

**Greaves Cotton Ltd**  
**Q2 FY18 Earnings Conference Call**  
**November 7, 2017**

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**Moderator:** Ladies and gentlemen, good morning and welcome to Greaves Cotton Limited Q2 FY18 Earnings Conference Call. As a reminder all the participant lines will be in the listen-only mode and there will be an opportunity for you to ask questions after the opening remarks are concluded. Should you need assistance during the conference call please signal the operator by pressing '\*' then '0' on your touchtone telephone. I would also like to remind all the participants that due to technical lag in the management's line there may be disconnections during the conference call, so requesting all the participants to please stay connected. We will try to connect to management soon. Thank you. I would now like to hand the conference over to the Managing Director & CEO – Mr. Nagesh Basavanhalli, Greaves Cotton Ltd. Thank you, and over to you, sir.

**Nagesh Basavanhalli:** Thank you and good morning all. Thank you for joining us for the earnings call today. Let me start with, as far as the business is concerned for the last quarter, the overall macro challenges that we all faced, Greaves Cotton reported a positive top-line growth of 3% on year-on-year and it was one of the highest quarter performances that we have seen. In terms of some of the backdrop, our strategic initiatives to expand our product portfolio reach as well as some of the bottom-line efficiencies measures that we have been driving within the company resulted in us maintaining the same PAT as of the H1 last year. Last quarter, we are also glad to report that we crossed the 5 million engines mark. We remain grateful to the millions of end users who have trusted our products and our services over the decades.

During this quarter we are also glad to report that our key OEMs has signed up for BS-VI ready Powertrain Solutions for the future thus reinforcing Greaves as a pure agnostic solutions and services company. We remain grateful to our OE partners who have reaffirmed their faith and trust in our technology solutions. Going forward Greaves continues to invest in the technology and building capability for the future and hence it is working on a three-pronged approach of capability building.

We are building the right technology, building the people capability and building infrastructure that will help us on our reach and our service across the country.

So let us take these three pillars one by one:

In the area of technology, we remain focused on our core areas of transportation mobility, farm and energy through a combination of both in-house development of technology as well as technology that we work with our partners and alliances across the globe. We had already talked about other announcements in the past but in this quarter, we saw the announcement of Altigreen Propulsion Labs to develop a retrofitted electric asset solution for a three-wheeler and a micro four-wheeler vehicle. The theme for this is to address the core issue of reduction of carbon load in atmosphere along with providing a cost-effective greener solution for the future.

Moving onto the people part:

We continue to build the organization and we made significant progress over the last couple of quarters and these people would be the ones that will lead the transformation of Greaves into the future and provide leadership to the different business units. We strive to create programs that unlock individual talent and inspire growth.

Moving onto the third pillar on the reach:

Greaves is investing in infrastructure which will enable us to have a stronger access to our customers and our ability to service a full portfolio of customer reach, hence transforming the Greaves business to a more customer facing and addressing the needs of a range of customers in the area of automotive farm, power and of course our aftermarket businesses. Leveraging the strength of our 3500-plus dealer network we have done tie ups with domestic and international partners which continue to grow over the quarters. We are also piloting the Greaves Autocare and we are encouraged by the success that we are seeing over there. This is a multi-brand service and a spares infrastructure for the current and future service and energy requirements of the customers that we are piloting and will be scaling up as we go forward.

With that overview, let me hand over to Mr. Barasia to take you through the financial results.

**Narayan Barasia:**

Thank you Nagesh. Very good morning and thank you very much for joining the quarterly earnings call. Greaves Cotton Ltd, one of the India's leading engineering companies, has reported a revenue of Rs. 452 crores for the quarter ended September 30, 2017 as against Rs. 489 crores including the excise duty of Rs. 50 crores for the quarter ended September 30, 2016. And revenue from operations for the quarter ending September 30, 2017 is reported at Rs. 452 crores with a comparative revenue for the quarter September 30, 2016 of Rs. 439 crores thereby putting around YoY growth of 3% and similarly QoQ growth of 11.8%. The northward movements of commodity prices have recently impacted the material cost. The course of driving operating efficiencies has reduced its operating expenditures and has helped the company to achieve EBITDA of 15% for the quarter ended September 30, 2017. Profit after tax for the quarter ended September 30, 2017 is Rs. 49 crores. The company maintained

PAT for half year ended September 30, 2017 of Rs. 90 crores in line with the same period last year. Despite difficult economic conditions and lag effect of demonetization and impact of GST, all our verticals have grown versus industry, except farm business which has been relatively slow on account of flood impact, impact of GST and slowdown in subsidy relief. Besides we have tightened our credit norms or better credit controls in the network and are ready to move forward in H2.

