perspective, we are expecting more in 2020 than in 2019 due to the start-up range.

Share repurchases. Obviously, we repurchased on a net basis $2.6 billion in 2019, $2.6 billion. Looking forward, we have ample capacity to do that or more. The base volume FX. FX was quite severe, at minus 4%, but the base volumes, as you saw, was actually positive at 2%. So that would have created a negative 2. We are anticipating a worse outlook in 2020 than that. So if '19's macroeconomic was a repeat in 2020, obviously, that would be a positive for us all around on this assumption. But at this stage -- again, this is an assumption. We're not projecting that we know the future. We just have an assumption or trying to lay out the basic guidelines, and we'll manage the business accordingly.

Robert Andrew Koort - Goldman Sachs Group Inc., Research Division - MD

Got it. And Steve, I think you made the comment about looking at your project execution on a risk-adjusted basis. Your backlog, obviously, is much more tilted to Asia than your current portfolio. Can you talk about how you look at project return hurdles in Asia relative maybe to the core business that's generating those 12% returns today?

Stephen F. Angel - Linde plc - CEO & Director

We look at them the same way. I mean, it's starting off with what is your cost to capital with the expected return, adjusting for risks. And when I say risk, I mean, I'll give an example of a very large project with Samsung that we're starting to start up as we speak. Long-standing customer. I think we all know who Samsung is. We've had a great relationship with them over years. We have an incumbent position in several of their locations. They pay in about 25 days. So when I go through the normal assessment of risk, they come out very well as a low risk, and it's an excellent return. So I don't really look at projects in Asia any differently than I would look at them in other parts of the world, but it's always important to go through that risk profile to make sure that what you think is a return that you should get, you'll actually get it.
Our next question comes from Geoff Haire with UBS Securities.

Geoffrey Robert Haire - UBS Investment Bank, Research Division - MD and Equity Research Analyst

I just want to ask 2 quick questions. First of all, on the green hydrogen comments you made at the very start of the call, you’ve got a number of electrolyzer units at the moment. I was wondering if you could just tell us what the average size of that is? And with the ITM Power investment, where do you think that could go in the future? And also could you just give us a quick update on how things are in China from Linde’s point of view just in relation to the coronavirus?

Stephen F. Angel - Linde plc - CEO & Director

Okay. All right. So we have about 80 electrolyzers under operation, about 40 megawatts. So you can do the math there. A lot of them are quite small. Typical module size today out of ITM is about 2 megawatts. There are plans to grow that in terms of making larger scale modules, which then can be stacked, and you can build out the remaining plant equipment and systems around that. I think the number -- it's hard for me to put a number on what it can be. But I think we're looking at much larger projects going forward, particularly with some of the industrial customers we're talking to, they have an interest, a sincere interest in moving to green hydrogen and the connected load, the megawatt load would be quite high based on some of the things I'm looking at. So it's going to grow a lot. Now so what are some of the hurdles? Today, the cost of electrolysis for producing hydrogen through electrolysis is probably 4x what it would be on producing hydrogen from more conventional means, like natural gas-based steam methane reforming. So there's some work that needs to be done to bring the cost down, scaling up is part of it, more efficient modules is part of it, lower cost, renewable power is part of that. So we're very much cognizant of that, and those are things that we're working on. So that will help drive this marketplace, the ability to bring those costs down. Of course, if government steps in and provides some of that difference, that would help it move more quickly.

To China and coronavirus. We have about 2,600 people in China. In the Wuhan region, we have about 1% of our people are in Wuhan. We have very small operations there today. So with respect to Wuhan, we're not dramatically affected. No -- fortunately, as of today, no one of our 2,600 employees nor any of our employees around the world have a confirmed -- have been confirmed with coronavirus. So we're very pleased to hear that. We provided aid as a corporation to our Chinese team, and much of that is flowing to Wuhan. We prioritize the flow of key products that are needed to fight this virus, like oxygen, medical gases. And obviously, we've been watching the situation very closely from a business standpoint. On-site customers have not really shown much of an effect, not yet. The merchant liquid, to give you an example, in a typical year during lunar new year, merchant liquid capacity would probably drop to about 30%. Rather than seeing 1 week of that this year, we saw 2 weeks and they're slowly coming back from that. And as Matt explained early on, we've accounted for that.

Certainly, based on what we know about the virus, we've accounted for that in our guidance. So that's the situation. Tough situation for the people there, but they're working through it.

Our next question comes from Vincent Andrews with Morgan Stanley.

