



LIQTECH INTERNATIONAL, INC.
(NASDAQ: LIQT)



**THIRD QUARTER FISCAL YEAR 2019
FINANCIAL RESULTS CONFERENCE CALL**

Thursday, November 14, 2019
9:00 a.m. Eastern

CORPORATE PARTICIPANTS

Robert Blum - Lytham Partners, LLC, Managing Partner
Sune Mathiesen - LiqTech International, CEO

PRESENTATION

Operator

Good morning. And welcome to the LiqTech International Third Quarter Fiscal Year 2019 Financial Results Conference Call. All participants will be listen-only mode. Should you need assistance, please signal a conference specialist by pressing the star key followed by zero. After today's presentation, there will be an opportunity to ask questions. To ask a question, you may press star, then one on your telephone keypad. To withdraw your question, please press star, then two. Please note this event is being recorded.

I would now like to turn the conference over to Robert Blum with Lytham Partners. Please go ahead.

Robert Blum

Thanks so much, Gary. Good morning, everyone, and thank you for joining us today to discuss LiqTech International's third quarter 2019 financial results. I am Robert Blum of Lytham Partners. I will be your moderator for today's call. Joining us on today's call from the company is Sune Mathiesen, Chief Executive Officer.

Before I turn the call over to Sune, let me remind listeners that following the conference call, there will be an open Q&A session. You should also note that a replay of this call will be available shortly following the conclusion of the live call and that a transcript of the call will be available on the Investor Relations' section of the company website shortly.

Before, we begin with prepared remarks, we submit for the record the following statements. This conference call may contain forward-looking statements. Although the forward-looking statements reflect the good faith and judgment of management, forward-looking statements are inherently subject

to known and unknown risks and uncertainties that may cause actual results to be materially different from those discussed during the conference call.

The company therefore urges all listeners to carefully review and consider the various disclosures made in the reports filed with the Securities and Exchange Commission, including risk factors that attempt to advise interested parties of the risks that may affect our business, financial condition, and sales of operations and cash flows. If one or more of these risks or uncertainties materialize or if the underlying assumptions prove incorrect, the company's actual results may vary materially from those expected or projected.

The company, therefore, urges all listeners not to place undue reliance on these forward-looking statements, which speak only as of this date and the date of the release and conference call. The company assumes no obligation to update any forward-looking statements in order to reflect any events or circumstances that may arise after the date of this release and conference call.

Now, I'd like to turn the call over to Sune Mathiesen, Chief Executive Officer of LiqTech International. Sune, pleased proceed.

Sune Mathiesen

Thank you, Robert, and good morning to all of you. Thank you for joining us today to discuss our third quarter 2019 results.

I'm very pleased with the results of the third quarter, which highlighted our third consecutive quarter of record quarterly revenue and also a new net income record. Further and equally important, our bookings continue to remain very strong with a growing order backlog. Absent the hiccup we're experiencing in the fourth quarter, due to the mechanical issues in two of our four existing furnaces, I couldn't be more pleased about the progress we're making.

Let's go into the third quarter a bit deeper. As I mentioned, our third quarter marked our third consecutive quarter of record quarterly revenue coming in at \$9.7 million, a 189% increase from the third quarter of last year and up from \$9.3 million in the most recent sequential quarter. I'd also like to highlight that the record quarter was achieved despite of the traditional European summer holiday season in July and August, when most companies shut down for several weeks.

Our net income in the quarter was \$656,000. This was also a new quarterly record for the company. This was a great improvement from a net loss of \$922,000 in the third quarter of last year, and a step up from a net income of \$147,000 in the most recent winter quarter. The new record was achieved despite \$200,000 of exceptional cost associated with the new expansion of our Hobro facility.

We also had several low margin filtration system orders in the quarter, orders that we accepted due to the longer-term strategic significance for our core market. We have now worked through the majority of these low margin projects and our strong and growing market position has enabled us to increase prices on the new orders we are now booking.

Our margin optimization program continues to be on track. During the quarter, we completed the acquisition of BS Plastics, which has been just one of the key components to the margin optimization program we laid out at the beginning of this year, the insourcing of certain manufacturing activities.

