APAR

Tomorrow's solutions today

SEC/0409/2024 **By E-filing** September 04, 2024

National Stock Exchange of India Limited "Exchange Plaza", C-1, Block G, Bandra- Kurla Complex, Bandra (E), **Mumbai – 400 051.** **Scrip Symbol : APARINDS** **Kind Attn.: Listing Department**	BSE Limited Corporate Relations Department, Phiroze Jeejeebhoy Towers, Dalal Street, Fort, **Mumbai - 400 001.** **Scrip Code : 532259** **Kind Attn. : Corporate Relationship Department**

Sub. : Submission of Transcript of Investor Day Conference Call made by APAR Industries Limited (the Company) on August 28, 2024.

Ref.: Reg. 30 read with Para A (15) of Part A of Schedule III & all other applicable Regulations, if any, of the SEBI (LODR) Regulations, 2015 ("Listing Regulations"), as amended from time to time

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Dear Sir/ Madam,

Kindly refer our letter no. SEC/2808/2024 dated August 28, 2024 w.r.t. submission of link of Audio Recording of post Investor Meet / Investor Day Conference Call organized by the Company.

Pursuant to the provisions of Regulation 30(6) of the Listing Regulations, we are submitting herewith transcript of the Investor Meet / Investor Day (Conference Call) made on Wednesday, August 28, 2024 for the information of members.

The aforesaid transcript is also made available at the website of the Company at www.apar.com.

Kindly take note of this.

Thanking you,

Yours faithfully,

For APAR Industries Limited

SANJAY A RAJU KUNDER

Digitally signed by SANJAYA RAJU KUNDER
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(Sanjaya Kunder)
Company Secretary

Encl. : As above

"APAR Industries Limited

Investor Day Conference Call"

August 28, 2024

MANAGEMENT: (APAR INDUSTRIES LIMITED)	MR. KUSHAL DESAI – CHAIRMAN AND MANAGING DIRECTOR
	MR. CHAITANYA DESAI – MANAGING DIRECTOR
	MR. RISHABH DESAI – NON-EXECUTIVE DIRECTOR
	MR. RAMESH IYER – CHIEF FINANCIAL OFFICER
	MR. MANISH AGRAWAL – CHIEF EXECUTIVE OFFICER (CONDUCTOR & TELECOM)
	MR. SHASHI AMIN – CHIEF EXECUTIVE OFFICER (CABLE DIVISION)
	MR. GIRISH GUPTA – SENIOR VICE PRESIDENT - TELECOM
	MR. SUNDAR SUBRAMANIAN – SENIOR VICE PRESIDENT – AUTO AND INDUSTRIAL LUBRICANTS
	MR. SUYASH SARAOGI – PRESIDENT (STRATEGY & PROJECTS

Ramesh Iyer: Good morning ladies and gentleman and welcome to the investor day. Today, we have Chairman and Managing Director and we have the entire senior management team of APAR Industries who would take you through the different business divisions and the growth opportunities that lie for us.

I'll just take you through a quick view of the – what's in store for the day today. We'll start the session with opening remarks by our Chairman and Managing Director, Mr. Kushal Desai, followed by Managing Director, Mr. Chaitanya Desai. After that, we will have the divisional highlights, the Conductor Division business highlights by Mr. Manish Agarwal. He's joined newly as the CEO of the Conductor and the Telecom sector. Mr. Manish is travelling abroad, so he'll be joining virtually for the session today.

Post that, we'll have Mr. Shashi Amin, who is the CEO of Cable Division, talking to you about the cable and wire business highlights. Post the tea break, we'll have Mr. Girish Gupta talking on the Telecom Division. After that, Mr. Sundar Subramanian and Mr. Rishabh Desai will talk about the specialty oils and lubricants business. I will cover the financial overview post that. And after that, we'll have ESG initiatives by Mr. Suyash Saraogi. And towards the end, we'll have the Q&A sessions.

You have your QR code on each of your tables over there, so at any time during the course of the presentation as well as towards the end of the presentation, you can scan your questions and all of those will be answered at the end of the session.

