THOMSON REUTERS

EDITED TRANSCRIPT

Half Year 2019 Umicore SA Earnings Call

EVENT DATE/TIME: JULY 31, 2019 / 7:30AM GMT

CORPORATE PARTICIPANTS

Filip Platteeuw *Umicore SA - CFO*
Marc Grynberg Umicore SA - CEO

CONFERENCE CALL PARTICIPANTS

Adam Robert Collins *Liberum Capital Limited, Research Division - Analyst*
Charles L. Webb *Morgan Stanley, Research Division - Equity Analyst*
Chetan Udeshi *JP Morgan Chase & Co, Research Division - Research Analyst*
Geoffrey Robert Haire *UBS Investment Bank, Research Division - MD and Equity Research Analyst*
Gunther Zechmann *Sanford C. Bernstein & Co., LLC., Research Division - Research Analyst*
Jean-Baptiste Henri Rolland *BofA Merrill Lynch, Research Division - Associate* **Martin John Evans** *HSBC, Research Division - Analyst of Global Chemicals* **Mutlu Gundogan** *ABN AMRO Bank N.V., Research Division - Analyst*
Nathalie Debruyne *Banque Degroof Petercam S.A., Research Division - Analyst*
Peter Testa *One Investments S.A.G.L. - Analyst*
Ranulf Orr *Redburn (Europe) Limited, Research Division - Research Analyst*
Sebastian Christian Bray *Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst*
Wim Hoste *KBC Securities NV, Research Division - Executive Director Research*

PRESENTATION

Operator

Thank you for standing by and welcome to Umicore Half Year 2019 results. I would like to hand the call over to our first speaker, Mr. Marc Grynberg. Thank you, please go ahead, sir.

Marc Grynberg Umicore SA - CEO

Thank you.

Good morning everyone and welcome to the presentation of Umicore's results for the first half of this year. I will cover business and market developments as well as the outlook for the full year before handing over to Filip who will take you through the financials. I will then wrap up before opening up the call to you for any questions that you might have.

Looking at the highlights, my first comment is that we have faced a challenging environment. In the second half of last year, we saw the first signs of a downturn in key industries and faltering consumer confidence with declining car sales as one of the most visible effects thereof. These negative trends have either continued in the first part of this year or, in some cases, have gotten worse. In addition, as I explained at the end of April, certain more specific market factors have affected Umicore's growth trajectory in rechargeable battery materials.

Against this backdrop, our performance in the first half proved robust. In Catalysis we have substantially outperformed the automotive market. In Recycling we have achieved a significant improvement in throughput rates in Hoboken following the last wave of investments. In Energy & Surface Technologies, the performance was below the record level of the first half of last year and we have adjusted our capital spending to adapt to short-term fluctuations in demand.
I would also like to point out that our cash flows have substantially improved and Filip will elaborate on this topic in a moment. Another highlight of the first half was the successful private debt placement of € 390 million at historically low fixed interest rates and with maturities of up to 12 years.

Despite the road bumps which affect our growth trajectory in the short term, I am convinced that the growth drivers which support our business are ever more relevant and we remain committed to our long-term growth strategy in clean mobility materials and recycling. So, while we continue to deal with agility in order to mitigate the impact of temporarily unfavorable market conditions, we are making new strides in the strategy execution. For example, we are securing a significant portion of our future cobalt needs through the ongoing acquisition of Freeport Cobalt's refinery and cathode precursor activities in Finland, and through a long-term partnership with Glencore that guarantees access to sustainable cobalt supply.

As another example, we are expanding production capacity in Europe, China and India to support the growth in Automotive Catalysts. In Rechargeable Battery Materials, we continue the construction of the greenfield production site in Poland and will soon start the commissioning of the new site in China, with an adjusted schedule for the addition of new lines due to the current slowdown. We also continue to intensify our efforts in research and development.

In terms of outlook for Catalysis, I do not see any concrete signs pointing to an immediate recovery in car sales. The factors that have caused the downturn in the automotive market since mid-2018 are still very much present and continue to undermine consumer confidence. However, I expect that Umicore will continue to perform better than the automotive market as a result of our strong market position in gasoline applications and the growing market penetration of gasoline particulate filters in Europe and China. This will be supported by capacity expansions in Poland, China and India. I also expect continued revenue growth in Precious Metals Chemistry driven by increasing demand for Umicore's homogeneous catalysts and fuel cell catalysts.

The outlook for Energy & Surface Technologies confirms the trends that I described back in April with previous projections of 100,000 tonnes of cathode materials sales in 2019 and 175,000 tonnes capacity at the end of 2021 now more likely to be achieved with a delay of 12 to 18 months. I expect the slowdown in the growth of EVs to continue in the near term as the subsidy cuts which were announced in China at the end of March are now in full force and are likely to impact EV demand in the second half. As announced in April, we have adapted the pace of addition of new production lines in China to align with the recent developments in demand. Results in the second half will also reflect higher depreciation charges and upfront costs related to our greenfield plants in China and Poland as well as the impact of persisting low cobalt prices and the overhang of unethically sourced cobalt.

On a positive note, the demand for cathode materials used in energy storage applications may pick up in Korea in the second half following the completion in June of the safety investigation which has exonerated battery producers and their materials suppliers.

Despite the adverse market conditions, I expect overall sales volumes of cathode materials in the second half to grow both sequentially and compared to the levels of the same period last year.

In Recycling, the latest wave of investments which we carried out in Hoboken during the extended maintenance shutdown earlier this year has improved the throughput rates of the plant and, by the end of the year, we expect to achieve a throughput rate corresponding to annualized volumes significantly above the record volumes of 2018. The supply mix is expected to remain supportive in the second half too and the same goes for certain precious metal prices. Unfortunately, second half results will be dented by about € 10 million, corresponding to the impact of the fire incident which occurred in Hoboken at the beginning of July. The installations have been repaired in the meantime and the Hoboken plant is now back to normal operations.

All in all, I expect full year recurring EBIT to be in the range of 475 to 525 million euros, which is fully in line with the guidance that I provided at the end of April, as the market trends that I described at the time have effectively materialized or been confirmed in the meantime. This guidance assumes no material further deterioration in the macroeconomic context in the second half.

As I also mentioned back in April, I expect full year recurring EBIT in Energy & Surface Technologies to be well below the record level of last year and, both in Catalysis and Recycling, I expect it to grow year on year.

Let's now turn to the business review and comment on the main developments in each of the three business groups in the first half of the year starting, in alphabetical order, with Catalysis.

Global car production in the first half declined by 6.7% year on year as trade tensions and a weakening economic outlook continued to weigh on consumer confidence, directly affecting vehicle purchases. In China, car production was down 12% and the decline was exacerbated in the second quarter by the destocking of China 5 compliant vehicles ahead of the early introduction of China 6 standards in certain cities. In Europe,

car production was down by more than 6% year on year with diesel, as expected, showing a larger decline of 13%. Diesel car sales in the region now represent 36% of the market. In North America, car production declined by close to 4%. The recent news flow from the automotive industry does not provide any indications of an imminent upturn in demand.

Against this backdrop of a sharp contraction of the automotive market, we achieved a strong performance in Catalysis in the first half, with revenues increasing by 1% year on year to € 717 million. Recurrent EBIT for the business group was similar to the first half of 2018 at € 87 million, while recurring EBITDA was up 3% year on year.