By bringing the manufacturing of certain plastic tanks and machine plastic products for our water filtration systems in house, we expect to save upwards of \$1 million in 2020, based on our current production levels, with more significant savings in the years to come as volumes increase.

Additionally, BS Plastics has other customers from which they continue to generate revenue and profits from. So, when you cover the cost savings with profits from BS Plastics' existing operations, we expect the pay back to shareholders to be approximately one year on this investment.

In the third quarter, we introduced the new MK6.1 version of our filtration system. With this new version, we have been able to decrease the cost per system by almost 20%. We delivered the new cost optimized system for about one fourth of the projects in the third quarter, and we plan to deliver it for most projects in the fourth quarter of 2019 and the first quarter of 2020. We're also currently in the development of a new MK7 version of the system, which will offer further cost reductions. The MK7 version is set to be ready in the second quarter of 2020.

Overall, we are on target to achieve our goal of overall gross margins to exceed 30% in the first half of 2020. Now as I assume most of you saw in the press release, we have encountered some mechanical issues with two of the forward system furnaces that make the ceramic membranes for our marine scrubber filtration systems.

As you can imagine, with the significant ramp we have seen over the last few months, we've been operating these systems at throughputs higher than they have ever seen previously. Unfortunately, this has caused a delay in the manufacturing of ceramic membranes for several projects set to be delivered in the fourth quarter of 2019. Due to the furnace issue, revenues for the fourth quarter of 2019 are now expected to be approximately \$6 million.

Customers that may have been impacted by a delay in their originally scheduled fourth quarter shipments have been notified. The mechanical issues highlight our forward thinking in order to order additional furnaces when we did. As we talked about last quarter, the first of the new furnaces that we ordered as part of our manufacturing expansion is set to be installed later this quarter, with three additional furnaces set to be installed in the first and second quarters of 2020. Each of the new furnaces are much more efficient, and they have a much larger capacity than our old furnaces. Our old furnaces will be scrapped, as we put the new ones in production. In total our capacity set to have tripled by July 2020 net of scrapping.

As earlier discussed, we have also placed conditional orders for further furnaces, which could further increase our capacity in the second half of 2020. One final point on manufacturing, the installation and building expansion of Hobro facility has been completed and put into production. The expansion was completed approximately one month ahead of schedule.

As you saw in our press release yesterday, we look forward to hosting you in Denmark in January for our second Investor Day. The event is set just outside Copenhagen at our Ballerup facility, where you will see where we make our ceramic membranes, including the new furnace installations. Please contact



Robert Blum for additional details.

From an order perspective, we continue to gain market share within the marine scrubber industry. This is largely in part to the unique ability for our proprietary ceramic silicon carbide water filtration systems to work seamlessly with a number of different scrubber manufacturers. This agnostic approach has served us well as a number of new engines have come into the marine scrubber market, particularly from Asia, where we have added a number of new customers.

During the quarter, we continue to experience a strong interest for our water filtration systems. We are pleased to note that our order backlog continues to grow, and it provides us with great confidence in a strong 2020. In the quarter, we also announced our largest single order to date, placed by one of the world's three largest shipping companies.

The order follows the recent installation and system deployment by this same customer on the two largest container ships in the world. This particular shipping customer has placed multiple orders over the last three years for our proprietary water filtration systems, with us, having received over 95% of their planned and completed scrubber installations so far.

I believe this order, along with many other very large orders we're working on, continues to validate our market position within the marine scrubber market. We have also started receiving orders against our third framework agreement announced in October 2018. This new product, which was specifically developed in conjunction with the scrubber manufacture, would be a great addition to our existing marine scrubber water portfolio, as it offers an attractive operating structure with rapid return on its capital investment.

We have great expectations for this corporation, and we believe that it will be a very important part of our revenue going forward. The market dynamics of the marine scrubber industry continue to trend towards closed-loop systems as opposed to open-loop systems. Again, closed-loop systems include a water filtration system that cleans the dirty liquid prior to discharge back into the ocean. Open-loop systems, simply take the dirty water, which includes all the contaminants, and discharges it back into the ocean. Open-loop systems defeat the purpose the IMO was trying to achieve by removing these harmful contaminants from the environment.