With that, I'll request our chairman, Mr. Kushal Desai, to begin the session for the day.

Kushal Desai: Good morning, everyone. And I'd like to extend a warm welcome and hopefully a dry welcome. I know you had heavy rains this morning, because of which commuting was a little bit difficult. So, I thank all of you for making the effort to be here and be present for our Investor Day.

As Ramesh has mentioned here, we have a fairly comprehensive presentation for you. And hopefully it will give you a deep dive in terms of where the company stands, where do we see the growth and the future of the business? And how prepared APAR is to actually take on these opportunities?

There's a famous English saying that luck is the point at which opportunity meets preparedness. So, at the end of the day, you guys should be able to judge whether APAR is going to be lucky or not in terms of its preparedness.

So, I'd just like to start off with just this slide, which puts in perspective what drives us. So, if you look at our mission which we define as why we exist? I think this is very important because whatever we've done in the last 10 years and what we propose to do in the next 25 years is pretty much dictated by this one sentence.

So, our mission is to design and manufacture building blocks for the energy infrastructure, transportation and telecommunication sectors that contribute meaningfully to make this world; A, more energy efficient; B, environmentally sustainable; and C, a safer place. So, you will see every single activity, every single product that APAR has worked on in the last 10 years meets these three criteria.

Our vision is to be a global leader in the energy infrastructure, transportation, telecommunication sectors by providing the best solutions

and value creation for our stakeholders. In 2020, we actually changed APAR's tagline by changing it from tomorrow's progress today to tomorrow's solutions today, keeping in mind that the important barometer to gauge, how useful you are to your clients is how effective your solution is to them because that is what is the final measure in terms of what value you've given to them.

There are these five values based on which we consider ourselves – to measure ourselves to be an ideal APARian. So, the first one, of course, is innovation. When you're trying to solve and you will see that there are some gigantic problems which are coming up in the world in terms of the energy transition, you have to be very innovative, you have to pioneer beyond conventional solutions otherwise it's not going to happen.

We have to be driven, proactively strive for superior outcomes, because that's what delivers the value, the value creation to shareholders and to stakeholders comes only from that. We've got to be entrepreneurial, empowered to take ownership, learn how to get more out of less. Accountability is important, we have to be committed to sustainable growth and be responsible in the way in which we go about doing it.

You will see in Mr. Saraogi's presentation that comes later on, in terms of the ESG side, it is going to be a license for you to operate. So, if you don't end up actually meeting those criteria in the next few years, believe me, you will not be able to operate. And then finally, we want to lead this whole innovation curve and inspire leadership at the forefront of innovation within our industries and as part of this energy transition.

So, the next slide, I'll just quickly go through it. These are the different segments and the brands which we have within Apar. So, we have the

speciality solution group that covers transformer oil, wire and pharmaceutical oils and a bunch of speciality products. We are the world's third largest transformer oil manufacturer. Within the oil division, the transformer oil portion has been the fastest growing. We've been clocking over 18% CAGR growth, looking at the last five quarters.

And as you'll see through this presentation that transformer oil grows linearly with the addition of transformers. So, as you have more transformers going in, you will have transformer oil growing at the same pace. We are also the largest exporter of transformer oils from India. The product is sold in 140 plus countries around the world and you have about 45% of the revenues coming from overseas, 55% coming domestic in that segment. We have now become the ninth largest player in the lubricant industry. My colleague Sundar will take you through the lubricant part of the business.

On the Conductor side, we have been leading the innovation curve as the largest one-stop solution provider for design, manufacturing and upgrading transmission lines in the world. Even though there's no published data based on industry data, we are the largest manufacturer of aluminium and aluminium alloy conductors in the world. There's a very comprehensive presentation, Chaitanya here will take you through part of it and then of course Manish is going to do the deep dive.

On the Cable Solutions front, we have the widest range of products in India catering two speciality sectors and these sectors are really growing. You have the Indian railways, you have the shipping, a lot of submarines being added. India has a 7000 plus kilometer coastline. And the interesting thing is we don't have a single offshore turbine, so you can imagine the kind of potential that can show up.