The Automotive Catalysts business, which currently generates about 90% of the business group revenues, benefitted from market share gains in gasoline applications and an increased market penetration of gasoline particulate filters. You will recall from the Capital Market Days presentations in June of last year that we have been highly successful in winning new gasoline platforms, in particular those requiring particulate filters in Europe and China, and this is the most significant factor which enabled us to outperform the market. We also explained then that, over time, these market share gains would offset the negative impact on margins of the lower proportion of diesel cars in the mix and I confirm that we are gradually getting there. Also important to mention is that we recorded higher revenues in the heavy-duty diesel segment.

In the light duty segment, Umicore's catalyst sales are well balanced from a geographical point of view, with Asia currently accounting for 37% of our global sales volumes, Europe accounting for 31% and the Americas for 32%. In Asia, I would like to highlight our very strong performance in China. While car production there declined by 12% year on year, we managed to grow sales volumes and revenues in the first half well above the levels of last year. This was due to the market share gains which I referred to a moment ago as well as a supportive customer and platform mix.

In Europe we had strong sales of gasoline catalyst technologies, which mitigated the impact of lower light duty diesel sales. With gasoline applications now representing about 3 quarters of our light duty catalyst volumes in Europe, we are well positioned to benefit from the changes in engine mix in the region. The contribution from gasoline particulate filters is growing and the trend is set to continue as the market penetration of such filters increases.

Production capacity is being expanded for gasoline catalysts and filters in both Europe and China: in Poland the new production lines started to come on stream in the second quarter, while the new production lines in China are due to come on stream in the second half of this year, as is the production capacity expansion in India, to cater for the new Bharat 6 awards.

Revenue growth in Precious Metals Chemistry was driven by stronger demand from the pharmaceutical and chemical industries for Umicore's homogeneous catalysts. This portfolio has been expanded by the purchase in July of intellectual property from Evonik covering metathesis and cross-coupling catalysis. Revenues from fuel cell catalysts were also higher and Umicore is expanding its fuel cell catalyst production capacity in Korea to benefit from the growing uptake of fuel cell drivetrain technology. The new plant will be commissioned at the end of the year.

Mid and longer-term perspectives in Catalysis are promising with tighter emission norms being introduced in several regions both for light and heavy duty applications. The most significant impact of the new norms in terms of catalyst market value uplift will be visible in China, Europe and India over the next two years. Umicore is set to benefit from this tightening of emission norms as well as from the increasing share of gasoline platforms in the mix and the growing importance of gasoline particulate filters.

In addition, Umicore is well positioned to benefit from the growing uptake of fuel cell drivetrains and the new production capacity for fuel cell catalysts will help establish a strong foothold in this emerging technology segment.

I am now moving to Energy & Surface Technologies.
As I explained at the end of April, the growth in demand for cathode materials used in Li-ion rechargeable batteries started to slow down in the first half of 2019 for several reasons. In China in particular, sales of electric vehicles have continued to grow year on year albeit at a slower pace than in the first half of 2018 and, in absolute value, have remained well below the levels of the second half of last year.

At the end of March, the Chinese government announced a change in the subsidy mechanism for new energy vehicles, with deeper than anticipated subsidy cuts on national level and removal of all regional subsidies, making electric vehicles substantially more expensive in the context of an overall weak automotive demand in China. As the subsidy cuts took full effect at the end of June, there may have been some EV pre-buying in June and the full impact of the subsidy cuts on EV demand is likely to be seen in the second half of 2019. The new subsidy scheme is also likely to be less supportive of NMC materials for use in electric buses for short distance public transport.

The other application segments have also seen significant developments in the first half. In Korea, the largest market for energy storage, the installation of new systems came to a complete stop during the first half following a series of safety incidents. The good news there is that the safety investigation was completed at the end of June and has exonerated the battery producers and their materials suppliers, which opens the door for the business to resume in the second part of the year.

In portable electronics, global demand for high-end devices was subdued in the first half of the year and sales of Umicore's high energy LCO cathode materials were lower. The reduction in demand was exacerbated by high inventory levels in the supply chain and by the price disadvantage that Umicore experiences compared to products containing unethically sourced cheap cobalt. There are no signs of turnaround in the near term and we expect our customers to continue reducing their inventories.

You will also recall from the discussion we had back in April that Umicore's cobalt-containing products are placed at a competitive disadvantage by the unethically sourced cheap cobalt units originating from artisanal mining. While the persisting low cobalt price has led to a reduction of the inflow of such cheap cobalt, the stock overhang is still affecting the market and pricing dynamics.

Revenues for Energy & Surface Technologies in the first half were down by 7% year on year at € 607 million and recurring EBIT decreased by 16% to reach €102 million, while recurring EBITDA was down by 5%. This performance reflected the impact of lower metal prices, lower volumes of NMC cathode materials used in energy storage batteries and lower shipments of high energy LCO cathode materials for portable electronics. Sales of cathode materials for automotive applications were flat.

The lower metal prices had a material impact on revenues and recurring EBIT as Umicore's margins were reduced in the refining, recycling and distribution activities, compared to the record high levels achieved in the first half of 2018. While it is difficult to accurately quantify the effect of the inflow of unethical cobalt on volumes and margins, we estimate that the combination of low metal prices and unethical cobalt has had a negative impact on the recurring EBIT of the business group of about € 10 to € 15 million compared to the first half of 2018.

The downstream product and distribution activities in Cobalt & Specialty Materials were also affected by low cobalt prices and by customers destocking inventories that were acquired during the period of price increases. Similar to LCO, the sales of the cobalt containing products of the business unit were also affected by the competition from cheap cobalt units which are unethically sourced from artisanal operations.
Revenues for Electroplating were slightly down while those of Electro-Optic Materials, were stable.

Despite short-term fluctuations in demand, the underlying fundamentals supporting the electrification trend remain strong. The regulatory push in China is continuing despite the deeper than anticipated subsidy cuts, with other levers being applied, including sales tax exemptions and removal of registration plate limits. Similarly, in Europe, CO_2 legislation and low emission credits are expected to increase the penetration of electrified vehicles, with average CO_2 emission levels again having increased in 2018.

At the same time, drivetrain electrification is confirmed as the main avenue to drastically reduce vehicle emissions and all automotive OEMs have started to roll out their electrification strategy or are stepping up their efforts in this respect.

Also, the technology roadmap requires innovative materials and continues to offer ample room for differentiation. This is driven to a large extent by consumers' expectations of longer driving ranges, shorter charging times, longer battery life and affordable car prices. While these demands make sense from a consumer experience point of view, their combination is complicated to be achieved. In addition, given the volumes of materials requirements for each individual EV platform, the ability to scale up fast and meet the highest quality standards with consistency remains another source of competitive distinction.

Umicore is well placed to meet such product and process requirements and our closed loop offering adds to our ability to create competitive distinction. Umicore is committed to enabling the transition to electrified mobility and is expanding production in China and Poland.

Alongside the organic investments, we also announced in May two important steps to expand our integrated and sustainable battery materials value chain. One of these steps is the agreement to acquire Freeport Cobalt's refinery and precursor production in Kokkola, in Finland. The acquisition which is expected to be completed by the end of the year, subject to customary closing conditions and regulatory approvals, will add state-of-the-art refining and precursor capacity and will expand our talent pool.

