

Westport Fuel Systems Fourth Quarter and Full Year 2022 Financial Results Conference Call Transcript

Operator

Thank you for standing by; this is the conference operator. Welcome to the Westport Fuel Systems' Fourth Quarter and Fiscal Year End 2022 Financial Results Conference Call.

As a reminder, all participants are in listen-only mode and the conference is being recorded.

After the presentation, there will be an opportunity to ask questions. To join the question queue, you may press * then 1 on your telephone keypad. Should you need assistance during the conference call you may signal an operator by pressing * and 0.

I would now like to turn the conference over to Ashley Nuell, Senior Director of Investor Relations. Please go ahead.

Ashley Nuell Senior Director, Investor Relations

Good morning, everyone. Welcome to Westport Fuel Systems' Fourth Quarter and Full Year 2022 results conference call which is being held to coincide with the press release containing Westport's financial results distributed yesterday.

On today's call, speaking on behalf of Westport is Chief Executive Officer David Johnson and Chief Financial Officer Bill Larkin.

Attendance on this call is open to the public, but questions will be restricted to the investment community.

You are reminded that certain statements made in this conference call and our responses to various questions may constitute forward-looking statements within the meaning of the U.S and applicable Canadian securities laws, and, as such, forward-looking statements are made based on our current expectations and involve certain risks and uncertainties.

With that, I'll turn the call over to you, David.



David M. Johnson

Chief Executive Officer

Thanks, Ashley.

Good morning, everyone. I'm pleased to be with you today to discuss our 2022 results for the fourth quarter and full year.

Today, I'll be walking you through our key financial and operating results and our outlook for the roadmap to decarbonize transportation. That is the need for and potential of clean, affordable gaseous fuels, and our products; fuel systems for LNG, hydrogen, CNG, RNG, and LPG, and I'll share some additional insights into our recent announcements related to hydrogen manufacturing capacity in China and our third OEM demonstration program for hydrogen HPDI.

Amid last year's challenging macro environment, our top line was slightly lower in U.S. dollar terms compared to 2021. As has been a repeating theme through 2022, the dollar/euro exchange rate movement masked the top line growth in euro that we delivered at an operating level. Excluding the impact of foreign exchange, our business grew 9% or \$28 million.

Our hydrogen components, fuel storage, delayed OEM, and electronics businesses all saw revenue growth in 2022 and have also started strong in 2023. The impact of foreign exchange and the Russia/Ukraine conflict masked some of the improvements we saw in 2022 in our aftermarket business, resulting in revenues down slightly this year in U.S. dollars. High CNG and LNG prices in Europe reduced our HPDI and CNG fuel system sales volumes in our heavy-duty and light-duty OEM businesses, while inflation, ongoing supply chain constraints, and warranty costs weighed on our profitability.

Although we have no control over fuel pricing, we have put measures in place to improve our bottom-line outlook for 2023 and beyond in the areas that we have the influence. I'll touch on these shortly.

In our heavy-duty and aftermarket businesses, we have work to do to enhance volumes and margins, supporting profitability going forward. Improving profitability by extracting efficiency internally is one of our biggest priorities in 2023, and later in the call, Bill will outline the steps that we're taking to address this.

We continue to face industry headwinds and felt—feel both prepared and poised to grow in the future. We believe that the strong LPG price advantage, the establishment of natural gas price advantages versus petrol and diesel, and our continued expansion in new markets, combined with support of global emissions reduction requirements, will drive our business forward. Environmental, economic, and regulatory requirements will not stop or wait and Westport is well-positioned to respond, and further OEM conversations around HPDI with LNG and biomethane, and now hydrogen HPDI in the future, will drive growth and profitability.

Wider felt impacts of rising inflation, supply chain constraints, higher utility costs, and fuel price volatility have continued to weigh heavily on our industry. As a result, recorded a net loss of \$32.7



million for the year compared to net income of \$13.7 million in 2021. Significant margin pressure, combined with the loss of equity income from the Cummins Westport joint venture, weighed heavily on the net loss, as well as the impact of foreign exchange.

Twenty twenty-two was also a year of significant announcements with respect to advancements of our hydrogen HPDI fuel systems, new customers, and collaborations. I want to quickly highlight a few of those announcements from the fourth quarter.

In November, we were awarded a program to supply Euro 7 LPG fuel systems to a leading global OEM, an add-on to the Euro 6 supply program we had announced earlier in the year and a program that starts production in Q4 of this year and will have a material impact to our revenue from 2024 on.

In December, we announced a collaboration with Johnson Matthey, a global leader in sustainable technologies, to develop an emissions after treatment system for hydrogen HPDI. Working together, we aim to create a zero-emission solution for affordable and clean transportation that does not compromise performance or efficiency.

As we look at the year ahead of us, I want to walk through our go-forward strategy and how we're positioning ourselves for the future.

We'll drive sustainable growth in our existing markets through a diversified portfolio of technologies, products, and services. This will be seen across all our business units. The strength of our diversified strategy was apparent in 2022, as our revenue before the impact of FX grew amid significant headwinds like the Russian sanctions and fuel price increases.

Secondly, we aim to unlock new and emerging markets through the delivery of clean, affordable transportation solutions. This includes opening new geographies, but also capitalizing on the strengths we're seeing from our delayed OEM, electronics, hydrogen component, and fuel storage businesses.

Third, we'll continue, as we've done in the past, to drive operational excellence and maintain our reputation as a Tier 1 supplier with enhanced quality and reliability.

Fourth, we'll extract efficiencies through prudent capital management focused on cost optimization and margin expansion.

Each of these initiatives positions us for strengthened profitability across our business units.

Listening to global markets, there's now an undeniably louder voice highlighting the need for a portfolio of options, recognizing it won't be a one-size-fits-all approach when it comes to the need to decarbonize transportation. Some are using the word eclectic and contrasting that with all electric; clever rhyme, but also true. We have diverse technologies and fuels today, and we'll have more diversity in the future. Gaseous fuels and our fuel systems will play an important and growing role in that eclectic future. A varied solution set that takes into consideration the differing needs of each application has always been our view. It's a welcome and needed change



in the conversation at both the OEM level and from policymakers alike. This might be the beginning of a step change which we can all stand to benefit from.

While much of the talk still points to fuel cells and battery electric options, hydrogen internal combustion engines are emerging as an attractive alternative for the implementation of decarbonized transport. In recent months, the likes of Toyota, Tata, Kawasaki, Reliance Industries, Tenneco, Volvo, and others have increasingly expressed this view. Reducing the cost of replacing current powertrains, but also maintenance costs compared to the fuel cell, battery combination or system, enables faster conversions for fleets. We know that as we move up to the long haul, heavy-duty, battery electric may not be able to meet the payload, recharging requirements, and therefore, hydrogen internal combustion engines is a very attractive proposition.

LNG and biomethane are also making a name for themselves in the heavy-duty, long-haul space. Trucking at its core is a conservative industry. It takes a while to prove concepts and to build the infrastructure that is happening now step-by-step.

As an example of the growth we're seeing, Europe added approximately 100 new LNG stations this past year, reaching to just over 600 stations in service now, a growth rate of 20%. LNG and biomethane offer clear climate upsides, remain competitively priced in many countries, and more importantly, using our HPDI fuel system, offer the driver the same experience as diesel fuel; all its power, performance, and reliability.