Vincent Stephen Andrews - Morgan Stanley, Research Division - MD

Just a question on backlog dynamics. I mean, Steve, you've talked about the slowing macroeconomic activity and I think in the past, we've talked about maybe a deceleration in sort of the urgency around project signing. So I'm just curious, are you seeing anything changing in terms of the opportunity set that's out there or the counterparties' desire to move forward?
Stephen F. Angel - Linde plc - CEO & Director

I would still characterize it as not a lot of hurry. People are not in a lot of hurry to get projects closed. The proposal rate on large projects is low. Most of what we’re looking at is in the smaller range, say, $50 million, maybe up to $100 million, maybe a little bigger than that, but nothing over $250 million. I think that’s just reflective of kind of where we are as an economy. But if I were to kind of try to look downstream in terms of what I think could happen with respect to the backlog, I believe that the U.S. Gulf Coast is still advantaged with low-cost natural gas that’s still going to continue to attract, especially chemical customers. I think we could see some growth, more growth with hydrogen in places like the U.S. Gulf Coast, but not restricted to that. As a result of IMO 2020, some of the decarbonization projects that we’re working on, again, some of them are fairly large, but it will be interesting to see how quickly they evolve and develop, but that could be additive to the backlog. And then I think you have to look at electronics, though it’s been in a lull this past -- during the second half of 2019 and especially in the fourth quarter, I think the long-term trends are very positive.

So this lower nanometer geometry, artificial intelligence, 5G, this EUD technology that Samsung and others have been adopting, and I think that will drive stronger electronics demand going forward and could result in increased adding projects to the backlog.

Vincent Stephen Andrews - Morgan Stanley, Research Division - MD

Okay. And just a follow-up on the CapEx for 2020. If my math’s correct, it’s down versus 2019, and I know part of the reduction is probably the synergies -- the CapEx synergies that you guided to, but maybe you could just bridge the ‘19 and ‘20 CapEx for us in terms of what the differential is?

Matthew J. White - Linde plc - Executive VP & CFO

Yes, Vincent, it’s Matt. You’re absolutely right. If you break it down between the project and between the base CapEx, we absolutely are expecting probably 100, 200 kind of synergies that we would anticipate to see on a year-over-year basis. And realize, as stated, in that base, there are small growth projects like the 30 VPSAs that we had recently announced. So when we can get those, we’ll take those all day long, so they can cause some quarterly number movement. But in the end of the day, we definitely anticipate some synergies in that line. As far as the project, frankly, the bigger that number is, the happier I am because that means we’re ahead on our project schedule. So that one is pretty much just lockstep with our engineering project outlooks in terms of timing of construction. But those are, as you can imagine, very tightly managed on a project basis from our engineering team, and that’s something that we’ll just continue to build to our schedules.

Operator

Our next question comes from Kevin McCarthy with Vertical.

Kevin William McCarthy - Vertical Research Partners, LLC - Partner

A couple of questions, sticking with the project backlog. Steve, in your prepared remarks, I think you made a comment that you won practically every project that you chose to pursue. And so if activity remains sufficient, does that suggest that you may have upside to push the envelope and increase returns above the current rate of 11.6%?

And then my second question is more specific on your engineering backlog. Looks like that increased $800 million or so sequentially. On Slide 14, you referenced the Amur project. Just wondering if you could comment on that project specifically? And what impact you would expect that to have on the helium market. And whether you can pull some more helium off of that yourselves?
Stephen F. Angel - Linde plc - CEO & Director

Yes. So all the projects that we're starting up are going to be accretive to return on capital. So it's 11.6%, I believe, that's the number that you're looking at. And of course, I'm looking at internal rate of return when I look at these projects, unlevered after-tax internal rate of return above the cost to capital. But after a few years, these projects are typically already accretive to ROC and then over time, they're definitely accretive to ROC.

So I would say that we look at just about every project. In fact, I always encourage my teams to bring all the projects forward, and we'll take a look at and we'll decide whether or not we think they're worth participating. But the criteria we use is pretty straightforward. It has to fit our strategy as a company, and it has to have a good return above cost to capital, as I described earlier. And we're going to maintain that twin criteria, but we do want to look at practically everything that's out there.

With respect to the Linde Engineering, yes, the backlog numbers are up for sure. The Amur project is not related to helium. The Amur project is a mixed feed cracker for Sibur and so that's not related to what you're thinking about. But there is -- there are natural gas plants for Gazprom that are being built and starting up that will be -- we'll have helium online, I would say, the second half of next year is when you would start to see the impact from them.

Operator

Our next question comes from John McNulty with BMO Capital Markets.

John Patrick McNulty - BMO Capital Markets Equity Research - Analyst

With regard to the base CapEx, what portion of that is actually tied to revenue-generating projects versus kind of the more normal maintenance or efficiency type projects?

Matthew J. White - Linde plc - Executive VP & CFO

John, this is Matt. That's not a number we disclose. But I can tell you, it's a meaningful part of that number, and it's something we evaluate. But as you can imagine, when you get into things like transportation, cylinder, storage equipment, tanks, it gets a very fine line, what is growth, what is replacement. So this is something internally we spend a lot of time on, but it's just not a number externally that we disclose. But I can tell you, unlike VPSAs and those type of plants that we've announced, they are under $5 million a spend, but they're in the upper end. So they're $4 million to $5 million, sometimes they could be a little lower. So those would be included in this number as well.