A further building block in Umicore's competitive battery materials supply chain in Europe is the partnership with Glencore which guarantees cobalt supplies that are compliant with our sustainable procurement framework. Umicore has a strict policy of not buying any cobalt sourced from artisanal operations, which often involve child labor and poor standards of health and safety.
Both these initiatives fit perfectly into Umicore's European cathode materials supply chain.

In Recycling, the availability of complex materials increased over the period leading to a supportive supply mix. In particular, we saw an increased availability of end-of-life materials, both spent catalysts and electronic scrap. The higher availability of the latter is probably due in part to the stricter enforcement by the Chinese government of the import ban on electronic scrap. The metal price environment was, on balance, also more favorable with higher prices for palladium and rhodium more than offsetting lower prices for several other metals.

Recycling recorded revenues of € 313 million and recurring EBIT of € 76 million, both 2% down year-on-year owing to an extended scheduled shutdown of the Hoboken plant at the beginning of the year. The comparison to last year excludes the impact of the European activities of the Technical Materials business unit which contributed to the results in January 2018 before their divestment.

The recycling facility in Hoboken was shut down for 7 weeks at the beginning of the year, twice as long as a regular maintenance shutdown, during which time we carried out a certain number of modifications to key equipment alongside usual maintenance operations. While the extended shutdown reduced the plant availability compared to last year, the latest wave of investments has resulted in an improvement of throughput rates which mitigates the impact of the reduced availability on overall processed volumes. We also benefited from a favorable supply mix in the first half as well as higher prices for certain metals.
In Jewelry & Industrial Metals, revenues were slightly higher year on year, excluding the impact of the divested European activities of the Technical Materials business unit at the end of January 2018. The demand for performance catalysts and glass applications was strong and the facility in China for equipment used in the production of high purity glass was commissioned early this year and is now fully operational.
The contribution from Precious Metals Management to recurring EBIT increased year on year reflecting favorable trading conditions for certain precious metals.

In the longer run, I see strong drivers behind the growth in Recycling as, by definition, the scarcity of mineral resources can only grow. Also, the public awareness about the need for a much higher level of resource efficiency keeps increasing which will support collection, reuse and recycling initiatives. Umicore is very well

positioned to capture growth as its recycling processes are highly efficient both in terms of recovery yields and environmental and quality standards.

I will now pass the call over to Filip who will comment on the financial aspects.

Thank you, Marc and good morning everyone.

This first slide recaps some of the key financials and puts them in a historic perspective. Revenues were down 3 % compared to the first half of 2018 which was a record semester in Umicore's history and supported by several tailwinds, in particular in E&ST. Compared to the second half of 2018, which towards the end of the year saw the first signs of market cautiousness, revenues are *up* 3 % sequentially. This revenue base was insufficient to offset higher costs as we continue to prepare for growth in all three business groups. Higher personnel costs on the back of recent recruitment and higher depreciation charges following the recent investments contributed to an 8 % lower recurring EBIT year on year and a 5 % decline on a sequential basis. Excluding the impact of higher depreciation charges, the decrease in recurring EBITDA was less pronounced than in recurring EBIT and was even flat compared to the second half of 2018. However, recurring EBITDA over the period did benefit from the effect of the introduction of the new lease standard IFRS 16 to the tune of 7 million euro. I will come back to that in a moment.

As a consequence, operating margins in the first half of this year came down compared to last year's very strong levels. Still, despite the challenging market context we managed to consolidate the margin step-up from 2017 and prior years. The metric that was down most significantly was ROCE, amounting to 12.3 %. This decrease was mostly driven by E&ST. The reason for this overall decline in ROCE was not *so* much the lower REBIT but more the substantial increase in the average capital employed year-on-year as last year's substantial investments in fixed assets and working capital are now included for a *full* year in the ROCE calculation. To illustrate this : while capital employed year to date only increased by about 170 million euro, the increase in *year-on-year average* capital employed amounted to approximately 750 million euros or an increase of close to 25%.

In February we had stated that we expected a significant improvement of our free operating cash flow compared with 2018 and that is what we see coming through in the first half. We kept net working capital flat compared with December 2018 and versus a 335 million euros increase in the same period last year. As a consequence, cashflows generated from operations tripled year on year to just over 300 million euros which is in excess of the levels generated in recent years as is visualised by the green line on the top chart.

Capex over the period increased to 241 million euro and is concentrated on the strategic expansion projects. This first half-year capex also included the spending linked to the investments which were carried out during the extended maintenance shutdown in Hoboken. Some 60 % of total capex is spent in Energy & Surface Technologies and the two greenfield projects obviously take up most of that amount. The recent trend of gradually increasing capitalized development expenses continued into 2019 and accounted for 17 million euros over the period. Again, most of these assets are related to E&ST's R&D projects. Accounting for these investments, the *free* operating cash flow over the period amounted to 50 million euros compared to a negative free operating cash flow of just above 100 million euros in the same period last year as you can see plotted by the orange line on the lower chart. For the full year 2019, we expect total capex to reach approximately 600 million euros and while activity levels and metal prices will obviously be driving factors, we currently target to keep net working capital flat between now and the end of this year. This implies that we expect free cash flow from operations in the second half of the year to stay substantially better than in the same period last year.

This next slide walks us through all cash flow items starting from the cash flow generated from operations of 308 million euros and the free operating cash flow of 50 million euros that we just discussed. The combined cash out related to taxes paid and net interests amounted to 86 million euros over the period which is slightly less than last year. The increased full year dividend of 2018 resulted in a cash out of 96 million euros in the first half year. At the back of the waterfall chart you see the effect of the adoption of the new IFRS 16 lease standard on our net financial debt which is a modest 37 million euro as we only use limited operating leases.

This is a pure qualification impact without any cash effect and represents the amount of operating leases that moved from off-balance sheet commitments to on-balance sheet financial debt. We have also incorporated this into our net financial debt KPI.

This same 37 million euro was also added to our capital employed, diluting our ROCE by 0.1 %. Including this IFRS 16 effect, net financial debt increased by just below 200 million euros compared to the end of 2018.

As illustrated on the next slide, the resulting net financial debt of slightly more than 1 billion euros corresponds to approximately 1.5 times recurring EBITDA and 1.35 times the recurring EBITDA when using the *average* net debt over the period, which confirms a strong capital structure that provides the funding headroom to execute our strategy and remunerate our shareholders. As a reminder, we expect the acquisition of Freeport Cobalt's cobalt refining and cathode precursor activities to take place by the end of 2019, subject to customary closing conditions including regulatory approvals. This acquisition will be funded from Umicore's existing credit facilities.

As an illustration of this funding flexibility we can highlight the successful issuance of 390 million euros of US private placement notes in June. These long-term notes with maturities of 7, 10 and 12 years come with a fixed interest rate. We expect these notes to be drawn down in September. The placement allows us to lock in historically low market interest rates and further diversified our investor base as we welcomed repeat investors from our 2017 placement as well as new investors. This placement of 390 million euros will bring the current total of committed medium- and long-term debt facilities to close to 1.9 billion euros, more than half of which is currently undrawn. As you can see from the chart, these facilities come with a well distributed maturities profile. Finally, these amounts obviously exclude our significant shorter-term funding lines.

On my last slide we summarize a number of accounting changes that were implemented over the reporting period. First, we adopted the new IFRS 16 lease standard which I already commented on previous slides. As a recap, while limited overall, the most significant impact from this is the increase in D&A charges and recurring EBITDA of 7 million euro and the increase in net financial debt and capital employed by 37 million euro.