At this point of time let me open up for your questions. Thank you.

**Moderator:** Ladies and gentlemen, we will now begin with the question and answer session. We will take the question from the line of Vasant Patil from HDFC Securities. Please go ahead.

**Vasant Patil:** Hello sir. Very good morning. Thanks for taking my question. This quarter the other expenses have come down. So is that the reason largely to maintain the overall EBITDA margin? What is the reason? Can you elaborate on this a bit?

**Narayan Barasia:** As we mentioned in the opening statement we have tightened our belt everywhere across the organization in terms of tightening operating expenditures, whether it is travel cost, operating cost, miscellaneous or other expenditures which company had intent to maintain and those tightening of expenditures across the businesses including productivity improvement & several other propel initiatives in the organization has helped us to tighten the operating expenditures & has helped us to maintain EBITDA.

**Vasant Patil:** Second question is, if you see the revenue segment largely, we are largely OEM supplier in auto engine. So rest all the equipment's could be sold in the name of Greaves Cotton. If I consider farm, genset or even any pumps and all, so how the pricing power varies compared to OEMs and what we sell in our own brand? We have a stronger pricing power in our own brand kind of the equipment's compared to OEMs on what we supply? Is that correct?

**Nagesh Basavanhalli:** As it relates to our OEs we have long standing relation with our OEs and we have contracts. We are bound by contracts by the OEs. We have a long term relationship and so the contracts obviously is what binds the pricing and the relationship with us. As it relates to the B2C part of it, I think Narayan will comment on it.

**Narayan Barasia:** So even though it is our own branded genset and farm equipment the pricing depends on the competition, industry as well as the demand and supply solution as per the tide. So I think in OE the pricing is more governed by contracts. In this it more depends on starting on supply equation in the market.

**Vasant Patil:** Can you share the volumes data for this quarter?

**Narayan Barasia:** 3-wheeler volume is 76,000, 4-wheeler has been 9,300, pumps have been at 16,000, Tillers at about 800 and genset at 1100.

**Vasant Patil:** Sir, can you guide on the CAPEX? Is that going to remain the same that we had indicated last year, 100 crores of CAPEX this year?

**Narayan Barasia:** Roughly it is in the range of Rs. 50-100 crores. That is the kind of CAPEX we have.

**Vasant Patil:** So in the first half how much it has been incurred?

**Narayan Barasia:** Those are very difficult to share. We have a few projects in the pipeline and the cash gets incurred basis the project milestone.

**Nagesh Basavanhalli:** But if I can add to that, I think it is enough to say that we remain committed to invest in future technologies whether it is in the area of fuel agnostic transportation or mobility solutions or in the case of power or farm, we are putting a lot of our CAPEX money into technology and people capability as we are readying the company for the future. If anything else, the pace of the operational efficiencies will improve to make up for any additional needs.

**Moderator:** Next question is from the line of Bhargav Buddhaddev from Ambit Capital. Please go ahead.

**Bhargav Buddhaddev:** Good morning Sir& thanks for the opportunity. Sir the first question is, is it possible to know which OEM have signed upBS-VI and whether is it for diesel or all fuels?

**Nagesh Basavanhalli:** I think the good news is lot of our key major customers have already signed on and couple of the other OE customers are in the process of final discussions, point #1. Point #2, the heartening part is they are looking at us across the range – diesel, petrol, CNG, hybrid and in some case electric. So obviously it changes from OE to OE. Some OEs are looking for everything. Some OEs are looking for 2 out of the solutions etc. So the good news is we thank them for reposing their faith in us for the future as well.