Hybrid cables, harnesses, a whole lot of telecommunication cables and we also build the safest house wire in the country. Some of the leading brands like Polycab and KEI and RR and etc, etc are now following suit because they've seen the value of the product that APAR has launched in the form of APAR Anushakti.

We are also the largest exporter and producer of these speciality cables, especially for the renewable sector in India and we are the largest exporter of these cables from India. In terms of the telecommunication side, we have been focusing on providing telecom solutions including fiber optic cables, copper and hybrid cable solutions and services and my colleague Girish here will actually run you through some of those opportunities.

This slide actually is very important and it just puts in context what we are going to be talking about for the remaining three hours that you will be over here. The largest revolution that is happening in this world, in the history of the industrialized world is actually underway. Most people in the world don't even realize it because you don't see power, you don't touch power but it's going to influence every form of what you do.

If you look at the root of this whole thing is that greenhouse gases are emitted basically from emissions that come out. You have it from the tailpipe of a car, you have it from a power plant, anything that uses a hydrocarbon form of energy has an emission. So, when you have greenhouse gases increasing, the heat that is retained in the world increases.

The important thing is that, and most people don't realize this, that greenhouse gases are emitted locally but they affect globally. So, if you do stubble burning in Indonesia or in India or in Papua New Guinea, it will

equally affect Anchorage which is in Alaska or Rio de Janeiro in Brazil or Canberra in Australia. So, it becomes then, you may create that locally but then it becomes a global problem.

So, governments and businesses across the world are trying to fix this. Demand for oil is projected to peak by 2030. You can already start seeing it, in spite of all the wars and so many other things happening, at least at the moment you don't see crude and gas oil going up that much because the demand has been a bit soft.

If you see annual investments across the energy sector, they are projected to grow at almost $1.5 trillion a year and going up to $3 trillion a year. Now how does this affect APAR actually? So, what we see is that in this energy transition, if you look at the period from 2020 to 2050, the energy consumption is likely to double. So, if you are consuming 100, it is likely to go to 200. In 2020, electricity formed 20% of that energy mix. By the time you get to 2050, it will form 40% of the energy mix.

So, you are going to go from 20 to 80, which is where this 4x increase comes in. I'll show you a chart later on that puts it in perspective. The beauty is that the incremental consumption, you know, going from 100 to 200, almost 75% to 95% of this is going to come from renewable sources and it's necessary because we need to have emission of greenhouse gases 25% to 30% lower than what they exist today, when you double this energy consumption. There will be, of course, energy storage solutions which will catalyze, you know, this whole transition process.

So, I've just tried to summarize here that there are these six areas, those of you attended our presentation last year, these six areas pretty much remain intact. And you probably will see this slide coming up for the next five to

ten years, because the growth is such a long story in these areas that there'll be just more activity happening, more intensity and a faster pace. So, in the first case, obviously the main driver is the addition of renewable energy, wind, solar and nuclear.

The businesses that benefit from this for us is a cable business where we have a plethora of cables that go into solar installations and wind installations. It forms about 5% of the cabling that happens within the plant itself. There are overhead conductors which will then transmit power out of there. There is always a substation attached to a generating source, because the substation, the source is at 11 kV or 33 kV and these transmission lines go from 220 up to 765.

The interesting thing is that, you know, as the step-up increases, you require a lot of more copper transpose conductors, because the primary is at a much lower voltage level compared to the secondary. So as a consequence, the total amount of copper required in the transformer also increases.

On the CTC side, we've already doubled our capacity and by January of 25, we will further double it. So, it will be a 4x increase in the capacity of copper transpose conductors. Transformer oil, as this happens, there is more heat that's being generated, you need more transformer oil for cooling and the insulation requirements increase, so better quality oil required to manage this.

If you come to the transmission line side, the evacuation of power is going to play a very important role. And you know, it's happening all over the world, but I'll spend a minute and explain it to you in terms of what's happening in India.

So, India works on a national grid, right? So, we have a grid that's a national grid and it connects into state grids, but really the concept you must have seen all over the place is one nation, one grid. What is the funda of this one nation, one grid?