Secondly, we implemented the IFRIC 23 Interpretation that specifies the method to measure and account for uncertain income tax position. *Its* impact was mostly accounted for through equity.
Thirdly, we changed the valuation principles related to what we call our "permanently tied-up metal inventories". Since we adopted IFRS in 2003 we account for these metals as a separate inventory category, as they are required to run the operations without business interruptions and as such are permanently tied-up and have an indefinite use. This is what is typically called base inventories or core inventories. Until this year we valued these inventories using the LOCOM principle which meant that at each closing date we compared their book value to their market value using the closing market price of these metals, somewhat contrary to the permanent nature of these inventories. In case the market price was lower than the book value we recognized a non-cash impairment charge and reported it as a non-recurring operating P&L item. A subsequent price recovery resulted in a reversal of such impairment, reported as an income item also through non-recurring EBIT. None of these impairment moves have any cash impact nor do they have any relevance to the underlying operational or commercial performance.

In the past, these impairments were limited in size (the most significant one since 2010 was a net impairment of 26 million euros in 2015). What has changed in recent years is the step-change in battery materials that resulted in a significant increase in these permanently tied-up metal inventories triggering excessive earnings volatility due in particular to the recent spectacular volatility in the cobalt price. Because of the fast erosion of the cobalt price in recent months, applying the LOCOM principle to the permanently tied-up cobalt purchased in 2018 would have triggered a non-cash and non-recurring impairment of some 150 million euros end of June 2019. In order to avoid such material non-recurring earnings volatility now and in the future, Umicore with the agreement of its auditor has decided to apply as from 2019 IAS 16 and IAS 36 valuation principles on all of its permanently tied-up metal inventory. This implies that these inventories will be included in the annual impairment test of the unit for which they are used by valuing that unit's expected future cash flows, which is better aligned to their permanent nature. To avoid any misunderstanding, this change only

relates to the *permanently tied-up* metal inventories and has no impact whatsoever on Umicore's cash flows or on its current and future operational and commercial performance or sales margins. Finally, to put matters in perspective, the total book value of Umicore's permanently tied-up metal inventories end of June amounted to 807 million euro which is half its *market* value of 1.6 billion euros when applying the June closing market prices.

This concludes this somewhat technical section but we felt it was important to elaborate on these accounting changes. I kindly refer to the disclosure notes in the press release for more details.
To end this slide and my section : the non-recurring items in the first half of the year amounted to a net operating cost of 3 million euros.

I hand back over to you Marc for the wrap-up.

Marc Grynberg Umicore SA - CEO

Thank you, Filip. Before opening the floor to your questions, let me wrap up the main messages from today's presentation.

Let me start by emphasizing that the first half performance and the full year outlook are both fully consistent with the messages I gave at the end of April. The market environment has developed very much in line with the views we had back then, which allows me to confirm the outlook for the Group overall and for each business group. The outlook is positive for Catalysis and Recycling while in Energy & Surface Technologies, the slowdown in the pace of EV growth justifies the adjustments to our investment plans.

Our performance in the first half proved robust and our cash flows have improved substantially.

I would also like to emphasize that the drivers behind our growth strategy in clean mobility materials and recycling are structurally sound and confirmed. We therefore maintain the strategic course of action while continuing to demonstrate that we have the agility to handle temporary adverse conditions.

I have consistently told you that our growth trajectory would not be linear and that we should not get carried away when there is an acceleration nor panic when there is a slowdown. I am leading Umicore in a manner that enables the company to pursue its long-term growth investments, research programs and dividend payments to shareholders at every point of the business or economic cycle. Today is no exception and it is rewarding that our robust performance and strong balance sheet enable me to pursue this business philosophy.

With this, I would now like to open the floor to your questions. As usual, I would ask you to raise one question at a time and, if you have a follow on question, please place your name in the queue again.

QUESTIONS AND ANSWERS

Operator

Thank you. Ladies and gentlemen, we will now begin the question-and-answer session. (Operator Instructions) Our first question comes from the line of Wim Hoste from KBC Securities.

Wim Hoste *KBC Securities NV, Research Division - Executive Director Research*

A question I would like to raise is on the competitive dynamics in the automotive cathodes space. In light of the weak demand currently is there any change in pricing power that you have, and can you maybe update on the awards that you might have won recently, is there any progress there in light of the rather weak overall demand currently?

Marc Grynberg Umicore SA - CEO

Actually, the market and pricing dynamics are exactly the same as what I described at the end of April. There is no change in the overall market environment. As I explained I expect actually the subsidy cuts to take their full effect in the second half of

the year in terms of EV demand in China. I see no changes in terms of demand patterns in the other regions either. And actually the competitive dynamics are very much stable since we last spoke. And this goes also for the pricing dynamics.

In terms of qualification programs, there has been nothing significant to report between April and now. Although we continue to be involved in quite a number of qualification programs, obviously.

Operator

Our next question comes from the line of Charlie Webb from Morgan Stanley.

Charles L. Webb ***Morgan Stanley, Research Division - Equity Analyst***

Maybe just kind of following on to that. We've kind of seen -- obviously nothing is changed in April but year-on-year at the very first in the first half in the second half, margins are down a fair bit in Energy & Surface Technologies. So perhaps you can just help us -- and you obviously flagged some of the full effects of the subsidies will continue to come through in the second half. So perhaps you could just help us understand margin progression from here, should we expect given the higher volumes you are expecting in the second half sequentially that margin should pick up or should we -- are we, do we expect margins to be more flattish or even with the subsidy effect coming in do we expect it to be trending lower? Just some sort of theory around the progress and direction of travel I think would be helpful. And obviously, you have given it on the volumes side just also on the kind of margin side would be helpful.

Marc Grynberg Umicore SA - CEO

So actually no, I would not expect the margins to be higher in the second half of the year because there are a number of factors, which will be reflected in the cost base, the high depreciation charges, the start-up costs for the new sites, for instance. Also expect a continuing pressure from the lower cobalt price and the overhang of unethical cobalt that is actually affecting our ability to place high cobalt products in the market. So these factors will be there in the second half of the year, and point to no increased possibility of margins in the second half.

And the uplift in volumes will not be of an amplitude that would offset these factors, not quite yet because indeed, as I mentioned earlier, and as you also are pointing out, I do not expect the market to be buoyant in terms of volumes for the remainder of the year.

Operator

Our next question comes from the line of Gunther Zechmann from Bernstein.

Gunther Zechmann ***Sanford C. Bernstein & Co., LLC., Research Division - Research Analyst***

My question is on the outlook. You confirmed it but clearly we are a few months further down the line. So what's changed in terms of you not narrowing that guidance range since April? Where has the uncertainty increased since then?

Marc Grynberg Umicore SA - CEO

So indeed in the past we've had the tradition or the practice, I don't know how to call it, of narrowing down the guidance at this time of the year. Except on few occasions when the visibility was not warranting such an exercise. In this case clearly the visibility is of such a nature that it doesn't warrant a narrowing down of the guidance. I bet you have seen the recent news flow from the automotive sector. I don't think that this is a very encouraging news flow. It's a news flow that also confirms the limited visibility that most players that are exposed directly or indirectly to the automotive sector have. So the visibility is indeed a pretty limited.