**Bhargav Buddhaddev:** Sir, has Piaggio also signed up?

**Narayan Barasia:** Yes,Bhargav. Piaggiohas also signed up

**Bhargav Buddhaddev:** Great sir. Congratulations because Atul Auto is in the public domain, so it is very good that even Piaggio has also signed up. So congrats on that. Secondly, coming to this tie up with Altigreen, how big could be the retrofit for three wheelers in India? I mean if you can just sort of give a number. We are not much aware about this, so if you can just spend some time on this it would be very helpful.

**Nagesh Basavanhalli:** So what I will do is I will give you an overview and over the next couple of quarters we will talk more. Where we are being if you look at the overall size of the population of the three wheelers today, right, and if we look at our engine park they are all the potential opportunities for us as we go forward. Having said that though, we are evaluating the technology, we are going to be doing the proof of concept, We are going to make sure we are going to be commercially ready with all the service and the right value proposition. So it will take up a couple of quarters to kind of work the details out to make sure that we stick to the true Greaves' mantra of providing the best total cost ownership and the best value proposition to the end consumer. So I think we are excited by the technology. We believe that the technology is what could help significantly reduce the carbon load on the existing fleet. How much and what will that potential be, for that you will have to give me a couple of quarters because I want to go through this proof of concept, I want to test the market and I will come back. But I feel the strength of the technology is strong enough.

**Bhargav Buddhadev:** Related question is that are Greaves' existing OEMs keen on working on this Greaves - Altigreen combined technology and is there any dependency on the state policy, meaning you will be waiting for some policy announcement and then possibly going ahead with this? How does it work?

**Nagesh Basavanhalli:** It would be a retrofit solution and it is already being certified by ARAI so in that sense it would be operated out of the Greaves service centers but clearly like I said we have to go through the proof of concept and make sure that we are ready for it for mass commercialization.

**Bhargav Buddhadev:** And this does not have Greaves' factory for retrofit, in fact the engine outlet, meaning the Service Centre, right?

**Nagesh Basavanhalli:** True, so it is an aftermarket kit. And like I said I think some of the details will emerge over the next couple of quarters as we move into.

**Moderator:** We will take the next question from the line of Ashutosh Tiwary from Equirus Securities. Please go ahead.

**Ashutosh Tiwary:** Sir my first question is on the Altigreen only, so I think the video which is uploaded on their website I think it says that the cost will be 60,000 to 1,00,000 per retrofit solution. So do you think that forthree-wheeler also, same range will hold true or, it will be lower for that?

**Nagesh Basavanhalli:** Like I said, I would not like to comment on that cost number. Greaves is always known to be providing the right value proposition which is exactly why in the proof of concept we will figure out what the fleet operator or the end user can bear to give that fuel efficiency improvement. The economics has to work out. So definitely we will look at bringing it in the right value proposition. So I would not comment on the cost right now.

**Ashutosh Tiwary:** But because of the constraints of the states in the three-wheelers can it be fitted over there?

**Nagesh Basavanhalli:** Those are the things we are working out in the proof of concept but the initial answer is yes. We have done the simulation. We are already working with them on that

**Ashutosh Tiwary:** So this will only be offered in the aftermarket, it won't be for OEMs?

**Nagesh Basavanhalli:** Initially it will start with aftermarket, then we can look at it where we go from there.

**Ashutosh Tiwary:** And secondly, how is the aftermarket sales doing for us? I mean what kind of growth you are witnessing in the first half?

**Narayan Barasia:** I think we are looking at a growth of about 4-5%, even in a quarter like Q2 where we actually had a severe impact of GST in the first few months.

**Ashutosh Tiwary:** So are things coming back to normal now and the growth is normalizing now?

**Narayan Barasia:** Yes, I think the things are becoming normal now. The retail has started picking up the inventories, which is good.

**Ashutosh Tiwary:** So the second half we can go close to say double-digit kind of growth, which used to be earlier the case?

**Narayan Barasia:** Yes, absolutely that is what our objective will be.

**Moderator:** We will take the next question from the line of Bhalchandra Shinde from Capital Goods. Please go ahead.

**Bhalchandra Shinde:** Hi sir, Balchandra shinde from Anand rathi. Regarding 3-wheelers engine, as we know there are more and more greener options coming into the market, so obviously now electric vehicles are also coping up and especially electric 3 wheelers. Do you really expect our 3-wheelers market to grow and in 5-years perspective where do we see ourselves because I think diesel engines will see a setback over next 5 years and more and more electrical and greener options will come into the market? So how we think ourselves to cope up with that, so at least on the sales growth side do we really think that we will be able to compensate that decline?