To paint a picture of the momentum with biomethane in Europe where the production of bio LNG is ramping quickly, in Sweden last year, for example, 96% of all the gas used in transportation was biomethane. Unsurprisingly, Sweden has the highest market share of LNG trucks on the road.

It's not just Sweden. Germany has been a dominant country with respect to biogas production for a while now, and other countries such as Denmark, France, Italy, and the Netherlands have actively promoted biogas production. With OEMs now on the clock to significantly decarbonize by 2025 and regulations proposed requiring reductions of 45% in 2030, utilizing LNG and biomethane today is a clear option. HPDI using LNG meets the 2025 carbon targets already and is on the road in the thousands, putting us in a solid competitive position to capture this growth.

When we think about the future of HPDI, we're looking at hydrogen as the fuel of the future. In our discussions with global OEMs at IAA last year, it was clear they're beginning to recognize that our hydrogen HPDI fuel system solution addresses the portion of the market not addressed by electrification and does so affordably. Gaseous fuels are a compelling way to address heavy-duty, long-haul applications, and HPDI offers the lowest cost to develop, the lowest cost to industrialize, and the lowest cost to operate. Again, we need a variety of solutions and can't rely on a single idea or concept to work for everything. It's just not realistic.

The challenging LNG pricing environment and differential to diesel last year resulted in a difficult year for our heavy-duty OEM business, resulting in lower volume than expected. These lower volume levels truly impacted our economies of scale, and when combined with higher production costs, drove margin pressure. In recent months, we're beginning to see a more favourable LNG price trend in Europe, with the fuel price returning to levels we haven't seen since 2020, 2021.



This more normalized LNG price is pushing the total cost of ownership back in the favour of LNG powered fleets, and we remain encouraged by this price trend.

Despite the macroeconomic environment, our European launch partner remains committed to the growth of HPDI. In fact, recently, many OEMs have made public announcements supporting the need for several technical solutions due to the availability of energy and fuel infrastructure which differs greatly between countries and regions, and also because the requirements for range, weight, and payloads will differ by use case. These statements have been supporting the future use of LNG and biomethane as a part of a multi-option effort to decarbonize transportation. This is exciting for us. We're at the beginning of the transition to cleaner fuels; natural gas, biomethane, and then hydrogen.

This transition to cleaner fuels is also making its presence known in North America, as a Canadian industrial gas and engineering company has recently committed to evaluating Class 8 LNG power tractors, its long haul operations, focusing on measuring performance, fuel savings, and other operational factors against its diesel fleet.

Turning to light-duty OEM, in 2022, we had several exciting announcements, including two major contracts with a leading European OEM for the supply of LPG fuel systems for both Euro 6 and Euro 7 standards through 2035 and beyond. The LPG vehicle market in Europe remained strong, bolstered by pricing advantage of the petrol.

In Q4 last year, LPG-fueled vehicle registrations grew by over 16%. This trend is also positive for our delayed OEM business where we saw 20% revenue growth in 2022, converting some 40,000 vehicles, a number we expect to grow significantly in 2023.

In India, we were encouraged by the increased level of light-duty sales to OEMs, as that market has been negatively impacted recently by rising CNG prices. To add some perspective, the price spreads between CNG and diesel have decreased by 19% year-to-date. Despite the pricing environment, biogas and bio CNG remain a focus for the Indian government, with recent announcements supporting the production and development of 500 new biogas plants and up to 5,000 bio CNG plants with a production target of 15 million megatons by 2023/'24. This is still an important growth market for our Company going forward.

Our partner in China, Weichai, remains committed to the commercial launch of HPDI, as we mentioned in December at our Capital Markets Day. They recently took possession of nearly a 100 HPDI units. A volatile LNG pricing environment has hampered the progress of this market. However, as pricing normalizes, it should be a boost towards a commercial launch, and we'll update the market on this progress.

We've talked a lot recently about our hydrogen components business, a business that grew gross profit by almost 60% in 2022 and continue to see strong growth. A few weeks ago, we announced our plan to invest up to \$10 million to expand our global manufacturing footprint in China, supporting our hydrogen components business and other alternative fuel system technologies. China leads the world in hydrogen investment and infrastructure development and has a



published ambitious objective of having one million hydrogen fuel vehicles on the road in China by 2030.

The new Westport facility in the city of Changzhou will begin operations in 2024 and include an ultra-modern manufacturing facility and a contemporary innovation centre. Our hydrogen components have had a strong presence in China in the market for over 10 years. This announcement is truly a steppingstone to continue our hydrogen technology advancement and positions Westport to support a variety of applications using fuel cells and internal combustion engines using hydrogen for fuel.

Globally, hydrogen continues to gain traction, as governments, private companies, and policymakers continue their push for investment and support to solidify hydrogen as the fuel of the future. In Europe, in particular, nine EU member states have called on the European Commission to include low carbon hydrogen produced from nuclear electricity in the EU's renewable hydrogen targets, stressing energy security and energy independence.

As demand increases, pricing is expected to decrease, and refueling infrastructure increases both driving factors for adoption. With these in place, change can happen quickly. The roadmap for hydrogen is very encouraging for our business. Our components business provides all the necessities for both IC engines and fuel cells. Because of this, we stand to benefit broadly from all hydrogen applications in transport.

When looking more closely at using hydrogen for heavy-duty transport, in February, the European Union made some significant announcements regarding potential heavy-duty vehicle emission standards and hydrogen internal combustion engines. For the first time, hydrogen IC engines were included in the list of technologies that will drive the shift to zero emissions. Though still a proposal, this is a critical step change from the earlier dialogue. We'll be monitoring these developments closely.

Just last week, we announced another collaboration with a global OEM to evaluate the performance efficiency emissions of the OEM's engine equipped with our hydrogen HPDI fuel system. This collaboration marks Westport's third major OEM engagement to date. Funded by the OEM, the work starts immediately and continues through year end. We look forward to updating the market further on the results of this ongoing evaluation work.

Hydrogen mobility has now become much more substantial than just fuel cells, as hydrogen internal combustion engines are set to play an important role moving forward.

Operationally, our independent aftermarket business performed well in 2022 amid a difficult macroeconomic climate. The impact of foreign exchange and translating results, combined with lower sales in Russian market and lower volumes in Turkey and Argentina, resulted in slightly lower revenue year-over-year. Despite these setbacks, in 2022, we were encouraged by growing volumes in both Eastern and Western Europe, and we're seeing recovery trends so far in 2023. The lower volumes in some of our key markets like Turkey and Russia tighten margins already impacted by higher production input costs. Plans are in place to address this, and we're working to get our margins back into a more acceptable range.



Despite pronounced supply chain and logistics headwinds that are still lingering with our customers and partners daily, we expect a busier 2023. We started seeing recovery in Western Europe in the back half of 2022, and this trend is continuing so far this year. We'll look to enter new markets where the spread between petrol and alternative fuels is favourable. We have several open tenders that we feel confident we'll be able to acquire in both new and existing markets. A more normalized CNG pricing environment in places like India and Argentina will also be beneficial for us to grow market share and revenues.

As the market leader for the LPG conversion of petrol direct injection vehicles, we've historically benefited from this position in Western Europe. As an example, in Italy, a developed market, we've seen conversions increasing as incentives for petrols rolled off, extending the price advantage of LPG. In new markets across the world, the need for LPG conversions providing customers with lower-cost clean fuel options is increasing, and we're seeing an uptick in demand in countries like Poland and Turkey.