Gunther Zechmann ***Sanford C. Bernstein & Co., LLC., Research Division - Research Analyst***

So the reduced visibility just to be clear is in Catalysis not in E&ST, is that fair?

Marc Grynberg Umicore SA - CEO

It's indeed to a large extent in Catalysis and typical other factors related to prices like metal prices, macro-economic conditions etc. But I would say that the main uncertainty today, in terms of volumes, relates to what the car industry will do in the second half of the year.

Operator

Our question comes from the line of Ranulf Orr from Redburn.

Ranulf Orr ***Redburn (Europe) Limited, Research Division - Research Analyst***

I'm just wondering if you could help us understand the progression in Catalysis a little bit better, going forward. I understand the rate of platform launches, for instance, with your GPFs should increase in H2 this year. Can you help us think about the phasing of new platform launches with your new higher value technology on the -- over the next sort of 12 to 18 months please?

Marc Grynberg Umicore SA - CEO

So what I would say in this respect is that the number of launches and the impact of launch in 2020 will be higher than in 2019. We have an additional uptake in the second half of the year compared to the first half and a more significant, more visible effect still to come in 2020, both in Europe and in China.

Ranulf Orr ***Redburn (Europe) Limited, Research Division - Research Analyst***

And could you help with the phasing of all of this through the first and the second half of the year, next year?

Marc Grynberg Umicore SA - CEO

That's a little bit too early for me to comment with that level of granularity. I will do that in due course, definitely.

Operator

Our next question comes from the line of Mutlu Gundogan from ABN Amro.

Mutlu Gundogan ***ABN AMRO Bank N.V., Research Division - Analyst***

A question on rechargeable battery materials. You are guiding for higher volumes in cathode materials in the second half. Can you just split where that increase in volumes is coming from? Are those capacity expansions? Is that the recovery in Korean energy storage systems, so any color will be helpful?

Marc Grynberg Umicore SA - CEO

So to be clear, it's not coming from LCO for high-end electronics, where as I mentioned during the presentation, I do not expect an upturn in demand. It's going to be a combination of automotive and possibly ESS demand where the business may pick up again in the second part of the year. And indeed supported by the start of the newer plant in China.

Mutlu Gundogan ***ABN AMRO Bank N.V., Research Division - Analyst***

And can I just add to this. You were rather negative on China, so when you say combination of automotives that means automotive outside of China, just to confirm that?

Marc Grynberg Umicore SA - CEO

Automotives overall at this stage.

Operator

Our next question comes from the line of Geoff Haire from UBS.

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

I just have 1 question. On the market share gains you have made in gasoline particulate filters, how much further are those market share gains that can be pushed from where we are at the moment?

Marc Grynberg Umicore SA - CEO

Yes, that's a tricky question, I have to say. As I mentioned, as part of the previous answer, there will be more visible effects with more platform launches in the course of next year. So it implies that you haven't seen yet the full impact of the market share gains.

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

But maybe another way of asking is, are there more platforms that you're working on that you can be certified on? Or have you now got to the end of all of the platforms that need to have the particulate filters on them?

Marc Grynberg Umicore SA - CEO

So thank you for the clarification. No, we're definitely continuing to work on future platforms and on the qualifications for future programs. This being said, things are pretty much, I would say, fixed for the next 3 years or so, 3 plus years. So any new win

would not be -- would not have an impact before, let's say, 2022, 2023 more likely, 2023.

So sorry, if I may add to that to be more complete with the response. Of course, the effects of these recent platform wins will depend on how the mix diesel versus gasoline will continue to evolve in the European region. In China it's pretty straightforward. The gasoline market within Europe, the influence of the mix is definitely one of the important parameters in that equation.

Operator: Our next question comes from the line of Peter Testa from One Investments.

Peter Testa *One Investments S.A.G.L. - Analyst*

Just another question instead on Energy & Surface Technologies. Just to try to understand some of the margin influences from things that you've been mentioning as we look into H2 in 2020. You talk about the impact competing against unethical cobalt. And I was wondering the extent to which that has a margin impact as you proceed forward in time? And maybe if you could also give some sense as to how the impact of the capacity uplift will influence this compared to the volume, the volume of production uplift?

Marc Grynberg Umicore SA - CEO

As I mentioned during the first part of the call, it is difficult to give an accurate quantification of the impact of unethical cobalt on our results. We estimate that the combination of unethical cobalt and the low metal price has a more direct arithmetic effect on our refining, recycling and distribution margins, a combination of both was about EUR 10 million to EUR 15 million in the first part of the year compared to the first half of 2018. If prices stay where they are today, we're likely to see again a substantial impact in the second half of the year compared to the second half of 2018.

The thing that has changed from recently from -- and with the slight difference, maybe not from a quantified effect, but from a qualitative perception, is that the inflow of fresh unethical supply has decreased. Because with the lower cobalt prices, there are less diggers active on that gray market in Congo. This being said, because demand for end products is subdued or remains subdued, there is still an overhang, stock overhang of these cheap unethical units on the market. And they continue to affect or share ability of competing and placing and setting our own high cobalt containing products. So I would expect that the margin impact will continue to be there.

So it is difficult to give you a precise answer because it's -- these unethical cobalt units affect both our volumes and our margins. On the margin side, we know that there has been a significant price differential between these cobalt units and I would say sustainable cobalt in the first part of the year. With the stock overhang, it is likely that these units will continue to be offered at a discount. That's one aspect. The other aspect which is even more difficult to quantify is actually how much we're missing out in terms of volumes because of that type of competition. So I'm sorry for a complicated answer, but this is what I can offer today as a response.

Peter Testa *One Investments S.A.G.L. - Analyst*

And then maybe the impact of capacity costs versus volume uplift just to try to understand the sequencing as you look H2 and into 2020?

Marc Grynberg Umicore SA - CEO

Yes sorry, I had omitted that second part of your question. What I expected that the impact of the cost increase that I described earlier, depreciation charges and the startup costs, the impact of metal price and unethical cobalt et cetera will be higher than the volume uplift effect in the second half of this year.

Peter Testa *One Investments S.A.G.L. - Analyst*

But if you stretch into 2020?

Marc Grynberg Umicore SA - CEO

No, it's too early to comment on 2020 because I think you will have probably a different picture in terms of volume versus costs development and possibly some better leverage effects in that respects than was the case this year.

Operator: Our next question comes from the line of Adam Collins from Liberum.

Adam Robert Collins ***Liberum Capital Limited, Research Division - Analyst***

I had a question on UPMR. Firstly, have you taken out any precious metal price hedges in the period? And then on sort of market color, you've commented on the fact that there were tailwinds from strict enforcement of China e-scrap regulations. Is that becoming a meaningful market for you? I wondered if you could just talk around that. And then again on China, I think you've alluded to, in the past, some increased competition, complex refining residues in China, as some local players have built a small capability. Wondered if you can talk about whether that's been a factor?

Marc Grynberg Umicore SA - CEO

The answer to the first part of your question is yes, we have taken some additional hedges in the course of the first half relating to our precious metal, to our exposure to certain precious metal prices for 2019, '20 and 2021. So we have, in other words in line with our hedging policy have taken advantage of historically high prices at levels where we can secure attractive margins to hedge to locking a significant portion, a very significant portion of exposure for '19, close to half of the exposure for 2020. And a first chunk of the exposure for 2021. Obviously, the criteria that I've mentioned of historically high prices and attractive margins, palladium and rhodium -- palladium, sorry, is standing out in terms of new hedges. Rhodium cannot be hedged. Unfortunately, there is no paper market for that. And we have taken also some additional hedges on gold.