You should be able to generate power in Kashmir or in Assam or in Hyderabad and be able to draw that power in Cochin. You can put in power anywhere in the system, you can draw it anywhere, you know, from wherever you need, you pay wheeling charges and costs based on the movement of that power, just like in your telecom network. You can take a call in Tinsukia or you can take a call in Cochin or you can take a call in Srinagar. Right? There's a cost to be paid and as long as you pay the cost, it should happen.

When all this power gets added and renewable energy is being added in a fully distributed manner, it's coming up all over the country, there is going to be a massive increase required in the transmission network if you want to follow this one country, one grid policy. So that's what is throwing all this up. You will have reconductoring solutions, you will have new lines getting added, a lot of substation increase taking place, so again transformer oil and CTC coming into the picture.

On the infrastructure side, this is really highways, ports and other forms of infrastructure, bullet trains, etc., in which you have both cables and lubricants playing a role. Public transportation is undergoing again a metamorphosis. It is one of the largest forms of emission, whether it is your car, whether it's a truck, whether it's a diesel locomotive train. India has moved completely electric on the train side, 90% of the electrification program is pretty much completed. Our sense is that all the buses in cities

and inter-city within a state will all move to being electric to cut emissions, much easier for government to control anything which requires a permit.

Last will come EVs because electric passenger cars because it's a decision that people in this room need to take as individuals. The government can't force you beyond a point, but they can force a taxi operator, they can force a bus operator, and then of course the train service is anyway within their control. So here you've got cables, you've got electric vehicles, and we are hanging our hat more on buses because that's something, as I mentioned, will be regulated.

And then you've got, of course, copper conductors coming in for this whole railway electrification and upgrading the current speed of railways. So, as you move into the Vande Bharats to get the full speed of Vande Bharat, as you get the bullet trains, we need to move from plain copper to alloy copper because you need to carry more current on that line to be able to drive the train speed faster.

On the telecom side, as I mentioned, there is fibre optic, there's also interesting hybrid products and you know, there'll be more discussion on that. And then finally in this manufacturing China plus one, you're looking at transmission and distribution line expansion happening to power factories. You will have, obviously, lubricants as you bring in more machinery and more sophisticated machinery means more sophisticated lubricants. And then of course, every factory is filled with power cables. So, these are the six areas that we see, you know, the growth taking place.

I'll spend just a minute on this chart because this is what I was talking about earlier. So, if you see how the energy consumption is growing, you will also see in here, you know, the light blue is solar, and you see how the

whole solar thing is growing. So, it's growing by 25 points from 40 to 65 and if you see the dark blue, that's the onshore wind that's growing from 20 to 40.

So, if you see a huge portion of this addition that's happening, is happening basically from these two areas, there is also some increase which will happen in wind offshore, because you have countries like India, 7000 plus kilometer coastline and not a single turbine. So, when you start running out of space on land, the only option is to go, you know, just offshore. And some parts of India, especially the entire east coast of India, Manish has a chart which he'll show later on in the presentation, has massive wind speed. So, this is where the whole transition will happen.

Now if you go to the renewable energy side, this chart we had shown last year, I just want to reiterate on this, and we've added a bunch of pictures so you can visualize the products that go in. APAR is a very unique company, because if you look at the solar and wind chain from generation right down to the socket, say, you know, in an Oberoi Hotel or in your house, we basically have probably the largest number of products that run through the entire chain.

So, we've got, you know, various types of cables on the generation side, we have substation products, then again you get into the transmission side, you have a step-down substation that comes after that, and then you have a plethora of various cables that go into the distribution side. This is where APAR is a really unique company, because those who are very large cable manufacturers don't do transformer oil, they don't do CTC. Those who are big conductor manufacturers are not necessarily doing a lot of cables. So, this is the unique, you know, sort of position that APAR has.

This is a little bit of a pictorial representation, so it just gives you a little idea in terms of what are we talking about. This Nacelle cable actually connects the wind turbine to the motor on top of a windmill. Then you have low voltage cables which evacuates from the windmill down to the substation. You've got a torsion cable, and then similarly you have also a tower cable that runs along the tower of a windmill.