Based on conversations we had with our largest customers, the marketplace understands these dynamics and are already preparing for what many believe is the invincible ban of open loop systems in favor of closed loop systems. One of the largest manufacturers in the marine scrubber market mentioned to us that they expect up to 50% of the 2020 marine scrubber orders to be closed loop. This compares to approximately 10% closed-loop systems and 90% open-loop systems at the same time last year.

They also mentioned that the current trend towards closed-loop scrubbers is not only driven by the expectation of a worldwide ban of open-loop discharge and the current ban of open-loop discharge in more than 60 ports around the world, but it's also driven by increased pressure from end customers and shipping companies to utilize superior environmentally friendly scrubber solutions. By the end of 2019, industry forecasters estimate approximately 4,000 open-loop installations [indiscernible] installations. With the current trends, we believe that many of these will be converted to closed loop. This significantly increases the already large addressable market we have estimated in the past.



One of the growth areas we have discussed beyond the marine scrubber market was our ability to take our technology and have it applied to a variety of other industries, where the need to filter very heavy contaminants was required. Two notable areas where increasing legislation, as well as market dynamics, is driving demand is in the power plant as well as oil-and-gas industries. We continue to book orders for power plant systems and believe that it will be an important part of our business in 2020 and onwards.

In the oil-and-gas market, we successfully completed a pilot trial with one of the world's largest oil-and-gas companies. We are now bidding on numerous projects with this and other customers with orders expected fee received in the first half of 2020. For those that have followed the company for many years, you will remember that the oil-and-gas market was one that we had limited success in many years ago.

As the price of oil drops, we were less looking for alternative applications. Given the success we have had in the marine market and the current trends in the oil industry, we are now revisiting many of those previous relationships with much higher levels of interest. We look forward to reporting back to you on the outcome of these projects we're bidding on.

Lastly, we continue to make progress on developing our NOx reduction products. Many within the industry believe this will be the next key initiative following the implementation of IMO 2020, which is a SOx reduction initiative. We remain on target to launch the product in 2020.

Before I turn the call over to your questions, a couple of last points I wanted to highlight. First, we installed a new \$5 million credit facility for the leasing of new furnaces and other working capital needs. This new working capital facility, coupled with our profitable operations, and a balance sheet that has \$11.6 million on it has been put us in a very strong working capital position.

Also, now that we are approaching the end of the year, I would like to take a step back and look at 2019. We have managed to triple our business, and at the same time turn the company profitable. We continue to gain market shares in the marine scrubber market, and we are making progress on margin optimizations, with further improvements planned for the coming quarters. Overall, I'm very pleased with the progress we made in 2019.

2020 is also setting out to be equally exciting. We have regulatory tailings that continues to grow our addressable market in the marine scrubber industry. We're making progress in several new applications and industries. We have a growing order backlog and we're expanding our capacity to meet the demand. So while we are going to see a bit of disruption in the fourth quarter, due to the mechanical issues on the two furnaces, we believe that we should be back to operating at full capacity shortly and returning to our most recent growth trajectory in the first quarter.

With bases in our current order book, we're expecting first quarter 2020 revenue in excess of \$12 million. We also expect continued improvements in our profitability due to increased sales prices and cost optimizations.

It's gratifying to see the adoption of our technology across the marine scrubber market and now into adjacent industries. I believe there are far reaching applications for our proprietary technology, and



we're just scratching the surface for the various opportunities available. I look forward to the continued growth and diversification of our business into the future.

With that said, let me now turn the call over to any questions you might have. Operator, please.

QUESTIONS AND ANSWERS

Operator

We will now begin the question-and-answer session. To ask a question, you may press star, then one on your telephone keypad. If you are using a speakerphone, please pick up your handset before pressing the keys. To withdraw your question, please press star, then two. At this time, we will pause momentarily to assemble our roster.

Our first question comes from Eric Stine with Craig Hallum. Please go ahead.

Aaron Spychalla

Yes, good morning, Sune, it's Aaron Spychalla on for Eric, thanks for taking the questions.

Sune Mathiesen

Hi, Aaron. Good morning.