Let me now move to the market dynamics relating to China and indeed there is a significant development and actually the green fence or the import ban on certain waste categories of which electronic scrap is not a new, really new dynamic, it was introduced in China a couple of years ago. We're actually starting now to see the true effects of the strict enforcement of that green fence in China. I mean, it's been publicized in the media about a certain number of waste categories with plastic getting high on the agenda for many, many industrial players.

Actually we see a similar effect, although it's been less advertised for e-scrap. So the amount of e-scrap that is either staying in the region, in Europe, generated in Europe and staying in Europe or arriving in Europe from other regions because we have very competitive e-scrap recyclers in the region. That volume has increased to a significant extent and we believe this is in part, a direct effect of the strict enforcement of the green fence. The way I see it is that this is a structural effect. So we should continue to benefit from the trend of growing volume of e-scrap being generated and being available in Europe for recycling.

To address the last part of your question, you're right, we indicated a while ago that there was increased competition for certain type of industrial complex residues in China. The market dynamics have not changed for now. So when I referred in the press release or in the presentation about the improvement in availability of certain complex materials, it was not relating to that part of the story.

Operator

Our next question comes from the line of Nathalie Debruyne from Degroof Petercam.

Nathalie Debruyne ***Banque Degroof Petercam S.A., Research Division - Analyst***

Actually I'll switch back to battery materials again. You mentioned that pressing dynamics and competitive environment especially in China remained more or less stable as compared to what you mentioned in April. Now I'm wondering long term what should we look at, because we see quite a lot of battery manufacturers now starting to internalize part of their cathode production. Do you expect this to put some, I would say, pressure on prices for external suppliers? How you see that, I mean, in the short-term, in the future or in the – let's say in the coming years?

Marc Grynberg Umicore SA - CEO

I think this is not really a new trend. As I have mentioned on previous occasions the Korean battery producers have had in-house production like forever since they've started up their lithium ion battery business. And so they have developed over the past 25 years or so significant expertise and capabilities and capacities in cathode materials. And so I see as far as the Korean -- our Korean customers are concerned this as a continuation of a long-term trends.

As I mentioned on previous occasions, I do not expect the in-sourcing to actually dense or grow the trajectory, because there will continue to be a certain level of balance between in-house supplies and external purchases. It is quite important for all battery players to have access to the best technologies. And therefore they're open as to look at other materials than what they have developed in-house. What is more recent indeed is the fact that there is quite a bit of in-sourcing possibly happening in China with one of the players. And again the market -- in the long term the market growth and the requirements are such that this is not going to be a major issue for us. And this is not something that we have not factored in our growth projections early on.

Nathalie Debruyne ***Banque Degroof Petercam S.A., Research Division - Analyst***

So just to make sure that I got that correctly. So I got that in South Korea that is not new, I read that LG is going for 35% in-house sourcing versus 20% in the past something. But then in China, like you say, it's a bit different. And that specific player is also coming into Europe because they're part of the supply chain. Do you expect that also to happen in Europe?

Marc Grynberg Umicore SA - CEO

It remains to be seen. I think their plans for Europe are still relatively vague in terms of scope. I think we have our hands full already today with what we need to do to be ready in Europe and to deliver to our existing customers for existing business and the plan comes on stream at the end of next year. So not a concern. I think the plans of -- and I think you refer probably to the plans of CATL to invest in Germany.

Nathalie Debruyne ***Banque Degroof Petercam S.A., Research Division - Analyst***

Correct.

Marc Grynberg Umicore SA - CEO

Yes. These plans are fairly vague in terms of scope and remains to be seen, we'll see. And please bear in mind that -- and I don't want to point fingers to anyone or to accuse anyone of anything, but bear in mind that we're building a sustainable and clean battery materials, an integrated battery materials value chain in Europe. I hope that, that will continue to be a competitive differentiator for all our customers and potential customers in this region.

Operator

Our next question comes from the line of Sebastian Bray from Berenberg.

Sebastian Christian Bray ***Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst***

I just have one again on Energy & Surface Technologies. Globally the market seems to have still been up from mid double-digit percentage in H1 and Umicore's volumes in NMC declined during this period. Marc you've alluded to the role of cobalt, role of ethical cobalt sourcing. But if you look at the average price the difference would my guess be about 2% to 2.5% between ethical and non-ethical, as it is in terms of the whole cathode cost. Is this to say that if you are being displaced, in China (inaudible), because purely on cost, or is there still a quality difference at the lower end of the market? Where are you losing these volumes and is it purely cost or is this still differentiation on quality.

Marc Grynberg Umicore SA - CEO

First of all, I would actually not extrapolate from short-term situations. I have never done that. And as you know I've also encouraged you to refrain from extrapolating from short-term situations, whether these are positive or negative. These short-term situations are not necessary meaningful for to assess the long-term perspective and profitability of the business and they will continue to be there and difficult to interpret.

Please bear in mind also that the competitive disadvantage compared to unethical cobalt as I have mentioned back in April and confirm now relate to the high cobalt containing products, so mainly the LCO and the products that are marketed by Cobalt & Specialty Materials. So it's not really an NMC story. I had the impression from the numbers that you mentioned that your calculation of the price differential related to NMC. So that's not really the case in NMC. So that's all I would offer at this stage and again I would not infer too much from short-term situations that would be my main message.

Operator

Our next question comes from the line of Jean-Baptiste Rolland.

Jean-Baptiste Henri Rolland ***BofA Merrill Lynch, Research Division - Associate***

I just have this one on working capital. I think your expectation is now for stable working capital and previous -- for 2019 versus previously you guided for working capital inflow this year following the drop in cobalt price, if my memory is correct. Can you elaborate on what's changed on that side please?

Marc Grynberg Umicore SA - CEO

Nothing really changed, because what we said in February that we expect the substantial increase in the free operating cash flow compared to last year. And last year obviously, as you recall, it was really distorted by this EUR 700 million increase of working capital, which was split between the first half and the second half. So it hasn't changed what we say for this year. So

the first half of the year we worked very hard in all the business groups to manage working capital as good as we can.

We have a flat performance compared to the end of last year. There is a number of, as always, effects into that. You mentioned the cobalt price that is about one. PGM, as you know we work a lot with PGM. PGM prices have increased quite substantially. So the mix of the total including also the changes that we had in recycling lead to a flat working capital performance and the slight inflow of about EUR 10 million since December. And the guidance we provided to you for the remainder of the year is that we expected to stay flat basically because we say working capital flat between now and the end of the year.

So for the full year I would say flat working capital compared to a cash outflow last year of EUR 700 million. So I mean obviously if we can do better, we will certainly do that. But as mentioned indeed cobalt price is one, but again part of the inventories related to what I discussed on currently metal inventories, actually it does not move with the price then you have PGM prices. So there's a mix of factors, what I can say is we manage it as good as we can, it's a top priority within the group and guidance for this year is flat.

So it means that in terms of free operating cash flow, I think you have the different elements. If you take the CapEx guidance for the year of about EUR 600 million you take your view on the EBITDA, on the top cash flow and you take a flat net working cash flow you see that we will have a very substantial increase in terms of the free cash flow compared to last year.

Operator

Our next question comes from the line of Chetan Udeshi from JP Morgan.