You've got various instrumentation control cables which manage all the panels and communication within the towers and panels. You have an earthing cable; you have a fire-resistant optical fibre cable for evacuating data and then of course LAN cables again for information.

If you look at the transmission side, you've got transformer oil, you've got CTC conductors, you've got PICC conductors, all these three products go inside a transformer. Just for your information, transformer oils are around 4% to 5% of the value of a transformer. CTC is almost 25% of the value of a transformer.

So APAR's products target 30% of a transformer. Of course we have significantly higher market share in transformer oil, but our CTC side of the business, as I said, is also increasing to keep pace with this. There's been some legislative changes because of which you have to use CTC if you go to a 400 ampere, if a transformer emits more than 400 amperes of current, you've got to use a CTC.

Then of course you've got the traditional overhead lines, you've got new generation, you've got OPGW, and then we have these turnkey solutions that we provide for reconductoring. And if you come to the distribution side, you've got Light-Duty Cables, you have FTTX cables. This ADSS cable is equivalent to an OPGW but in a distribution network, so it has a fibre

optic core in the distribution network. Then you have this medium voltage covered conductors, transformer oil and of course new generation overhead conductors.

If you come to the, this chart gives you an idea of where the world is going based on the previous chart that I'd shown you. And I think this is a little important, we can spend a minute on this. So, if you see, recent years is basically the base case is around 2020, about four years ago. So, the share of renewables was around 17% by 2030, this is a global number, it'll get to 35%, and by 2050 it is supposed to get to 82%.

The last one gives you an idea of the progress in the world, we have not even hit the first quartile. So, you can see where we need to go in terms of additions if we have to get to the destination. Share of renewables today, it's 28%, it'll get to 68% by 2030 and then 91% by 2050. So, one is in terms of consumption, the other is in terms of generation.

Then you have renewable power capacity additions, so finally what is this delta we are looking at? We are looking at almost 300 gigawatts a year in the world, almost 1000 gigawatts by 2030 and then maybe 1100 or so gigawatts by 2050. So, the acceleration is going to happen between now and 2030 and then it'll continue at that pace for the next 20 odd years. This is pretty much the prediction.

If you come down to dollars, you are looking at about $486 million, so about $500 million dollars a year right now, going to $1.3 trillion and then up to $1.4 trillion by 2050. And then the investments needed particularly for power grids is about $275 billion, so today this is a typical thing that happens, you start putting money first in generation then you discover, oh my, transmission is not happening adequately, then the money goes into

transmission and then you have distribution, that's the typical waterfall, we saw that in thermal, unfortunately people learn a little bit slowly, you'll see that happening again.

If you go to the next slide, which is what is happening in India, so today the share of renewable and finally energy consumption is now getting closer to 40%, we are cleaning up our grid, just a few years ago we were at hardly 22%-23% and you see these massive projects, Khavda is going to be one of the largest solar generation sites in the world where you have three companies adding 10 gigawatts each, NTPC, the Reliance Group and the Adani Group and their plans are to add hundreds of gigawatts of renewable power. By 2030 it will get to about 50 odd percent and this works out to about almost 90 gigawatts annually in PV additions, it will grow to about 170 gigawatts.

Wind, which was a little bit slow is catching up, 47 gigawatts to about 100 gigawatts, there is a national policy that's just been released which may get upgraded where they are looking at upgrading the windmills, some of the best real estate for windmills has been occupied by windmills, it was set up 10-15 years ago, which are at 250 megawatt – sorry 250 watt for one tower, today the minimum is 3 megawatt a single tower, so you can have significantly more power being generated on the same landmass, so that's another thing that's coming up.

So that's pretty much what I wanted to give in terms of the overview, now Chaitanya will come here and take you through a much deeper dive on the execution of this whole process. Thank you very much.