The growth of our LPG business will be an important part of our story moving forward. With price advantages in key markets like Italy, Netherlands, and Poland, we can continue to grow this business well into the future. The cost of owning electric cars is still expensive and is increasing in certain geographies due to the soaring commodities cost like lithium, and the cost of operating electric cars is also climbing as electricity prices rise in Europe. Consumers continue to look for lower-cost alternatives and can still make a conscious purchase with a vehicle powered by clean, lower-cost alternative fuel.

Despite the macro headwinds that we face, falling LNG prices and the continued focus on dramatically reducing carbon emissions create opportunities for our business as both industry operators and end customers look for lower-cost options to reduce carbon.

With that, I'd like to turn it over to Bill to go through our financials.

Bill Larkin

Chief Financial Officer

Thank you, David, and good morning.

I'll start off by going over the Q4 and full year financial highlights.

In the fourth quarter of '22, we generated revenue of \$78 million. This was a decrease of 6% year-over-year. As David mentioned, this was primarily driven by the impact of foreign exchange when translating our financial statements into U.S. dollars and a decrease in light-duty and heavy-duty OEM sales. Both our independent aftermarkets and OEM segments continue to be impacted by the Russia/Ukraine conflict, as volumes have decreased from pre-conflict levels. Also the rise in European LNG prices slowed demand for HPDI trucks and reduced volumes. However, we did realize strong growth in our hydrogen components, electronics, and fuel storage businesses.



Revenues for the full year of '22 decreased slightly by 2% to \$305.7 million. This decline was primarily driven by the weakening of the euro when translating our financial statements into U.S. dollars. Holding exchange rate consistent with Fiscal '21, our FY22 revenues would have increased by 9% or \$27.7 million compared to '21.

Apart from foreign exchange, FY22 revenues were positively impacted by a full year's revenue from our fuel storage business, which we acquired in June '21; increased sales volumes of our hydrogen and electronics products; higher delayed OEM volumes; and increased sales volumes of our light-duty products to OEMs in India. These were offset by lower sales volumes to our customers in Russia and both the IAM and the OEM businesses, and lower sales of CNG products in the Western European market due to higher natural gas prices.

We reported a net loss of \$32.7 million for the full year of '22 compared to net income of \$13.7 million for the prior year. Some of the larger drivers of this change include a decrease in gross margin of \$12 million. This decrease is due to a combination of translating our financial statements to U.S. dollars, resulting in lower revenue and a reduction in the gross margin dollars; a reduction in our gross margin percentage from the impact of increasing material; manufacturing and labour costs because of global inflation; a loss of 33 million of equity income from the termination and sale of the CWI joint venture, which was partially offset by a gain of \$19.1 million recognized on the sale; and an \$8.4 million year-over-year swing in foreign exchange, which is a loss of \$6.4 million FY22 compared to a gain of \$2 million in FY21. FY21 also included tax benefits of \$8.9 million related to our Italian operations. For the fourth quarter of '22, we reported a net loss of \$16.9 million compared to net income of \$5.4 million in the prior year period.

Moving on the next slide, in the fourth quarter of '22, we reported negative \$12.9 million in Adjusted EBITDA compared to positive \$10 million in the same period last year. The decrease in Adjusted EBITDA was primarily due to an overall decrease in our gross margin and the loss of equity income from the CWI joint venture. As a reminder, the fourth quarter of '21 included \$14.8 million in equity income from the CWI joint venture.

Gross margin for the fourth quarter of 2022 decreased year-over-year to \$4.5 million or 6% of revenue compared to \$9.3 million or 11% of revenue for the fourth quarter of '21. This reduction was mainly due to lower sales volumes in our OEM segment, a shift in our sales mix in our OEM business, and increased manufacturing material, energy, and utility costs and results of the widespread inflation and global supply chain challenges.

Moving on to the next slide, this our OEM business. Our OEM revenue for the fourth quarter of '22 was \$47.8 million compared to \$57.4 million in the same period in '21. The decrease of \$9.6 million was driven by the weaker euro when translating our financial statements to U.S. dollars, resulting in lower revenue, as well as decreases in sales in both our light-duty and heavy-duty OEM businesses. The decrease in revenue was partially offset by higher sales volumes in our fuel storage, delayed OEM, hydrogen, and electronics businesses.

Touch quickly on our hydrogen components business. This business grew revenue by over 60% in '22 as a result of increased volumes to our key customers. As a reminder, we work with the likes of Ballard and Plug Power and have been invited to participate in many more RFQs for OEM Tier 1



programs. Also, there's a strong sign of further growth in the coming years with an announced pipeline of potential revenue totaling a \$100 million.

Our heavy-duty OEM volumes decreased by 50% in the fourth quarter of '22, which was a result of the unfavourable fuel price differential between LNG and diesel in Europe. This was largely driven by a shortage of LNG supply. More recently, we have seen a return to a more normalized LNG pricing environment in Europe, which we anticipate will be helpful in driving demand for HPDI trucks in the future.

Gross margin decreased year-over-year by \$5.9 million to a loss of \$800,000 compared to a positive \$5.1 million in the fourth quarter of '21. Gross margin was negatively impacted by lower sales volume and continued higher input cost. As a reminder, we did have a contractual price reduction on sales to our initial heavy-duty OEM launch partner.

Moving on to the next slide, that's an overview of our independent aftermarket business. Our independent aftermarket revenue for the fourth quarter of '22 was \$30.2 million compared to \$25.3 million for the same period in '21. The increase of \$4.9 million was primarily due to increases of sales into Eastern Europe, Italy, and Asia Pacific, partially offset by the foreign exchange impact when translating our financials into U.S. dollars. We did see a positive trend develop in the fourth quarter through a partial recovery of sales into Western Europe, particularly in Italy, Germany, and the Netherlands. We remain confident in our ability to deliver revenue growth through new and existing markets in our independent aftermarket business.

Gross margin was \$5.4 million compared to \$4.2 million in the fourth quarter of '21. The increase was driven by higher sales volumes in Eastern Europe, partially offset by lower sales volume in Russia. IAM's gross margin was negatively impacted from higher production costs incurred for materials, transportation, and energy.

Looking ahead, support of LPG pricing is creating a promising demand trend for our businesses, as Westport continues to address and serve markets for customers looking to save money on fuel costs.

Moving on to next slide, finally, I'd like to touch on liquidity. Our cash position slightly decreased to \$86.2 million at December 31 compared to the September 30 ending balance. In the fourth quarter, we saw improvements in our net working capital.

Looking at the full year, net cash used in operating activities decreased by \$12.2 million to \$31.6 million. This decrease was primarily driven by positive net changes in working capital, specifically in inventory and accounts receivable. This was partially offset by an increase in our net loss.

We built up inventory in 2021 to manage supply chain risks against shortages of raw materials and components in support of our growing electronics business. However, our inventory levels have remained elevated since the second quarter of '22. We continue to take actions to monetize our existing inventory and optimize inventory levels. This process will take time that will continue throughout Fiscal '23.



We will continue to be prudent in our liquidity management and there are multiple steps we are taking. We have outlined a prudent capital program for 2023, with \$12 million to \$15 million in planned capital expenditures focused on advancing work with hydrogen and adding test cell capacity.

Our net cash provided by investing activities for FY22 was \$17.6 million compared to \$2.3 million 'for '21. The increase in 2022 was primarily driven by the proceeds on the sale of our investment in CWI of \$31.4 million. Also in the prior year, we received dividends of \$21.8 million, while no dividends were received in '22.