Chetan Udeshi ***JP Morgan Chase & Co, Research Division - Research Analyst***

I actually had one question on E&ST, again, on battery materials, which is clearly the market perception on the lock-in, Umicore and some of the other external cathode suppliers have in terms of IP versus the internal battery -- just say internal cathode arms of OEMs, or even the new Chinese entrants have essentially changed to the extent that people feel the IP is not as much as was thought previously. In that regard, have you guys internally changed any of your roadmap, planning on how are you going to be competing in the market in the future? Or is that still consistent with what you've done in the past? That's 1 question.

Second question, I just wanted to understand this accounting change on metal impairment because if I read the release, it says, based on the old methodology, there was a possible impairment charge of EUR 158 million, which is massive. But what is, besides just changing the accounting policy, what is the best way to think about the risk on earnings from the volatility that we've seen in the cobalt prices in the future?

Marc Grynberg Umicore SA - CEO

I will let Filip answer the second question in a moment. And first of all, regarding your question about the market dynamics or strategy and the way we deal with the changing -- the possibly changing competitive landscape, let me say that, from a long-term perspective, there is no change to the course of strategic -- to the strategic course of action, sorry, because the drivers behind electrification are intact. The materials requirements and the technology requirements will be massive. I think it's important to point out that the technology is going to be -- will continue to be a differentiator for a number of reasons. One of them is that -- I've mentioned already in the past that if you look at the consumers' expectations, but first of all, the first wave of electrification is driven to a large extent by regulations.

But if you want you to have a broader adoption of EV, you need to meet -- you need to provide the consumers and the drivers with a positive experience, which means that we need to achieve longer driving ranges, shorter charging times. We need to have longer battery lives, and we need to have affordable prices.

Now, each one of these objectives taken in isolation can be achieved relatively easily, not very easily, but relatively easily. Now, the problem is that they tend to be incompatible with each other, which means that the combination of those is extremely difficult to achieve, and requires a lot of technology improvements in terms of materials, properties, new materials, new designs, and this is where we are playing indeed.

Secondly, if you look at the volumes of materials that are and will be required in the future, these are massive. Wwhen you know how the automotive industry works, you can figure out that one needs to have the ability to go fast from pilot and prototype scale to mass production, you need to be able to scale up fast. Quite importantly, so you need to be able to provide a highly consistent quality in mass production, which is not a walk in the park, considering the level of sophistication of these projects. So long-term the drivers are strong and that's why we maintain the strategic course of action.

Now, you're absolutely right in asking whether we are adjusting the tactical course of action and there the answer is yes, because there are short-term fluctuations in demand because there are possibly new entrants because there are different dynamics at different times in the business development cycle. And so yes, we have to be agile, we have for instance quite quickly been able to adjust the schedule for the addition of new lines in one of our major investment projects. We are, of course, intensifying or continuing to intensify our research and development work and qualification work of new technologies with kind of the customers. This is extremely important in order to be able to maintain the longer-term strategic course of action.

So there is indeed quite a degree of adjustment that is required in the short- and medium-term from a tactical point of view in all operational and material respectively.

Filip Platteeuw ***Umicore SA - CFO***

And your second question Chetan, good morning, on the inventories. To get straight to your question, is there any impact or what is the impact on margins or performance? There is none. So this has nothing to do -- this has no impacts on the commercial margins, operational performance or even on the cash flows. The only effect that this inventory has had is actually last year, it's when we acquired a substantial amount of cobalt to be put in these new facilities, the new lines, and that cobalt will stay there. And the impact of that you saw in the increase, a substantial increase in working capital last year.

So for the rest, there is no impact whatsoever. What we want to avoid, we've always had this category that again, is kind of you can almost see it as a kind of PP&E, it stays in the plant this inventory. We've always valued that with the LOCOM principle, in the past we never had any impacts. But now given the magnitude of the cobalt we bought last year, and the substantial, obviously, decline in the cobalt price, we have this noncash, nonrecurring impairment charge that we'll have to take.

And actually if the global price would go up again in the future we would have to reverse that. So it would be a nonrecurring income item. So to avoid that, and also actually better reflect the principle of this inventory category, we changed the accounting standard. So, it has no impact whatsoever on margins on operating performance. It's there in the plant, which we bought it at a high price compared to the current price. And that's the only impact of the cash impact that was in the working capital of last year.

Operator

Over next question comes from the line of Ranulf Orr from Redburn.

Ranulf Orr ***Redburn (Europe) Limited, Research Division - Research Analyst***

Thank you for taking my second question, it is on RBM again, I'm afraid. I just like to understand the progression of the business with the automotive customers slightly better. Can you give us an indication of how your sales with those customers progressed in the first half, was that in line with market? And on your volume growth assumptions for the second half, is that predicated on a return of the delayed xEV platform that you called out in April? Or is there other underlying sort of support for that, that offsets the subsidy revisions in China?

Marc Grynberg Umicore SA - CEO

Ranulf, as we mentioned in the release, and I mentioned during my preliminary comments, automotive -- cathode material sales for automotive applications were flat in the first half, year-on-year. And the uplift in cathode material sales that we expect in the second half of the year, as I mentioned earlier, is partly automotive and partly the impossible pick up in ESS demand.

And coming back to the more specific part of your question regarding the large xEV platform in China that we mentioned was postponed. When we had the discussion back in April, it is not part of the forecast for the second half in terms of an uplift.

Ranulf Orr ***Redburn (Europe) Limited, Research Division - Research Analyst***

Okay. Are you able to just help us understand why you grew below market rate for the EVs in the first half and then just a second follow-up will the --

Marc Grynberg Umicore SA - CEO

Why -- can you repeat the question, why?

Ranulf Orr ***Redburn (Europe) Limited, Research Division - Research Analyst***

Why did you grow below EV market rate in the first half of the year?

Marc Grynberg Umicore SA - CEO

Again, I think that there have been times where we grew much faster than the markets. There are times where we grow slower than the markets. Any extrapolation from short-term -- from such short-term shift is extremely difficult to make. For me, what matters most is the underlying -- are the underlying trends and how well we qualify for new programs and how -- so I don't think that's -- there is a very meaningful answer to give. I mean, I don't typically do not have answers regarding short-term situations. I do not extrapolate from those.

Ranulf Orr ***Redburn (Europe) Limited, Research Division - Research Analyst***

And then, the xEV platform, is the optional upside on that in the second half of the year or we are expecting that in 2020 now?

Marc Grynberg Umicore SA - CEO

I would be positively surprised if there was good news in the second half of the year. Against a context of a challenging context probably for EVs in the second part of the year in China. As I expect the -- as I mentioned earlier, the full effect of the subsidy cuts to be visible in the second half.

Operator

Our next question comes in the line of Martin Evans from HSBC.

Martin John Evans ***HSBC, Research Division - Analyst of Global Chemicals***

Just a question. Again back on battery, or in fact your customers, the battery cell makers and any sort of changes you're perceiving and in the technology that's being adopted, particularly given recent movements, I guess in the price of cobalt. I'm thinking, for example of NMC811, which has been discussed at length as being or was relatively popular. Have you seen any sort of movements in that direction? And to some extent, does it really matter for you, which particular combination of metals the battery cell makers prefer?