**Nagesh Basavanhalli:** If we look at the 3-wheeler market, in H1 while there has been a decline but in Q2 we saw a promising aspect. Going forward even when we look at the future horizon of 3-5 years out, clearly we believe it will probably stay flat or slightly grow in low single digits when we talk about it. However, what will happen is the overall market size more or less will stay around the same or slightly increase. We see a trend, it could happen by the pure mix that you touched upon whether it is diesel or petrol or CNG or hybrids or potentially down the line

getting into other even electric options. There will be a transition that will happen. The good part about Greaves is with our fuel agnostic power train strategy we even have a benchmark solution for the diesel (that's our home grown),with the petrol and CNG with the pinnacle solutions we will have world-class, world-leading technology solutions. And that remains on track. With the hybrid we already hitched upon it, we will have solution. And we are also working on couple of electric options. So we will remain fuel agnostic solutions provider and we also believe that in the diesel segment, as some of the cities ban it, the rural areas will probably continue strong in diesel at least for the near future as well as the CNG will continue strong because of the base of the grid that has been added. So when we look at the 3-wheeler industry I would say our strategy that we have put in place along with the technology and the solutions that we are putting in place, positions are "very well to capitalize"on the newer areas of growth while still hanging onto our leadership role in our core areas. So I believe we have positioned ourselves quite long going into the future.

**Ashutosh Tiwary:** Sir but on the 3-wheelers side also, even if we take all the spare parts which we have introduced, do we really expect us to continue with the trading or over a period of time we will convert ourselves to the auto-ancillaries' business?

**Nagesh Basavanhalli:** Let me make sure I understand the question; so can you explain the question exactly?

**Ashutosh Tiwary:** As we have introduced many traded components in the after-market, and we are increasing the network, so obviously we are working more and more in developing the network. So are we putting ourselves in that part where we want to convert ourselves towards more like auto-ancillary business by introducing more and more parts and then getting into the manufacturing part of that?

**Nagesh Basavanhalli:** So I think enough to say that you saw even in one of the tougher quarters, with commodities prices rising high, with some of the other macro GST related stuff in spite of that, I think we have not lost sight on our bottom line number, when you look at our EBITDA number. So why do I bring that up? Whatever we do, whether we get into multi-brand spare parts, which is your question, whether we do trade or we do in-house, we go through a rigorous process of make versus buying and we do the same thing for all the components that we manufacture in house. We want to remain competitive, whether we make it in-house or we buy it from outside to protect our margins., so we will go through the same process. Over time clearly some will come in, some will go to the partner or sourcing or the OES route and at the end of the day we want to make sure we are providing the right value proposition for the customer while still maintaining our margins. So I think enough to say that in some areas we will definitely bring manufacture in house, we have already started to do that. In some areas we remain competitive we will probably sore. So I think we go through a strategy of make versus buy then we will continue to work on that as we go forward.

**Ashutosh Tiwary:** So how much time we will take exactly to get into the full-fledged manufacturing part in that multi-brand spare parts?

**Nagesh Basavanhalli:** I think let me make that clear. Our intention is not to manufacture every part. Even in the case of our engine, we do not manufacture every part. We manufacture certain critical components. we also buy certain parts. So I think the strategy will be similar for the spare parts as well. We will probably have a combination. And from time to time we will look at the margins because our interest is to make sure our margins are protected. Our interest is to make sure that the right kind of value proposition can be provided. So do I have a set formula that I will have x percent in-house right now? I would say no, the answer would be where is the right level of margin and where is the right level of value proposition that I can provide to the end consumer. So it is a balancing act and we continue to monitor both. We will look at both they can buy. And keeping fully in mind the competitiveness of our offerings, that is what the focus is and the margins we need.

**Moderator:** We will read the next question from the line of Arpit Kapoor from IDFC Mutual Funds. Please go ahead.

**Arpit Kapoor:** My first question was on pillars, is there any strategy there given the fact that in process of launching the new 14HP pillar that we developed, so how do you see the launch plus the market share shaping up in the next 2-3 years?