Net cash flows used in financing activities in '22 were \$22.5 million compared to cash provided by financing activities of \$104.7 million in '21. Twenty-one includes \$12.8 million in net proceeds from the ATM equity offering in Q1 of '21 and \$107.9 million net of transaction costs from a marketed public offering that closed in June of '21.

Net payments on our operating lines of credit and long-term facilities increased to \$17.3 million for '22 compared to \$8.6 million in the prior year.

Finally, coinciding with the expiry of our current short form base shelf prospectus in the middle of April, we are planning to file a new shelf to provide flexibility over the next 25 months to access the capital markets if necessary. As I mentioned in the past, should we need additional funding, our preference will be to use debt to fund our liquidity needs versus equity.

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

David M. Johnson

Chief Executive Officer

Thanks, Bill.

Let me close on a few points.

In 2022, we made important progress moving the Company forward, but we fully recognize we have a lot of work ahead of us. The need to decarbonize transportation and the need for our products and to supply clean affordable solutions to the market is certain.

Looking ahead, 2023 is a very important year for us. It's a year of change, setting us up for success beyond 2023. We're committed to enhancing our financial performance and driving margin expansion, revenue growth, and technology development. It comes down to the fact that we need cleaner transportation, and the products we make enable affordable solutions that are available for customers, scalable—and scalable for OEMs. HPDI, our marquee product, is on the road today. We're on a good path with our lead customer and with the development of hydrogen future.



We expect additional regulations in 2025 and 2030, and the increased opportunities for biogas now and hydrogen in the future will drive additional customers and revenue. We're at a really exciting time at Westport when the volume is expected to grow, economies of scale are achieved, and we're going to generate cash flow and the profitability that our investors expect. As we deliver on these financial and operational priorities, we're positioning Westport for long-term growth in 2024 and beyond.

With that, I'll turn it over to the Operator to open the call for your questions.

Operator

Our first question comes from Colin Rusch of Oppenheimer. Please go ahead.

Andre for Colin Rusch Analyst, Oppenheimer and Company

Hi there. You've got Andre on for Colin.

First question would be on the light-duty OEM side; if you could talk about any incremental evolution in the technology and what kind of specific solutions your customers are looking for?

David M. Johnson Chief Executive Officer

Yes. Good morning, Andre. Thanks for your question.

We announced projects just in the last few months for a European customer to address Euro 7. I think this is the biggest technical development, and so there is technology behind that that enables the response to the regulation, but for us, it's a very important development and scaling of our light-duty LPG business into the—expanding our OEM treatment. We have seen through 2022, as natural gas prices were higher quite dramatically, a dramatic decrease in that CNG side of the business for light-duty OEM, but we see that being offset as we go forward and fully overcome by the growth in LPG business, which we've seen on the aftermarket side, but also we are really excited about the Euro 6 and Euro 7 development programs, Euro 6 then launches this year and Euro 7 takes us long into the future.



Andre for Colin Rusch

Analyst, Oppenheimer and Company

Awesome. Thank you so much, and what are you guys seeing across the portfolio on a price leverage perspective? Are there meaningful opportunities to increase price in particular areas of the portfolio?

David M. Johnson

Chief Executive Officer

Yes. Fundamentally this is, I'll say, an ongoing challenge, because we've entered, as everybody knows, a very—I'll call it severe inflationary environment with respect to our input costs, whether that's material or labour or energy, and luckily, some of those costs are abating. We're seeing the turn of the corner with respect to rising inflationary rates across various commodities. Nonetheless, there's a persistent base that will take some time to unwind and for inflation to come back down, and, as such, our pricing activities are a really important part of our margin recovery aspects for the business, so the opportunities are never easy to obtain, especially on the OEM side. We've got long-term contracts. Nonetheless, that is a core activity of our team.

Andre for Colin Rusch

Analyst, Oppenheimer and Company

Got it. Thank you, and one more from the—on the hydrogen side, could you speak to the maturity of potential new development partners and where you are on the pipeline of opportunities that you had mentioned in your comments?

David M. Johnson

Chief Executive Officer

Yes. Thanks for the question, so this, obviously, for us is a really important part of our technology development roadmap and product development roadmap, and we're truly pleased with the response we've seen from the work we did in 2022, showing off our hydrogen demonstrator trucks first in North America and then in Europe, and also customer by customer around the world, so we are pleased that kind of work has led to the finding of our third OEM demonstration program, so I think it's clear, but just to recap, we signed a project with Scania, demonstrated great results in our Dyno cell, and are continuing our work on that project.



The next one we signed was the AVL/TUPY project, which is ongoing, and the results from that will be presented at the Vienna Motor Symposium at the end of April, so we're keen to get that data into the marketplace so people can see the really fundamental offering that is hydrogen HPDI as it compares to spark ignited product, and really what a step function enhancement of the diesel engine it is by unlocking more power, more torque, more efficiency, and yet, doing so with a low carbon fuel hydrogen, so just a fantastic opportunity for our industry and the environment, and so we see those developments being realized as we do the work in our labs and with our customers, and then moving on stepwise to programs that will lead to production, so that productionization will take some time, but I expect there'll be some demonstration programs on the way to production, because there is, in the industry and with our customers, substantial excitement, if you will, about the ability to maintain their investments in factories, in know-how, in supply chain by reusing the existing diesel engines, but feeding them with clean hydrogen fuel, and yet preserving and enhancing the performance of those engines, so it's really a great combination that we see as a real big driver of our HPDI business in total, and let me just expand on that.

As our customers recognize the opportunity that hydrogen HPDI offers them with respect to performance, with respect to efficiency, with respect to a low carbon future, they're seeing also that with that hardware in their engine, they can adapt and use methane today because the technology is so similar between the hydrogen offering and the methane offering, and therefore, we see that as a driver more near term for our HPDI business in total as customers adopt the technology and apply it for methane and biogas today and hydrogen into the future.

Andre for Colin Rusch

Analyst, Oppenheimer and Company

All right. Thank you, guys, so much.

David M. Johnson

Chief Executive Officer

Thanks, Andre.

Operator

Our next question comes from Rob Brown of Lake Street Capital Markets. Please go ahead.



Robert Brown
Analyst, Lake Street Capital Markets

Hi. Good morning.

David M. Johnson
Chief Executive Officer

Good morning, Rob.

Robert Brown
Analyst, Lake Street Capital Markets

I just wanted to get a little further colour on the demand environment for the HPDI in Europe. I think you talked about fuel prices normalizing. Have you seen that demand picking up yet, and what's your expectations for growth in that business this year?

David M. Johnson
Chief Executive Officer

Yes. It's a great question, because I think it's sometimes—maybe oftentimes very hard to see this market dynamic, and so let me just go back.

We've been on a growth curve with HPDI until 2022, and the reason for that sag in the volume and the decrease in volume that we reported today and our numbers through the year is all due to LNG prices, so the LNG prices—or let's just back up to the commodity price of natural gas, went up on the order of six-fold, depending on exactly which time points you take, but, I mean, really, huge increase, and thankfully, there's been some recovery, and we're now back into low commodity prices and we're starting to see those prices show up at the pumps, and so we need that price differential, that price advantage that we had, let's say in 2020 and before, not only re-established, as basically the case already in Europe and also in China, but also we need it to persist so that customers that are buying trucks, which are long-held assets; three, five, seven years, can be comfortable that they buy it today and save money operating it, and that it's going to keep saving them money, and so there needs to be this stabilization that lasts a while, and that is starting to show a pick-up in volume, so we're encouraged by the outlook. We're looking at the fundamentals and saying, thank goodness, natural gas prices have come back to where we think



they belong relative to diesel, and that will drive our business, and so what we're looking forward to that recovery in the quarters ahead.