Marc Grynberg Umicore SA - CEO

I will start by addressing the second part of your question. No, it doesn't matter. We have all the capabilities, we have all the products, technologies, our process is versatile. So we produce actually what the customers need and wants the most. The metal ratios are not really important for us in that respect. Plus, I would like to repeat that there are dozens of grades, it's not just 811 versus 62 versus 532. There are dozens of different grades, the products are to a large extent custom made for individual customers and for individual platforms. And more generally, I would like to repeat what I said a while ago. Is that the move to high nickel more than 80% nickel has been more advertised than it's being taking place in practice.

But you should take all these announcements about 811 introduction with a pinch of salt, because in practice, it goes at the pace that we had indicated in the past, which is much slower than what is being advertised.

And clearly, the fact that the cobalt price has come down from the peaks in mid-2018 to, I would say, the current levels have somewhat reduced the pressure on the fast migration to high nickel. Secondly, there's been a certain number of safety incidents in a number of places with high nickel batteries that have also created a degree of caution with this technology. So it's going at -- there is clearly a migration to higher nickel chemistries. And this goes at a controlled pace. There is no, I would say overnight migration to more than 80% nickel.

Operator

Our next question comes from the line of Mutlu Gundogan from ABN AMRO.

Mutlu Gundogan ***ABN AMRO Bank N.V., Research Division - Analyst***

Yes, just a few questions, Marc. On recycling, you mentioned the increased availability of e-scrap, can you just update us on the split of the process for you. You said the part that is coming from the metals and mining industry versus recyclables such as e-scrap or the spent catalysts and then talked about automotive industrial. So that is the first question. And then the second question is on still on recycling.

I mean, there was a fire in July. So early this month, there was a fire in September last year. And I think we've seen several fires or incidents in the last few years. Do you know what is causing that? And is there anything you can do about it? And then finally, your returns as a group have come down significantly in the last 12 months. And especially Energy & Surface Technologies is the lowest, while you are investing the most in the business. And I know you mentioned about the long-term strategy. But just wondering, how long are you willing to invest in a business that is pulling down returns for the group?

Marc Grynberg Umicore SA - CEO

Okay. So these are a lot of questions and actually we will have to stop very soon. So we're taking a limited number of questions still. So end of life, materials versus industrial byproducts. Volume wise the ratio is, I would say, still around what we said in the past 22% to 25%. In terms of revenues, the contribution from the end-of-life products like electronic scrap, spent catalysts, industrial and automotive catalyst, was about 1/3 of revenues. So that is not fundamentally or not substantially different in terms of volumes than in the past. But the growth in revenues and in value has been quite substantial in the end-of-life products.

Yes, the fires I mean, we have, unfortunately had 2 fires in -- with an interval of a few months only. I don't want to give the impression that this is, I would say, a chronic disease that we have, because we have had only 2, I would say over the past 25 years as -- since we started the recycling plant. So it's -- first of all, it's unfortunate that we have any such incident. And of course, it is unfortunate that we had 2 in a row in such a short period of time.

They are completely unrelated. The fire that we had in -- on July 3 was a mechanical failure of a piece of old equipment. While the fire that we had in September of last year was due to an unforeseen chemical reaction, in one part of the plant. So of course, we're taking all measures to prevent and to -- these sorts of incidents from happening. And we are learning when there is an incident, we're learning from the incident to make sure it doesn't repeat. And so we are -- I am hoping that we are now doing what's necessary to be off again for the next 25 years without such incidents.

And in terms of returns, clearly the return is somewhat less than the target we have for the group of 15%. It is somewhat less than what we had last year, we had record results and returns last year. Clearly, we will continue to invest in the long-term growth potential of the company in clean mobility materials. So, that's not only battery materials, it's also in catalysis and of course in recycling. And so in that respect because the drivers are so strong, and the potential is so strong, I'm not concerned about having a somewhat lower return for a certain period of time.

Operator

Our next question comes from the line of Geoff Haire from UBS.

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

Just wanted to ask a question about the accounting changes on inventories. I'm not an accountant. So I apologize, if this is a stupid question. But I was wondering, if you could just help us understand, if you applied the accounting standards to 2018, what would the change of working capital have been under the accounting, the change in accounting that you have now it's on a pro forma, on a like-for-like basis.

Filip Platteeuw ***Umicore SA - CFO***

Yes, Geoff the same, because the change of working capital is cash impact. So again, the accounting change has no impact -- do not change the cash flows in any way also not the future cash flow. So basically, we have bought a substantial amount of cobalt last year to fill the new lines, new plants of Energy & Surface Technologies and with expansion. We bought that cobalt at an expensive price given -- using the price profile of cobalt last year. So that was a cash out. So that was a substantial, as we indicated, substantial part of the EUR 700 million of net working capital increase last year.

That's it. So the accounting change, if we would have applied, what we are doing now last year, it would have had no impact whatsoever on our cash flows. The changes on 2019 have no impact whatsoever on cash flows.

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

So can we expect them that you'll have to buy cobalt in the market to fill the Chinese plant in the second half of this year, as well. And that's included in your working capital forecast that you've given?

Filip Platteeuw ***Umicore SA - CFO***

It's based on what we bought last year. We think it will, yes.

Marc Grynberg Umicore SA - CEO

So I realize that there are still a lot of questions that you have. However, we are getting a little bit short of time. So unfortunately, I can only take one more question. And I would then suggest that the following questions after the last one should be raised after the call with our Investor Relations team. So I'll take one more question. And then we will have to close the call.

Operator

For our last question, it will be coming from the line of Peter Testa from One Investments.

Peter Testa ***One Investments S.A.G.L. - Analyst***

I just want to ask a question on the catalyst business, please. I was wondering if you could just help us understand your flexibility on capacity management in light of your comment on certainly in the auto market and also taking account to the extra capacity coming on in Poland and China. And maybe to the extent to which you've used some flexibility also in H1 to manage the good result.

Marc Grynberg Umicore SA - CEO

Peter, we have some flexibility in the sense that we are in a growth mode and the -- we can actually pace the addition of new production lines, according to the short-term and midterm market development. This being said, there is 1 area of our investment programs, where we have less flexibility and that's relating to the infrastructure that we need. So we're building greenfield sites, so we need the site to be in place with all the utilities, the peripheral equipment, and you name it. And it's only the effective addition of lines that can be modulated to meet as closely as possible the market demand. So there is some flexibility but it's not like we can put everything on hold and wait for, I would say, a different development. There's a certain number of investments at cost and cost which we need to continue to incur.

Peter Testa ***One Investments S.A.G.L. - Analyst***

And the extent to which you also use some flexibility in H1 or is that really covered by the strong growth in ramping up?

Marc Grynberg Umicore SA - CEO

The flexibility relates mostly to the addition of new lines on the site in China that will open in the summer of this year. So it's so much relating to the investments of -- or actually it has an impact on the investments we did in the, in H1. But it didn't have an impact on the existing capacity.

Okay. With this and again with my apologies, I have to close the call. And I realize that there is -- there are quite a number of follow-on questions that we will be happy to take in a moment and our Investor Relations team will be available to address your questions. And we will also have a chance to continue the discussions over the next couple of days. The team, Filip and myself, and Investor Relations colleagues will be in London in the next couple of days to pursue the discussions and we look forward to that. With that, I would like to thank you for joining the call this morning and we'll talk to you soon. Bye now.

Operator

Thank you. That concludes our conference for today. Thank you all for participating. You may all disconnect. Speakers, please stand by.