**Nagesh Basavanhalli:** Yeah, so on the pillars I think Narayan pitched upon a little bit. That is an area that we deliberately are going a little slower because of the overall macro situation that Narayan described earlier plus the fact that we tightened credit norms given some of the recent changes in the overall DBT and other stuff, right. And again the focus was very clear how do we commercially tighten up to make sure that we are financially attractive as a business unit, point #1. Point #2 is in the case of power tiller, we have two products we deliberately were going through a market seeding, slow market seeding approach, state by state it was more like a micro market. We collected feedback, we got some feedback which could improve our quality and our service, we fixed that and we are going through. So the bottom line is we are in the state of launching it systematically as we go forward. So over the next couple of years I would say that is an area given the fact that ours is an indigenous tiller, ours is also an indigenous engine, the 14 HP engine and based on the early feedback we are receiving we are quite bullish going forward. Having said that though farm is a business, like Narayan said is one of the business that we have work to do because compared to the industry we are behind, whereas all of our other business units we are ahead versus the industry. So this is an area that clearly we need to do better in the next couple of quarters.

**Ashutosh Tiwary:** So are we still aspiring for 25% market share or it is just an aspirational target and it may take let us say a couple of more years to achieve, to get there?



**Nagesh Basavanhalli:** How about I come back to you in a couple of quarters because as you know, I think based on the market feedback then I will get back on that answer. I do not want to forecast a number.

**Ashutosh Tiwary:** On the 3-cylinder engine, have we got some orders? We were planning to showcase it for the export market as well – was there any progress there?

**Nagesh Basavanhalli:** So we continue our sales team continue to work with both, international as well as domestic partners. We continue to make some progress, but we do not have anything to announce yet as we get closer we will announce. But enough to say that this is a platform that just like our other solutions on the single cylinder as well as on the new single engines, we will take it to BS-VI. So the value proposition to the customer is not just the BS-IV level but it will also be at the BS-VI level. So we will be ready with that platform for BS-VI at the right time. So we will continue to work with customers as and when we have something to announce.

**Moderator:** The next question is from the line of Kaustubh Bubna from SKS Capital. Please go ahead.

**Kaustubh Bubna:** If you could break up your engine sales in terms of the different sectors you sell it to like farm, three wheelers, four wheelers?

**Narayan Barasia:** Yeah, so roughly auto engine business is about 50-55% of the turnover, farm and genset is roughly in the range of 15% for each and then aftermarket is about 20%, so that constitutes about 100%.

**Kaustubh Bubna:** And aftermarket is about 20%?

**Narayan Barasia:** Yes.

**Kaustubh Bubna:** So in the farm business, you are saying that you are facing that is one area where you have underperformed. So could you highlight the competitive scenario of how we aim to stay ahead of the competitors or in line with them and what is our plan here to improve numbers and performance? In terms of margin profile what is the farm business margin profile like compared to O2?

**Narayan Barasia:** So we are a profit focused company and farm business also offers very decent EBITDA margins. Margin is not a concern.

**Nagesh Basavanhalli:** On the strategic side let me add. I think just like the other areas, we are putting in investments to bring in new products and you are going to see that over the next couple of quarters. So we started out with the indigenous power tiller which is like we said slowly getting launched. In addition to that we obviously are looking at other light agricultural equipment which as and when we are ready over the next couple of quarters we will talk about it. We are also looking at multi-fuel solutions there keeping in mind our overall fuel agnostic strategy. And then we are also looking at farm from overall solutions basis as to

what we can do to the ecosystem of farmers in terms of the end to end ecosystem farming community how we can be ecosystem solutions provider. So all in all our strategy encompasses a couple of different areas in terms of where Greaves will be in the next 2-3 years. So stay tuned as over the next couple of quarters we talk more and more substance.

**Kaustubh Bubna:** And what is the total business opportunity for Greaves Cotton from this Altigreen partnership?

**Nagesh Basavanhalli:** We talked about it earlier, the addressable market size is huge but I was not willing to put in a dollar number of a rupee number today. The reason being I want to go through a proof of concept. I want to get the right value proposition. I want to make sure that staying true to Greaves' mantra of getting the right value proposition and the right customer fit we will do all of that and come back and talk. But clearly it is the right technology for the Indian market.