John Patrick McNulty - BMO Capital Markets Equity Research - Analyst

Got it. And I guess, when you think about the returns on those projects versus kind of the more base or the more kind of big project pipeline, how do the returns compare?

Stephen F. Angel - Linde plc - CEO & Director

Well, they're very solid. The configuration of a typical small on-site project is, it's 100% facility fee. So -- and they're easy to construct. So I've always liked these small on-site projects. I'm excited about the capability that we now have between the 2 companies. We have every offering covered now in small on-site, and it's something that we're very much focused on as a company, very strong, 100% kind of take-or-pay commercial contracts. They are easier to construct, much simpler configuration. So all you have to do really is select the right customer.
Operator
Our next question comes from Martin Roediger with Kepler.

Martin Roediger - Kepler Cheuvreux, Research Division - Equity Research Analyst
Actually, 2 minor questions only. Some of your competitors do portfolio shaping, means disposing noncore activities. Is that a topic also, which is on your agenda, i.e., I refer to voice on the logistics company GIST, that's my first question.

Stephen F. Angel - Linde plc - CEO & Director
Martin, I'd prefer not to get into specifics about which companies that we're looking at divesting. And you will -- I just -- all I'm going to say is really we're pretty active as we look at businesses and geographies that we don't think belong in our portfolio long term from a strategic standpoint. And you'll hear more about that as the year progresses.

Martin Roediger - Kepler Cheuvreux, Research Division - Equity Research Analyst
And the second question is on the sustainability topics. Can you help us to understand how much short you are in terms of certificates when it comes to the European trading scheme? And do you think your actions to reduce the greenhouse gas intensity will help you to be better prepared for the Phase IV in the European trading scheme, i.e., that you are not short anymore in emission certificates?

Stephen F. Angel - Linde plc - CEO & Director
Well, I don't know exactly how the trading scheme is going to work at this point. I believe that these are management targets. So we decided as a team, these are things that we wanted to go after. As I said earlier, renewable power has a lot to do. The availability of renewable power has a lot to do with what our emissions profile ultimately looks like. And the sooner the world converts to renewable, the much better off we will be. We're going to be very active in terms of going out and contracting for renewable power. And that's how you're able to increase purchases from $1 billion to $2 billion.

But as far as reaching carbon neutrality at some point in the future, there are other things that would need to happen beyond 100% renewable power, we would need, I think, a very strong carbon tax around the world. We need advancements in technology. All things that can be achieved, but they just take a longer time frame.

Operator
And our final question comes from Mike Harrison with Seaport Global Securities.

Michael Joseph Harrison - Seaport Global Securities LLC, Research Division - MD & Senior Chemicals Analyst
Steve, you noted some slowing in electronics markets in Asia, I think that a number of players in the semiconductor space are encouraged that we're starting to see a recovery. So can you just talk about what you were seeing kind of in the second half and particularly in Q4 and maybe comment on your outlook for 2020 in electronics?

Stephen F. Angel - Linde plc - CEO & Director
Yes. So as you know, there are big inventory builds and memory chips, prices dropped precipitously. Samsung did not have best quarter they've ever had when they announced here recently. So that is what's -- that's really been in the news, I think, the last several quarters in 2019. Most people
think that it will be better, that this bottom is that it's going to improve in 2020, and it's going to improve based on a lot of the trends that I mentioned earlier. So I don't have a number for you, but I think it should be better in 2020. And certainly, when we start up some of these big projects, that will be quite additive.

**Michael Joseph Harrison** - Seaport Global Securities LLC, Research Division - MD & Senior Chemicals Analyst

And then I wanted to also ask you about the Americas. You commented that manufacturing and metals end markets were weaker. Talk about what you're seeing in hard goods versus packaged gases? And also maybe comment on the new trade agreements that are in place. Any sense that those could have some positive impact on manufacturing and metals in the U.S. during 2020?

**Stephen F. Angel** - Linde plc - CEO & Director

Yes. So hard goods, year-over-year is down double digits. Gas is flat. Hard goods sequentially, Q3 to Q4, is down high single digits, whereas gas is flat. So clearly, hard goods is feeling the effect. Gas not nearly so much so. Looking forward to the year with respect to trade agreements, I think, to the extent that we supply large capital equipment, export companies that will have some positive effect. I quite frankly don’t think it’s going to be a huge number, but it could have some positive effects.

**Matthew J. White** - Linde plc - Executive VP & CFO

And just, Mike, this is Matt. As a reminder, we have a very strong Canadian and Mexican franchise as well. So I think regardless of which side of the border and where that goes, we feel quite confident in our ability to capture the business.

**Operator**

Ladies and gentlemen, this concludes today’s conference call. Thank you for participating. You may now disconnect.