Robert Brown

Analyst, Lake Street Capital Markets

Okay. Good, and next question is on cost structure. You talked about taking steps to adjust that. How much cost can you take out or what's your plan in terms of cost take out?

David M. Johnson

Chief Executive Officer

Let me talk at a high level first, and then I'll ask Bill to chime in with maybe some more specifics, but fundamentally, the Company, Westport Fuel Systems, been built over years through merger and acquisition, and only during the last few years have we put a drive in place to really drive—define the efficiencies, unlock the efficiencies, and realize those efficiencies to the bottom line, and that's, I'll say, starting to bear fruit now, so we have a one company principle that we're—one company culture that we're building, and that is offering us the opportunity to leverage the key assets of the Company that were in separate pockets now as one company and unlock the synergies that allow us to grow the Company without growing our OpEx, I would say is fundamentally the principle.

Bill Larkin

Chief Financial Officer

Yes, also, I think aside from—as David mentioned, we've—this Company's grown over acquisitions and we have quite a bit of production capacity across all those physical locations, and so we're going through and analyzing what components do we produce in each of those locations, what's our capacity in each of those locations, and what level of excess capacity do we have, and then look for opportunities. We're going to go fill up that capacity or are we going to shrink that capacity in the related cost, so we're going through this analysis right now, and that's an ongoing process that's going to keep going on through the year and well into next year. However, I think there are some opportunities to help really optimize our production facilities across the Company, and I think in the future, that will—we will start seeing, hopefully, reduction in our cost, as well as improvements in our overall margins.



David M. Johnson

Chief Executive Officer

Maybe, Rob, just to add a bit more on—thanks, Bill—fundamentally, being an efficient Company, utilizing our capacity and capability to their fullest is fundamental to being that responsive, efficient, effective, Tier 1 supplier that we aim to be. At the same time, I think it's really clear that the kind of losses that we had in 2022, we can't fix all that with cost cutting. It is about growth. Westport Fuel Systems is driven by growth. What we want to let you know and let the market know is that we're not waiting for growth to become efficient, so we have to do both, and that growth is really critical.

On the light-duty OEM side, the contracts we signed last year starts in the fourth quarter. That's important growth for us and will increase our utilization of our productive capacity and drive economies of scale, and the growth that is the future of HPDI is absolutely critical. We've been talking about that for a long time. We saw a dip in 2022, which is the wrong direction. We expect to recover that dip and press forward with the growth curve that we started out in 2018, and that means growth from our original European customer, but also growth in other markets as is so important to our business equation.

Robert Brown

Analyst, Lake Street Capital Markets

Okay. Thank you. I'll turn it over.

David M. Johnson

Chief Executive Officer

Thanks, Rob.

Operator

Our next question comes from Eric Stine of Craig-Hallum. Please go ahead.

Eric Stine

Analyst, Craig-Hallum Capital Group

Good morning, everyone.



David M. Johnson

Chief Executive Officer

Morning.

Bill Larkin

Chief Financial Officer

Good morning.

Eric Stine

Analyst, Craig-Hallum Capital Group

Hey, so just sticking on the cost side, and so I know it's still early in the process and going through and looking at your facilities and the overlap and all of that, but would you agree that—it sounds to me like it's more—you expect to grow, and multi-year, potentially pretty significantly. Your goal is more to just keep your costs the same rather than trying to find a number that you're going to take out of the business. Is that a fair characterization?

Bill Larkin

Chief Financial Officer

Yes. I wouldn't say keep the cost the same, but what I would say is we have to be careful to not hurt our fundamental growth prospects in the cost cutting, right, so as an example, we're investing right now in next generation technology for HPDI. Engine working pressures are going up and we have to invest in that, and so it would be foolhardy to cost cut in our technology development area because we're in this for the long game with respect to HPDI being a dominant technology of the future with cleaner, affordable fuels; natural gas, biomethane, or hydrogen, so what we're saying, though, is that we need to look at, okay, so very clearly, what is our footprint today, what is our footprint in the future, how do we traverse this time period in a way that sets us up for the future, but also is super cost conscious in the present, so it is that balance of both, and yes, we won't be out there, I don't think, with a here's our cost cutting strategy and slash—but that that's not Westport Fuel Systems. Our primary driver of future profitability is growth, but in the meantime, we see plenty of opportunities to become more lean.



Eric Stine

Analyst, Craig-Hallum Capital Group

Yes.

David M. Johnson

Chief Executive Officer

We're not going to cut our way out of this process. It's going to be a balanced approach between growing the top line, as well as managing our cost structure.

Eric Stine

Analyst, Craig-Hallum Capital Group

Yes. Okay. Understood.

Maybe just turning to gross margin, clearly not a number you're happy with just on—for the fourth quarter, and you cited a number of reasons. Just curious, in light of some of the steps that you're taking there in the business in '23, how do you envision that? What's a way to think about that and where the recovery might be and how it might play out?

Bill Larkin

Chief Financial Officer

Yes. Unfortunately, when we look at the fourth quarter, we had a lot of negative things line up the wrong way that impacted our margins. As we talked about, we had the mix. We had a little bit of slowdown demand in Western Europe, which is what I call a higher margin market for us versus—however, we did see increases in sales to India. However, it's a lower margin market, so mix played a big part of that, so again, we're looking at our cost structure. We do expect, as we look into '23, we are—all these initiatives that we're talking about, from growing top line, working with our suppliers, passing on price increases to our customers, all these together are going to improve our margins and our bottom line, so it's not going to be one specific item where we're going to see significant improvement in margins. It's going to be a combination of many initiatives, and so as we look into '23, we are going to expect—we're going to see some improvements in our overall margins, clearly, when we compare that to our fourth quarter margins.



Eric Stine

Analyst, Craig-Hallum Capital Group

Got it. Okay. That's helpful, and then last one for me, just on the hydrogen components, you mentioned a \$100 million OEM pipeline here. Just curious, any commentary on how that's expanded, say, over the last year or two, and I'm also just curious on your thoughts on the competitive environment. You mentioned an increased number of RFPs or RFQs that you are responding to, and so just thoughts on that as well.

David M. Johnson

Chief Executive Officer

Yes. Thanks, Eric.

This hydrogen components business—and so just to be clear for everybody, basically, the hydrogen components business to us means all those things that attach a fuel tank to a fuel cell or an engine, so all the regulators and valving between the tank and the fuel cell and the engine. This business, for us, has been a really—a growing business over last five years, but maybe even longer term than that. We saw significant growth in 2022, and as per our announcement earlier this year, that we would have production capacity in China going forward. That growth has been dominated by our North American market and our Asian market, and so what we're seeing now and the new business that we've secured is expanding into Europe, and so that work to—that the governments are doing around the world to build hydrogen economies is really to the benefit of our hydrogen business, and so we see this growth trajectory, not just as a short term, hey, this has been nice over the last few years, but actually as a long-term path where hydrogen increasingly is an important part of what transportation relies on, and from a competitive standpoint, we feel very much in the lead. There are competitors and we quote against them, and we're having a good hit ratio in terms of winning those—that business, as evidenced by that \$100 million pipeline, and so we feel good in our position, and we think we need to invest in that position to enhance our offer to the marketplace in places like China, hence the investment we're making there.