Chaitanya Desai: Good morning, thank you, I'd like to present some of the important trends in the transmission and distribution segment. So on the back of the strong

demand from renewables, what we are seeing is this interstate Indian transmission segment has seen very good demand and we expect that to continue, unlike the past where a lot of transmission lines used to originate from the eastern part of India to evacuate the coal-based thermal power plants, the new power transmission lines are being installed where the solar and wind big power plants are coming up. So, these are typically in the western part and the southern part of India and that is where the major new transmission lines are coming up.

The point of this slide is to explain that India has seen a decent amount of growth already amongst the democratic countries, the ecosystem here is relatively good and also in terms of the regulatory clearances, the bidding process, financial closures, it's actually helping to execute on the ground much faster the various transmission lines.

The current transformation capacity is 12.5 lakh MVA and the further projects will get it to about 17 lakhs MVA by 2030, which is about 35% increase, the overall transmission line length in the country is at present 4,86,000 circuit kilometers and is likely to get to 5,35,000 circuit kilometers by 2030, so this is about 11%.

In the old days, we used to have a ratio of 70% transmission investment, 30% substation, now it's getting skewed more towards the substation and that is where this is almost 3x in terms of the transformation capacity increase. I'd like to mention that the type of renewable energy requirements for the consequent transmission line systems is to be designed with a lot more robustness to take care of the inherent capacity and also the surges which happened during the course of the day and the various planning authorities are actually working on giving the right type of solutions and

hence the ratio of transmission to substations has changed now in favor of the substation investments.

Another important trend we are seeing is urbanization and the increase in demand of electricity, the growing population and increasing standards of living, rapid transition to electricity from various forms of other energy sources as was explained by Kushal bhai. And also, the progressively less land being available especially in the semi-urban and urban areas with the associated difficulties of right of way is forcing the utilities to look at de-bottlenecking the current transmission lines through advanced products.

So not only are we seeing increase of the new lines, but also there's going to be reconductoring as an example of the existing base which is already at place. So, there will be two types of demands, new demand coming in for new products and substations as well as for the old lines and the old substations which need to be upgraded.

From your school days you will recollect that power is basically voltage into current and the current is the one that is the low-hanging fruit to upgrade, to increase that. So, a lot of the products to increase are on the ampacity or current and here we see like the CTC which is used for the copper winding in the transformers or the high temperature low sag conductors which are used to replace the old lines to double the amount of power throughput. These are the type of products and solutions which are forthcoming nowadays.

In addition to the power transmission there is an additional revenue possibility for the utilities and they are leasing out the Optical Fiber that they are putting in the form of OPGW and similarly there are other revenue models which are coming into place. So, this is another new trend. The

reliability of data transfer through the overhead as opposed to underground is significantly better because there is very less risk of damage like digging or road repair work.

Another phenomenon we are seeing in the Indian transmission system is that there is increasing flexibility which is coming in terms of the choice of products to be used to improve the economics, especially for the tariff-based competitive bidding for the interstate with the amendment of the Electricity Act the developers are looking at the best value for money option and here as an example I have a part of the tender which is shown for the TBCB or the Tariff-Based Competitive Bidding which is that they give the option to use the traditional or conventional conductor of ACSR or alloy and nowadays another type of product called AL-59 which we are calling as a high efficiency conductor. So, this gives a better value proposition, it not only reduces the cost of the entire system because the weight of the product is less and hence the tower structure, the civil foundation, but all of that can also be reduced.

In addition to the TBCB which is in the interstate there is also the state intrastate work which is happening in terms of feeding the power to the urbanization area and reconductoring with the HTLS. So here there is a formula used to ascertain what are the line losses and the combination of the price of the product and the net present value of the recurring line losses is considered to figure out what is the best option. So, this is giving interesting opportunities to companies such as us to differentiate ourselves by innovating, bringing out new products.

Some of these new products like HTLS require a different type of installation and here we are giving an end-to-end specialized turnkey solution and it is not everybody's cup of tea to build these R&D capabilities

and have those resources to develop these end-to-end innovative solutions. This is also transforming the competitive landscape in the industry where the smaller players are actually closing down and the bigger ones are gaining a larger share of the markets and profits. Similarly on the distribution side we are seeing a number of changing trends.