Aaron Spychalla

Good morning. Maybe first on the furnaces, it sounds like—can you just talk if they're back up and running. And then, any sense if you've seen or anticipate any impact from the scrubber relationships.

Sune Mathiesen

Yes, so let's take the furnaces first. We have, right now, two furnaces up and running, we have one furnace which is permanently down, it seems like, and we have another furnace that is running a little bit on/off. And that's all baked into that fourth quarter revenue expectation that have announced today.

We are getting the first of the new furnaces delivered right now, and it's been put into manufacturing right now. We expect it to be up and running by the end of December. And then we're getting three additional new furnaces in the first and second quarters of next year. And again, everything is baked into that \$6 million revenue expectation for the fourth quarter this year and \$12 million for the first quarter next year.

Aaron Spychalla

Alright. And then, I guess, anything on that business in the fourth quarter, any impact you're seeing or anticipate to see with those scrubber customers?

Sune Mathiesen

No, we had a good dialogue with our customers and we're not expecting any negative impact from this at all.

**Aaron Spychalla**

All right. And then, on that first quarter number, you talked about it being baked in there, but just in that \$12 million, is there any expectation from the additional furnaces that are coming in, or is that just kind of what you have now plus that first furnace that's kind of set to be up and running by the end of the year?

Sune Mathiesen

Yes, it's really based on that furnace being up and running, which it will be, and then the additional capacity that we have. We are getting the second furnace delivered in January. It will be up and running by mid-February, so that's also part of that revenue expectation.

Aaron Spychalla

Okay, thanks. And then, maybe on the orders, can you kind of disclose, like you have in the past, you know, some sort of kind of a book-to-bill maybe on what you saw with the filtration systems? And then, just any color on kind of how that backlog is made up between the framework agreements versus others. And then, just anything on timing, is that mostly 2020, does it stretch into 2021?

Sune Mathiesen

Yes, so the framework agreements have been going very well. We have the two first ones we announced in the spring of 2018. One of those customers already exceeded the expectations for 2018 and 2019. The other one is coming pretty close to those numbers we were anticipating, so we're very pleased with that.

As I mentioned in my prepared remarks, the third framework agreement we announced in October last year is now starting to generate orders. It's been kind of slow rolling out, we launched the new product in June this year. And we're now seeing the first orders. And from what we see right now, it looks very exciting and it looks like we're going to be meeting our expectations for that framework agreement, as well.

In terms of book-to-bill, as I mentioned, we are seeing great order backlog and the book-to-bill ratio was about 1.4 in the quarter.

Aaron Spychalla

All right. And then, maybe last for me, just you know, seeing the strength in shipping rates in the industry and just some of the commentary from some of the guys in Europe, can you just maybe talk about that the market dynamic, is that kind of pushing anything out? And you talked a little bit, but it sounds like it's pushing some things over into Asia where you are capturing some new customers.

Sune Mathiesen

Yes, so we definitely saw a shift in market shares in the marine scrubber industry. Going back a year we had some very dominant European players, it was early stages. What we've seen in the last 12 months is a lot of new Asian players coming into the industry. And there has been this shift in market share. It's correct, we're seeing certain European players come out in the last couple of months and say they saw softening scrubber demand. And we think more than anything that was due to shifting in market shares really.

On top of that, what I also mentioned in my prepared remarks is that we see a much higher adoption of closed-loop scrubbers now versus open loop. Again, going back a year, there was approximately 10% closed-loop systems where we are versus 90% open-loop systems, and what we see now and what we hear from our customers is that upwards, again, 50% of the orders for next year could be closed-loop.

So, we really have an expanding market in front of us. We think we have about 50% of that closed loop market and it looks like we have tailwinds right now and that our addressable market would be much larger going into 2020.

Aaron Spychalla

All right, thanks for the color. I'll turn it over.

Sune Mathiesen

Thank you.

Operator

Again, if you have a question, please press star, then one.

The next question is from Rob Brown with Lake Street Capital Markets. Please go ahead.

Rob Brown

Good morning, Sune.

Sune Mathiesen

Good morning, Rob.

Rob Brown

On the first furnace issue, when did that start, how recent is that, did that impact Q3?