Eric Stine

Analyst, Craig-Hallum Capital Group

Okay. Thanks.



David M. Johnson **Chief Executive Officer**

Thanks, Eric.

Operator

Our next question comes from Amit Dayal of H.C. Wainwright. Please go ahead.

Amit Dayal **Analyst, H.C. Wainwright & Co.**

Thank you. Good morning, everyone.

Most of my questions have been asked, but just wanted to touch on these warranty costs that you highlighted that impacted revenues and margins for you guys. Could you talk a little bit about what these were and whether these are potentially in play for 2023 as well?

David M. Johnson **Chief Executive Officer**

Yes, for sure. This, I'll say, significant cost that we experienced in Q4 and booked is related to a supplier quality issue that we had in our HPDI system. It was a fair amount of work, and this is an area where we can't cut. We have to deliver on quality and we have to be able to work with our suppliers to solve these kinds of issues. We have solved that issue. It's basically behind us in terms of addressing the fundamental supplier quality issue we faced, and so that's hopefully a one-time occurrence, right, but in the business of supplying to the OEMs, you have to stand behind your product. You have to do what's right, and this is one that we had to cover in this past quarter.

Amit Dayal **Analyst, H.C. Wainwright & Co.**

Understood, David, and then, in terms of the price increases you're planning to implement, have these already been initiated, or are these coming in the next few quarters?



David M. Johnson

Chief Executive Officer

This is an ongoing process, right, because inflation continues, so we've done a number of price increases. I'll tell you it's a bit easier in the aftermarket, because basically, we don't have any long-term supply agreements and—to our customers. It's all on a transactional basis. Whereas, with our OEM business, there are long-term supply agreements we have with our customers. We have to go back and sit at the negotiation table and demonstrate the cost increases that we've experienced and pass those on.

One of the things it does do when you look at margin percentage, is we're passing on cost increases for the most part at cost, and so that squeezes margin by definition. Nonetheless, that activity will persist as inflation persists and is a part of our daily business as opposed to a one-time activity.

Importantly in that, we do have long-term supply agreements, for example, with HPDI with our lead OEM customer in Europe. That was a contract that was penned back in 2015, and we've been living with that contract, which called for significant price downs year-over-year that we've been mentioning year-over-year as they've come into effect, but fundamentally, we're coming up on a chance to revisit those—that supply agreement and reset the table there.

Amit Dayal

Analyst, H.C. Wainwright & Co.

Understood. Thank you, and then, you're targeting growth for 2023. Should we expect year-over-year growth each quarter? I'm just trying to think through sort of from a modeling perspective how this will play out. Should we expect a heavier second half, or are you already seeing some traction with sales relative to last year?

David M. Johnson

Chief Executive Officer

What I would say there, Amit, is that we have some seasonality for sure in our sales cycle. Typically, as you know, August is our shutdown period, and so the third quarter tends to be a little lower, so I'd say that seasonality will persist, and so far, so good in this—in the first quarter of this year. As the sales' been unfolding in January and February, we feel good about the progress, but there's a lot of work to be done. The markets are not stabilized. Frankly, as I look back on '22, I feel pretty good that we had this significant challenge with the loss of our Russian business, which we had quoted this time last year as 15% to 20%, or 10—excuse me, 10% to 15% of our business.



We were able to largely offset that, and so we're in the good fight and we have work to do, but so far, so good. Natural gas prices being lower, good price advantages between LPG and petrol in our main markets, we see that recovery, but again, it's not a steep recovery. It's a recovery.

Amit Dayal

Analyst, H.C. Wainwright & Co.

Appreciate it, David. Thank you. That's all I have.

David M. Johnson

Chief Executive Officer

Thanks, Amit.

Operator

Our next question comes from Chris Dendrinis of RBC Capital Markets. Please go ahead.

Chris Dendrinis

Analyst, RBC Capital Markets

Yes. Thank you.

Just echoing some of David's comments earlier in his prepared remarks, we were down at CERAWEEK last week, and very encouraged by some of the commentary we were hearing on the hydrogen ICE engine outlook and enthusiasm from some of the oil and gas companies down there. Just maybe just building on that a little bit, and I appreciate you can't say much on this topic, but you announced that third collaboration agreement with the—with an OEM. Can you maybe just elaborate on that a little bit more? How did that relationship come together? How long had you been talking to them, and then maybe just a timeline on the evaluation plans there?



David M. Johnson

Chief Executive Officer

Yes, sure. Thanks for the question, Chris, and I think your point on, let's say, various elements of our industry waking up, if you will, to the opportunity that is hydrogen internal combustion engines, I truly feel that we are the ones waking them up, because we've demonstrated so clearly that hydrogen with HPDI can deliver more performance and more efficiency, and relatively straightforward with existing technology, and so we talk about our customers

That contract that we signed just a few weeks ago and announced for our third demonstration of hydrogen HPDI, this is a customer that's known us for a long time. It's not a customer that we just discovered under—behind some tree or under some rock. This is a relationship we've had for a long time, but we had a new offer. We had hydrogen HPDI, and so the process then of helping them understand the potential of that technology and unlocking their interest and getting them to sign a contract and send us their engine and do the work that's ahead of us, this was a—I'm going to call it a 12 to 18-month long process that really started back at ACT Expo where we unveiled hydrogen HPDI to the world, made it clear, and explained, I'll say in tremendous technical detail, how this does what it does and how we deliver 20% more power, 15% more torque, 10% more efficiency and do it so, let's say, easily with our existing HPDI technology, so that is very compelling, and hence the ability to bring on a third customer.

Having that proof point of Scania's engine demonstrating 51.5% brake thermal efficiency, basically when that press release hit the wire, we got calls from people we know, but then like, oh, there's actual—this is really happening, so this is—yes, it's super exciting for us and we're really compelled by it, and looking forward to having great results with the projects we've signed, and you'll be able to see some of those, or the industry will see those at the Vienna Motor Symposium in April, but there'll be more coming after that, I'm certain.

Chris Dendrinis

Analyst, RBC Capital Markets

Great. Yes. Looking forward to hearing more on that.

Just as a follow up, on these customer conversations, can you provide any colour on where the interest level is most coming from geographically? Is it still heavily in Europe or is there a pick-up in some other regions?

Thanks.



David M. Johnson

Chief Executive Officer

Yes, so one of the ways that I think about this, Chris, is that, basically, the mature markets, the well-developed markets around the world; that means Europe, North America, some parts of Asia, are really keen to get to hydrogen and clean technology, and they need to do so affordably, and so that is where the primary interest comes from, but it is, I would say, very global, right, and in the industry, when we talk about heavy-duty long haul trucking, that's about 50% of all the trucks made. All the commercial vehicles in the world are heavy-duty long haul. Those players are global players. I would say with the exception of the Chinese, they're companies like Daimler that have trucks all over the world, be it freightliner trucks, or Traton Group with Scania, MAN, Navistar. These are global players, and so we continue, and this week, my team is in Tokyo, for example, at the Fuel Cell Expo, and at the Fuel Cell Expo, we're showing fuel cell hardware, as well as internal combustion engines that run on hydrogen.

Chris Dendrinis

Analyst, RBC Capital Markets

Got it. Thank you. Yes, I'll leave it there.