**Moderator:** We will take the next question from the line of Bhargav Buddhadev from Ambit Capital. Please go ahead.

**Bhargav Buddhadev:** Housekeeping question on data. Is it possible to know volumes in first half across various business verticals and also for the corresponding periods last year? Is it possible first half?

**Narayan Barasia:** I will give you quarter, I have that handy with me. 76,000 for quarter 2 and corresponding number was 79,000. Four wheelers 9,300 with a corresponding number of 7,800. Pumps is 16,000 versus 25,000 Q2 last year. Tillers is 800 versus 1000 and genset is about 1100 versus 1000.

**Bhargav Buddhadev:** Sir secondly, on this Altigreen, typically what happens is that many of these OEMs they sort of waive the warranty when there is a retrofit solution which comes in. What happens in this case given that here Greaves itself is essentially providing this? I am sure there will be no waiver of the warranty earlier given?

**Nagesh Basavanhalli:** Like I said let us come back to you after the proof of concept. We are definitely looking into that and this is not the first time we have done the retrofit kit, we have done that in other areas. So we will get back on this post the proof of concept.

**Moderator:** We will take the next question from the line of Ashutosh Tiwary from Equirus Securities. Please go ahead.

**Ashutosh Tiwary:** On the pumpset there is a sharp decline. Is it because the market was that or what was the reason behind that?

**Narayan Barasia:** With pumps there were a couple of issues in Quarter 2. One issue was there was a flood situation in several states and it is surplus water and the pump business gets impacted. So that is one clear reason. The second reason is GST had an impact on the dealers and the retail

outlet on the pump and third is the subsidies. So many of the government account have actually not bought the pumps the way they were buying earlier. So for three larger reasons and apart from that we tightened the credit control. So we did not allow the credit to go out of control and we tightened it a little bit which also impacted the realization, etc., to correct. So combination of all the four, Q2 was a depressed quarter for the pumps.

**Ashutosh Tiwary:** And secondly, so if you look at the market per se I think with electricity situation improving across the country, I think electric pump demand is improving a lot and already our competitors are talking about electric pumps being the future. So what are our plans as of now in that space, because I do not think we have any offering at electric site.

**Nagesh Basavanhalli:** Like I mentioned earlier, I think as part of our multi-fuel strategy that is exactly one of the products that we have under consideration and we will be talking about that in the coming quarters. Yes, that is definitely on our horizon and that is definitely something we are looking at.

**Moderator:** We will move onto the next. It is from the line of Arpit Kapoor from IDFC Mutual Fund. Please go ahead.

**Arpit Kapoor:** Sir just wanted to get your perspective on with the BS-VI conversion, the cost of ownership of a normal 3-wheeler versus electric 3-wheeler what would be the cost essential at that point of time, given currently we have a decent bit of cost differentiation but once we move to BS-VI how do you foresee the cost playing out just in terms of onboarding or buying a new 3-wheeler?

**Nagesh Basavanhalli:** So clearly, if you look at the past when we went from BS III to BS-IV, clearly there is going to be some incremental additions. Having said that though, we remain very committed working with our OE partners and end consumer, keeping the end consumer in sight to make sure that the value addition is significantly there. And do I have a number today, the answer is no. The reason being we are working, we have signed up agreements with our OE partners, we are working on a solution. The goal is of course in conjunction with our OE partners we will be figuring out as we get closer to 2019, right? But enough to say that I think the focus will be how much value addition can we provide not only in terms of emissions but also in terms of fuel economy. So I think it will be the total. Are we giving the right value proposition in terms of fuel efficiency improvements, emissions and power I think is the right balance and that is what was recommended a final price.

**Arpit Kapoor:** But can the switch to electric 3-wheeler be more prominent once let us say BS-VI gets rolled out given the fact that the deprived essential between the electrical 3-wheeler and a BS-VI 3-wheeler will not be as significant as currently it is with an electric 3-wheeler and a BS-IV 3-wheeler?