Sune Mathiesen

Yes, so we had issues throughout this third quarter with the two furnaces. We had one of the furnaces we had issues in previous quarters as well. I think it is what it is. We have some old equipment that we've been running for many, many years. We never really tried it out at the ones that we now have, and now that we are running at a much higher capacity, we have been experiencing some issues.

I think what it highlights is the timing, timeliness in ordering new furnaces, which we did last year, we have the new furnaces coming in. The first one will be commissioned by end of this year, the next three ones in the first and second quarters of next year. And we'll scrapping the old furnaces entirely, which was always part of the plan. So, when we get to July 2020, we will have tripled our current capacity and it is really just fourth quarter issue that we're now encountering.

Rob Brown

Okay. And given that the new furnaces won't be commissioned till the end of the year, what's the risk that that kind of delays with those big new kind of what gives you confidence that you can get those up and running and not see issues there?

**Sune Mathiesen**

We have been in the market for silicon carbide manufacturing for 20 years now. On top of building our own factory, we have actually set up a number of factories for other companies over the years. We set up a factory for Pirelli Ordinance, we set up other factories for other competitors in the TPS market. So we are quite experienced in setting up new equipment and we're not foreseeing any major issues in doing this.

Rob Brown

Okay. And could you maybe characterize the order book a little more? How long does that give you visibility for? What's the sense of maybe number of units, or size of that order book? I think some clarity there would be helpful.

Sune Mathiesen

Yes, so with the order book we have right now, we are getting more and more visibility into 2020. And with the current order book, we do have very good visibility that we'll see another strong year of growth in 2020.

Rob Brown

Great. Okay. And then, maybe how much of that order book at this point is the third framework agreement units, and have you shipped any of those yet?

Sune Mathiesen

We shipped one system so far, and in terms of the backlog, it's a growing part of the backlog. As I mentioned, we just started seeing the first orders come out of that framework agreement, what we see so far, is extremely positive. And they are very, very positive in terms of reaching the anticipated volume for 2020.

Rob Brown

Thank you. I'll turn it over.

Operator

Once again, if you have a question, please press star, then one.

The next question is from Dave Covis with Oberweis. Please go ahead.

Dave Covis

How are you doing guys? Just a couple of quick questions for you. What other color can you give on bookings so far this quarter in terms of what you're seeing?

Sune Mathiesen

I think the color we can give is that we saw bookings from the first framework agreement. We continue to see a strong book-to-bill ratio, which again was about 1.4, and that is a new record revenue quarter.

Dave Covis

Okay, got it. And then you mentioned the split between the closed-loop and open-loop shifting and I know you mentioned one customer getting new, I think you said 50%, I think you said in this current year 2020 or the year ahead 2020. What do you see for across the board?

Sune Mathiesen

Yes, what we see when we speak to our customers in the scrubber industry is that they have seen a drive towards closed-loop systems. If we go back one year, the split between closed-loop and open-loop was about 10% closed loop, 90% open loop.

Dave Covis

In 2018?

Sune Mathiesen

In end of 2018, that was kind of the split between the two. Now, going into 2020, when we talk to our customers in the marine scrubber industry, they are all very positive for closed loop. They see a lot of things happening. There are now more than 60 ports around the world who have banned open-loop discharge. I think there's general expectation that we'll see a worldwide ban of open-loop discharge in the coming years.

And the third thing that we're seeing is a pressure from big end customers, asking the shipping companies to have the most environmentally friendly scrubbers installed. And all of this together, they are expecting upwards, again, 50% of all orders for 2020 to be closed loop.

Dave Covis

Okay, got it. And then you had mentioned more entrants into the marine scrubber industry. Are you seeing more entrants in the filtration market? And how specifically [ph] is that now versus, say, a year ago?

Sune Mathiesen

Yes, so when we readdressed our business strategy in 2014 and transformed the company into a water treatment supplier, we started looking into a lot of different applications. Since then, we have been successful in getting large scale references in oil and gas and power plant, in drinking water treatment, in mining and so forth. But what happened in 2016 was that the IMO passed this new lower cap on sulfur emissions, IMO 2020. Then we started focusing a lot into the marine scrubber industry.