David M. Johnson

Chief Executive Officer

Thank you, sir.

Operator

Our next question comes from Mac Whale of Cormark Securities. Please go ahead.

MacMurray Whale

Analyst, Cormark Securities

Hi. Good morning.

Just quickly on the hydrogen HPDI, can you just take us through the broad strokes of what the plan is with these various—these three particular partners? I'm just wondering, like, take us through, like you have a demo, it takes whatever number of months and then you progress to the



next step. What is that next step and how long does that take? Just trying to get an idea of what the milestones we should be looking for.

David M. Johnson

Chief Executive Officer

Yes. Thanks for the question, Mac. Good to hear you this morning.

Fundamentally, the steps I would from—sorry, from my career, are very traditional. In other words, it starts with a meeting. We talk about PowerPoints and technology demonstrations and computational fluid dynamics and good engineering stuff. It leads to these demonstrations that we've announced; the Scania demonstration. We had completed and published and shared those results with the world already, but the work goes on to check other corners of the map and understand, of course, the work that we're doing with Johnson Matthey to develop an after treatment system that would couple with our fuel system on a diesel engine, produce the cleanest, most affordable way to use hydrogen in long haul trucking. This is really critical because OEMs need the full set of solutions. We're not an after treatment supplier, so we need an after treatment that goes along with it. I don't see any technical hurdle, nor does Johnson Matthey. We've got to go do the work and show this demonstration.

Meanwhile, I do expect in this world of hydrogen internal combustions and the technology that we're offering, that we will have some demonstration programs, and these demonstration programs will be very important, so we've already demonstrated two trucks, one in North America and one in Europe. I expect they'll be—we'll start to see opportunities for fleets of five, 10, maybe more trucks at a time as hydrogen hubs are built out and electrolyzer capacity, and people are going to say, okay, now we've generated this hydrogen, let's put it to use, and our solution will be one of the most effective and affordable ways to do that, and therefore, I expect those demo programs.

In parallel with the demo programs, I'll say, is the normal development of actually taking the hardware, building multiple sets of prototypes, doing the validation—development and validation cycles, passing emissions, and bringing it to production, and so that cycle is on the order of—we're looking at the latter half of this decade, '26, '27, '28, that we could see first production launches, but there's always a chance that someone gets aggressive and goes faster, but typically in our business, we tend to go a little slower than faster, but we'll have to see what the regulators drive us to. These new regulations that are proposed in Europe that call for a 45% reduction in CO2 by 2030 and a 90% reduction by 2040, maybe the only way to get there is hydrogen HPDI.

MacMurray Whale

Analyst, Cormark Securities

If we look at Scania specifically, the demo's done, you've released the results, so do they—is that now done and you wait for them to come back to you to say, okay, we're going to go and do a fleet of five, or I'm just wondering what the nature of that is on an individual basis?

David M. Johnson

Chief Executive Officer

Yes, so that demonstration that we published with Scania was, I'll call it almost a single point demonstration. There were a few points, obviously, but it wasn't a comprehensive demonstration. You start with steady state and you move on to transient, so we're continuing to do work with Scania, and with their engine, obviously at our test cells, and that work basically expands the understanding and the mapping of the engine across many different modes of operation and speed load points, and so forth, and starting to work on transient behaviour, so some of those results will be published also at the Vienna Motor Symposium.

A year ago when we published our first hydrogen HPDI results at the Vienna Motor Symposium again, we were one of like 13 papers on hydrogen internal combustion engines. We were the only one demonstrating more power, more torque, more efficiency, because we were the only one using HPDI. This year at the Vienna Motor Symposium, there'll be two papers presented on hydrogen HPDI, and so I really expect that will continue to grow as more and more of our customers bring their results to the marketplace and share them with the industry.

MacMurray Whale

Analyst, Cormark Securities

Okay, and then moving on just to margin, you talked a lot about it already. I'm just wondering, from a contribution basis, when you look at an incremental volume in both the OEM business and the IAM business, what is the new level of incremental contribution margin you get from an incremental sale? I'm trying to reset our outlook, and trying to understand if there's a permanent shift in the way you're thinking about margin and how it ramps.

David M. Johnson

Chief Executive Officer

I'll make a few comments. Maybe Bill would like to, too. First of all, Mac, I think one of the things that is complicated to understand about our business is that we have all these different businesses, so there isn't just the Westport Fuel Systems contribution margin. Of course, when you put them all together, you get one number. I understand that, but in our business, actually, we're managing a portfolio of products, a portfolio of businesses, and therefore, a portfolio of contribution margins, all of which are contributing to paying our bills, but none of them are contributing—in aggregate, they're not contributing enough, obviously.

I would say the biggest lever in that is our HPDI business where we've been living with and abiding by a contract and year-over-year price reductions that started when we signed the contract back in 2015 and when we started production in 2018, and frankly, the price has just been going down, and we have a chance to reset that and re-evaluate that and make the right thing, and fundamentally, look, we're—I would love to have lots of low cost product with good margins, but right now, we have low volume product in the case of HPDI, and so we cannot access the economies of scale that we need to make that product as profitable as it needs to be and should be, and so in this low volume area, we have to have higher prices, and so we have that conversation going on now.

MacMurray Whale

Analyst, Cormark Securities

Okay. Those are...

David M. Johnson

Chief Executive Officer

That's the biggest. I don't know, Bill, if you want to add on that.

MacMurray Whale

Analyst, Cormark Securities

Great. Thanks, guys.



Operator

Our next question comes from Jeff Osborne of TD Cowen. Please go ahead.

Jeff Osborne **Analyst, Cowen and Company**

Hey. Good morning.

David, a couple quick ones, just on the housekeeping side, I was wondering, it might be buried in the MD&A, but what's the percent of revenue that hydrogen components made up in 2022? Is there a rough number you can give for that 60% growth?

David M. Johnson **Chief Executive Officer**

Yes. I don't know that it's buried in the MD&A. We don't specifically call that out, but I don't know if we have a number. It's sub-10% for sure.

Bill Larkin **Chief Financial Officer**

Yes, you're right.

Jeff Osborne **Analyst, Cowen and Company**

Okay.



David M. Johnson

Chief Executive Officer

But the growth rate's been really strong, so it will not be sub-10% forever. We definitely see that as a increasing part of our sales mix, and looking forward to having that showing up more clearly in the financials in the future.

Jeff Osborne

Analyst, Cowen and Company

Look forward to that, and then how do we think about—you gave the CapEx guidance and some comments on seasonality. How should we think about the expense run rate through the year?

Bill Larkin

Chief Financial Officer

Operating expense or...

Jeff Osborne

Analyst, Cowen and Company

Correct. OpEx.

Bill Larkin

Chief Financial Officer

I think a lot of the variation that we're going to see in our OpEx is going to be more in the R&D as we invest in various programs, and so as I look at each of the line items, our G&A, sales and marketing, that should be relatively consistent throughout the year, but R&D will fluctuate depending on levels of investments in these various programs.

Jeff Osborne

Analyst, Cowen and Company

Safe to say still trending higher through the year?

Bill Larkin

Chief Financial Officer

It depends on the timing of the programs, the level of effort, if we need to make any investments in CapEx, so it's going to vary.