**Nagesh Basavanhalli:** No, I think it is a fair question. So a couple of parameters to keep in mind. One is Greaves has always prided itself from giving the best of the cost of ownership, which means it is Rs. X per km for the customer. And so that will be our motive to give in the best value of proposition. And even if we go to BS-VI how can we provide the best value proposition that is possible at that stage of time. Parallely what will also happen on the electric side to your point, battery prices where they are today versus are expected to go down. How much and how soon and when will be the dipping point I think it's a big question. So I think it will be a function of both as battery prices come down or continue to come down because that is obviously the total cost of ownership on the electric side will start getting competitive. Today it is not, right. On the other hand whether it is in diesel or petrol or CNG strive to provide the best value proposition. So I think at the end of the day, I am a firm believer that market and economics will pick the right fuel. So at the end of the day it is companies like us using technology and partnering with the ecosystem will be able to provide solutions. The consumer will pick one of those options, whether petrol or CNG or diesel or electric or hybrid. So I think the good part is we remain in position to benefit from any one of those as and when the technology moves in that direction.

**Moderator:** We will take the next question from the line of M.Sambewala. Please go ahead.

**M.Sambewala:** Regarding BS-VI, do we have production samples or prototypes ready for the diesel as well as petrol BS-VI? Do we have prototypes or production samples ready which are either on the validation at least from our BS-VI production that what we are waiting for?

**Nagesh Basavanhalli:** So clearly we are working with BSVI inline and we are quite pleased with the progress that the teams have made and again different people that we have brought in, capabilities that we have brought in, there are different teams working on diesel, on petrol, on CNG, on hybrid and on electric. So the advantage now is on parallel we are running 4-5 work streams going on and at any point of time they will give you the quality process and they are going through their individual milestones. Simulations, results and the prototypes are in progress so I think the earlier results that we have seen is quite encouraging as to where we are progressing towards the BS-VI.

**M. Sambewala:** So in terms of this single cylinder diesel, for BS-VI I believe it will have to be CRDi, right? So are we developing that, are we sourcing that? How is our BS-VI diesel is going to shape up like?

**Nagesh Basavanhalli:** Some of those we are working with our sourcing partners and as we get to the final solutions, because again what we are looking for is not just find the solution but finding the right commercially feasible and the right value proposition. So we are looking at it on multiple directions to be honest with you and as and when we are ready we will be talking more about it.

**M. Sambewala:** So that is actually going to be my follow-up question, I mean is it commercially feasible to have a single cylinder small CRDi engine from end user perspective?

**Nagesh Basavanhalli:** Yes, and we have worked with not just internal but global partners like JBL and others in terms of simulation and where we have, yeah absolutely. And if I can add another proof was the OEM signing off with us for the BS-VI because we have seen some of the advanced simulation results.

**M. Sambewala:** And lastly what would be the CAPEX requirement required to upgrade our manufacturing to BS-VI?

**Nagesh Basavanhalli:** Obviously as the parts change, there will be change of some technology and some parts that will change from BS-IV to BS-VI. As the design is frozen, which it is not right now and the sourcing is complete, which is in progress so then the manufacturing will follow and clearly we are well equipped to handle that. But I think I would say it is still a couple of quarters away.

**M. Sambewala:** Okay, so given BS-VI functional 2020 by when do we need everything frozen so it is under validation with our partners?

**Nagesh Basavanhalli:** Our goal is to be ready ahead of time and we will be ready ahead of time. So the goal is we will be ready well ahead of the April 2020 deadline. So hopefully one or two quarters before.

**M. Sambewala:** Right, but you will have to give it much sooner to your partner for having the product value –

**Nagesh Basavanhalli:** Absolutely and in fact we will have, like I said, individual timelines that we have already started working closely with partners and they are like I said that is running into individual execution timelines across the four streams, right. So yes, in fact they are already involved as of the last quarter and I think it will continue over the next 4-5 quarters.

**Moderator:** Well that was the last question. I now hand the floor back to the management for their closing comments.

**Nagesh Basavanhalli:** Thank you very much for joining the call today. We appreciate your continued interest in our company. Thank you and have a great day.

**Moderator:** Thank you. Ladies and gentlemen, on behalf of Greaves Cotton Limited that concludes this conference. Thank you for joining us and you may now disconnect your lines.