But, simultaneously we have been focusing into some of the other industries, where we have large scale references right now. Some of the industries that are developing well for us right now is the power plant industry, which we have said for a while, we expect it to be a meaningful part of our revenue stream in 2020 and onward. We are starting to see the orders from that industry.

What is also developing well for us is the oil-and-gas market, where we now have some very successful pilots behind us, with some of the big players, and we are now actively bidding for new projects in this industry. So, besides the marine scrubber industry, we have a few markets that are developing quite well for us at the moment and we're expecting them to turn into meaningful revenue in 2020.

Dave Covis

Okay, thank you.

Sune Mathiesen

Thanks.



**Operator**

The next question is from Shawn Boyd with Next Mark Capital. Please go ahead.

Shawn Boyd

Hi, Sune can you hear me okay?

Sune Mathiesen

Yes, very good.

Shawn Boyd

Just to start real quick, on the revenue breakdown, did you disclose earlier what the diesel particulate filters were in revenues in Q3?

Sune Mathiesen

No, we have not done.

Shawn Boyd

Okay. Would you mind just, is it similar to what we've seen in the past or are we still sort of on track for a \$5.5 million, \$6 million year here or is there something different going on?

Sune Mathiesen

No, we're still on track for that. So, from the top of my head, revenue from DPF was about \$1.3 million in the third quarter. And we're still on track for that about \$6 million revenue for the year. We're actually looking into—so as you probably know, the diesel particulate filter market has been challenging for us, for some time. And it kind of stabilized at that \$6 million revenue for the last couple of years.

Now that we're going into 2020, we actually have hopes to see that grow. We have new mandates in Denmark in 2020 through 2022, and we could be up to about in excess of \$10 million in revenue from DPF next year as a result of those new mandates.

Shawn Boyd

Got it. It'll be great to see that growing again. Moving back to the finance issues and the liquid filters. If you did not have the mechanical issues that you're having right now, is your demand such that the March quarter, can you give us—would your March quarter guidance for \$12 million, would that be even higher?

Sune Mathiesen

I think there is a certain amount of potential upside to that number if everything comes together, and we are continuing to see strong demand for marine scrubber systems.

Shawn Boyd

And the other question I have is, within that \$12 million, can you give us any idea of how much of that is pushed out from December orders that would have been in December?

**Sune Mathiesen**

The orders from December are pushed out to several quarters, but I do not have a specific break down from the top of my head.

Shawn Boyd

Okay. Gross margin, switching to that real quick. As you bring these new furnaces online, would that start to bring the gross margin up, I assume, I mean, Q4 is going to be much lower in terms of scale, so probably nothing there. But would we start to see gross margins up in the potential mid-20s or something greater than what we've been seeing even through Q3?

Sune Mathiesen

Yes, so we actually had an increasing gross margin in the quarter, due to several reasons. What is going to happen in the coming quarters is, is a lot of different things. First, in the third quarter, we introduced the 6.1% version of our filtration system that offers lower manufacturing costs about 20% lower than previously. We delivered that system for about one-fourth of the orders in the third quarter, and we'll be delivering it for a bigger proportion of the orders in the fourth quarter in the first quarter next year. So that will generate more gross margin.

When we get into the second quarter of 2020, we'll be launching our MK7 version, which is currently in development. The MK7 version offers even more significant cost reductions. So that should drive higher gross margins as well.

And then finally, as I mentioned in my prepared remarks, we had several low margin projects in the third quarter, orders that we booked six, nine months ago to get established, especially with the new Asian players in the marine scrubber market. Now that we are established, and with the market position that we have, we have a little bit more pricing power, so the orders that we are booking now, they have better margin profiles, so that should improve gross margins as well. And altogether, overall, we are set to hit that goal of exceeding 30% gross margins in the first half of 2020.

Shawn Boyd

Thirty percent first half, got it. Okay. And just last question for me. With the expansion at Hobro, your operating expense is at around \$2 million a quarter. I'm thinking that's already kind of baked in there. Is there any reason that those need to come up significantly in the near term?

Sune Mathiesen

We are anticipating a nice growth for 2020 and as we grow the company, they will grow as well. Having said that, it was a big jump in the third quarter. We're not anticipating as big a jump in the coming quarters.