David M. Johnson

Chief Executive Officer

What I would add on to that, Bill, is that—and Jeff, is that basically the more customer projects we do, the less R&D we have capacity for, so if you think about kind of our engineering staff on a global basis has some kind of fixed costs, actually, it does vary as the staff changes in size here and there. We add a few people as we grow, for example, but fundamentally, when we get more projects with customers like the one we announced a few weeks ago, that takes away from our capacity to do R&Ds. We have to manage that and balance that, because obviously we don't want to be not investing for the future, but it does, in the near term, decrease our R&D expense and move some of the R&D expense to cost of goods sold, essentially.

Jeff Osborne

Analyst, Cowen and Company

Got it. That's helpful.

The last question, David, you made a lot of comments about China and hydrogen, which was great to hear. Can you just give us a quick update on what you're seeing with China and the natural gas side of the business?

David M. Johnson

Chief Executive Officer

Yes, so we have seen, for sure, some really encouraging developments with respect to fuel price in China where basically the advantage of natural gas has been largely re-established, much like we're seeing in Europe, maybe not to a 100% level there. Maybe it's like an 80% level, and then there's, I would say, generally, for a guy running a fleet of 50 or 100 or 500 trucks, there's some is it going to stay this way, so should I buy natural gas trucks? Is it going to stay this way, so the market is—for natural gas trucks is starting to come back, but it's not coming back. It's like step function. Like, okay, now buy a natural gas truck, so that's happening in a, I would say, modest way.

At the same time, we were hugely excited to see our customer show a natural gas engine with the highest brake thermal efficiency I've ever seen for—engine for a long-haul truck kind of application, so this announcement by Weichai Power of 54.16%. I love the specificity of the brake thermal efficiency unit, such a great number. I mean, for years, decades we've been trying in the industry. As an example, the U.S. DOE has had multi-hundred million dollar programs at leading OEMs like Daimler and Navistar and Cummins to develop an engine that delivers 50% brake thermal efficiency with diesel, and for Weichai to come out and show an engine at 54.16%, it's just an amazing accomplishment and I'm super, super proud of them, and so I think this bodes well for the future of natural gas engines in the Chinese market, and we're looking forward to supporting and helping that process go forward and unlock all the efficiency that a technology like HPDI can offer to marketplace.

Jeff Osborne

Analyst, Cowen and Company

Great to hear. That's all I had. Thank you so much.

David M. Johnson

Chief Executive Officer

Thanks, Jeff.

Operator

Our next question comes from Bill Peterson of JP Morgan. Please go ahead.



Bill Peterson

Analyst, J.P. Morgan & Co.

Yes. Hi. Good morning, and thanks for taking my questions and for sneaking us in.

I might have missed this in the intro, so my apologies, but on the LPG opportunity, you mentioned a global OEM for a couple of programs, Euro 6 and Euro 7. Can you help us size the opportunity and help us understand like when does this start? Just any comments on the contribution of this opportunity would be helpful.

David M. Johnson

Chief Executive Officer

Yes. I'm going to do my best to recollect all the numbers, Bill, but we'll certainly point you to the actual press release that had the numbers.

Basically, the production is scheduled to start in the fourth quarter of this year with the Euro 6 for a number of this OEM's applications. I think our number was like €35 million for about two years of production. We have since secured the follow-on business, which I think starts in late '25, early '26. I can't remember the timing exactly for that. It's a Euro 7 application, so the Euro 7 timing is still under discussion. The regulation isn't fully in place yet, but certainly that Euro 7 product will be ready to support the regulation and our customer, but that business then grows from the first contract we won for Euro 6, and I don't remember the number. I apologize.

Ashley Nuell

Senior Director, Investor Relations

Forty million euro annually.

David M. Johnson

Chief Executive Officer

Forty million euro annually as opposed to €35 million or €38 million for the whole contract, so almost a doubling from Euro 6 to Euro 7 in terms of top line revenue figures that we expect from that—those contracts.



Bill Peterson

Analyst, J.P. Morgan & Co.

Yes. Thanks for that incremental information.

Want to come back to HPDI, but in this case for the region of North America, so we know that natural gas really is relatively small, and then obviously, you have the hydrogen programs that look like they're dominated by Europe and maybe China, but if you think about natural gas prices in the U.S., they're low and declining. Is there any opportunity for nat gas HPDI for you, do you see over the horizon, and then for hydrogen, how do you see that progressing? I think you were supposed to have a collaboration with Cummins last year. I'm not sure if that occurred, but I'm wondering what opportunities could exist as we look out in the future for HPDI—hydrogen HPDI into the North America market?

David M. Johnson

Chief Executive Officer

Yes, so let me just start maybe at the end in terms of hydrogen in North America.

It was only, I think, less than a year ago that we basically had the announcement of the IRA with the hydrogen hubs and the significant spending, and so frankly, there's an infrastructure build-out that's started and plans are being made and announcements are being made, and companies like our customer, Plug Power, are investing to create that infrastructure and that hydrogen economy in North America. We think that as that capability to offer hydrogen in the marketplace grows and as the cost per kilogram of hydrogen comes down, as is the forecast in many jurisdictions around the world, maybe every jurisdiction around the world, that hydrogen HPDI will play an important role, and this is not lost on the industry that makes trucks as they look at what about a fuel cell? What about a battery electric? How do I do long haul? How do I respond to the CO2 regulations? What will the CO2 regulations be? What will a zero emissions vehicle actually be defined as, so all these things are in play, and so in North America for sure.

But I want to just point out that in North America, basically, you have four major brands that dominate the marketplace for long haul trucking, and all of them are ones that we have ongoing relationships with and would expect that the products that they make today in this jurisdiction, this jurisdiction being Europe or can be brought to North America, and so, sure, there's some work involved with that, but the answer in the long run is, for sure, and I do think, coming back to your natural gas side of the question, as our customers integrate our HPDI hardware into their engines, there is a natural step that says, now that we've got your hardware in the engine, why don't we do natural gas and biogas right now, because that will help respond to the regulations and respond to our customers with an affordable alternative, so yes, it'll come.



Bill Peterson

Analyst, J.P. Morgan & Co.

Okay. Thanks for that.

David M. Johnson

Chief Executive Officer

Thank you.

Operator

This concludes the question-and-answer session. I would like to turn the conference back over to Mr. David Johnson for any closing remarks.

David M. Johnson

Chief Executive Officer

Yes. Thank you very much, everyone. Thanks for your time this morning.

We fully recognize that the numbers we've posted in 2022, I'll say at the top line, are somewhat encouraging; far from the growth we expect and that we plan for, but fundamentally, to offset the loss of Russian business, to continue to grow in the challenging environment we've had in 2022 and in prior years, for us is a positive sign, but not nearly as positive as we'd like, and when we get to the bottom line, for sure, we have work to do. There's no question about it. That really is largely making sure we're efficient as a company, but also making sure we grow to the opportunity that's in front of us with HPDI and then hydrogen HPDI.

When I think about the marketplace, our developing markets are really looking for affordable technology that's clean, and the well-developed markets are looking for clean technology they can afford, so for us, that looks like a world of opportunity, and as mentioned in my opening prepared comments, we do see—we do believe in this eclectic future that there's going to be more than one technology, and so this myopia that exists in some pockets of the world still that says, hey, it's all battery electric, this needs to be dispelled, and I think we're doing a good job of that by bringing hydrogen HPDI to the marketplace and help people understand that is for now and into the future.



With that, I'll close, and thank you very much for your time today. We're looking forward to talking to you again at the next quarter.

Operator

This concludes today's conference call. You may disconnect your lines. Thank you for participating and have a pleasant day.