Shawn Boyd

Got it. Okay, thank you.

Operator

The next question is from Roger Liddell with Clear Harbor Asset Management. Please go ahead.

Roger Liddell

Yes, good afternoon, Sune.

**Sune Mathiesen**

Good morning, Roger.

Roger Liddell

Question on the ports that have banned open-loop scrubbers. You mentioned 60, which is quite a bit higher than China, Singapore, and in the Middle East, that one refueling port and some in the North Sea area. Can you give examples of key ports, other than those already mentioned? I'm just trying to get texture on really what the meaning is of the number of 60 ports.

Sune Mathiesen

Yes, it's certain ports in Scandinavia. It's certain ports in Germany, Australia, so really spread around Europe and Asia. As you mentioned, China has been very aggressive on this ban. They are even suggesting further lower discharge limits in several things from scrubber waste water. So I think we'll see tightening legislation, especially in China in the near future.

These bans around the world have caused the IMO to now put a study group together. They're doing the work right now. They have to report in the IMO meeting in the spring of 2020. And I think, the general expectation in the market is that we'll see a global ban of open loop discharge in the near future. More importantly, what we've noted in conversations with our customers is that the shipping companies are now seeing certain pressure from large inducers.

Big global companies that have sustainability policies in place now, they are forcing the ship owners to install the most environmentally friendly scrubber systems onboard their ships. So, there is this big push towards closed-loop and I think we'll see that that will be a bigger, bigger part of the orders in 2020.

Roger Liddell

You mentioned China's activism on banning open-loop. They've also banned or will be banning discharge of PAHs, which are powerful and well-known carcinogens. Is there interest elsewhere in the globe beyond China on that?

Sune Mathiesen

Yes, there is. It's more and more part of the discussions we have with ship owners. As you know, Roger, we compete against centrifuges in the market. And one of the advantages we have over centrifuges is our ability to remove other things than just sulfur. PAH is one of them. It's already an integrated part of our system, and it's an add-on you can buy with the system. So, we are seeing more and more interest for this and it's something that there is a certain awareness in the market now about these things.

Roger Liddell

Regarding NOx, it is a major health issue. Is there a process underway at IMO to deal with it? And is this a two-year, four-year kind of process as SOx turned out to be, or is there a shorter timeframe on NOx?

Sune Mathiesen

So, there is a great awareness now about the environmental issues with NOx emissions; it is a big problem. The emission of NOx from the shipping industry is horrible, and is what you have been

addressing in passenger cars for many, many years. I think there is a drive in the shipping industry in general that it's moving towards a similar emissions industry. We have seen a lot of new mandates in the shipping industry. We've seen new mandates on ballast water treatment, on bilge water treatment, now on SOx reduction with the scrubbers. I think the general consensus in the industry is that NOx reduction is the next big mandate in the industry.

There are certainly environmental protection zones around the world right now, where we do need NOx adoption already. In terms of timing, I think realistically in the next couple of years, we'll see that mandate, and then there will be a grace period of maybe a couple of years before it kicks into place.

Roger Liddell

Okay. And power plant business, you haven't given anything very concrete about that. Would you be able to put more texture on your expectations for power plants?

Sune Mathiesen

Yes. Again, it's something we've been developing for the last three or four years. We've been successful in getting a number of installations in Denmark. We had our first international orders. And we are now booking orders into 2020. As we said for a while, we think it would be more meaningful part of our revenue stream in 2020 and onwards. We have not quantified that yet. It's still a small baby growing, but we think will turn into something significant in 2020, and by then we'll be quantifying our expectations for the progress.

Roger Liddell

Okay, thank you.

Sune Mathiesen

Thanks, Roger.

CONCLUSION**Operator**

This concludes our question-and-answer session. I would like to turn the conference back over to Sune Mathiesen for any closing remarks.

Sune Mathiesen

Thank you very much, and thank you for everyone joining us on the call today. As a reminder, we invite all of you to come to Denmark in January for our Investor Day and if you have an interest, please contact Robert Blum for additional details. I wish you all a good day. Thank you.

Operator

The conference has now concluded. Thank you for attending today's presentation. You may now disconnect.