The various centrally aided schemes to strengthen the distribution network grid are for upgrading and adding a lot of new distribution lines both underground and overhead. The planning authorities have been carefully selecting different solutions for improving the reliability and longevity of the distribution networks and as an example I have the Gujarat state where there is a large coast and associated corrosion issues and also cyclone challenges. So, in this the authorities have been planning underground cables for the coastal area within 20 kilometers.

Then they have another product called the covered conductor which is being preferred in the distance between 20 kilometers to 60 kilometers and then there's the bare conductors for beyond 60 kilometers from the coast. This type of improvised planning that we are seeing nowadays by the various authorities is beneficial because it will ultimately help get more revenue from paying consumers of electricity to get reliable good quality of power 365 days a year. The ongoing reforms through conditional support schemes like RDSS from the central government to the State Discoms will be ensuring that there is more revenue.

We expect with implementation of smart metering the billing and collections will improve significantly and there should be less theft and leakages in the times to come. Further with cheaper solar power being used to supply to the agricultural sector, the subsidy burden on the states is likely to reduce. More pressure will be there to supply uninterrupted

power at our doorsteps and also for some of us who have seen power cuts in our childhood days at home and even today we see painful unplanned power outages in our factories.

We'll see and actually we have been forced to run on DG sets. We will see a much-improved dependable power supply scenario in the near future with all these various investments which are coming in the right type of products. Also, with increased need for last mile power connectivity for greenfield and brownfield expansions by the private sector, the industry will be funding the power infrastructure although this is technically owned by the Discom.

So, on one hand the Discom will not be putting in capex but on the other hand it will get some share of the revenue. So overall we expect to see increased consumption of grid power and reduced DG set usage. The state utilities are likely to get into a positive cycle and the structural problems will get resolved to a large extent, ultimately enabling more spend on capex.

In conclusion, all these various trends in the transmission and distribution industry are likely to help continue the existing trend of significant demand not only in terms of volumes but also higher end solutions to meet the planning authorities and consumers requirements. There is a clear visibility of growth in the Indian T&D industry for the short term, medium term and long term. There is also a changing competitive landscape.

The bigger players are gaining on market share and also profit share relative to the smaller players who are unable to invest in developing new products and solutions. With tougher measures imposed on quality control for Central Government Schemes, the possibility to cut corners on quality

by the small-scale players is also reducing. The global scenario is similar to that of India's with regard to renewables driving the energy transition and increasing the demand for building blocks used in the power generation, transmission and distribution segments.

At APAR, we are investing in getting ourselves future ready. We have been investing in capex to increase our capacity and fungibility to improve our capability to cater to improved range of products and technical requirements. At the core of APAR's manufacturing excellence is a commitment to operational superiority, aligning people, processes, technologies and resources to enable production and quality.

Capex investments for the last four years has been INR764 crores for expanding our capacities across our 10 manufacturing facilities. We are also introducing a number of innovative products to meet rising demand and providing customers tomorrow's solutions today. The company is adopting industry 4.0 technologies including IoT and smart factory solutions. We are modernizing our manufacturing processes. Also, we are utilizing advanced systems like SCADA and Pigging for improved efficiency and waste reduction. This strategic focus on continuous improvement driven by Six Sigma and Kaizen principles will allow APAR to optimize costs, enhance product features and consistently exceed customer expectations. Through these initiatives, APAR is building its position, leading innovation and sustainability in its core industries.

I would like to also mention on ESG we are doing a fair amount because especially in Europe we are already seeing that the various customers there are considering this as one of the important components in their decision making in the entire calculation. Like in the case of the HTLS where the line losses are incorporated, we are seeing in some of the European customers

they are also having a very significant portion in their calculation of the bid to be about the carbon dioxide emitted in the supply from our side.

So, with this I will now pass it on to my colleagues who will go into much more detail on the various action points that we've talked about. And I'll invite Mr Manish Agarwal to go next. Thank you.

Manish is joining from the US, so he's online.

Manish Agarwal: So good morning, everyone. Just to introduce myself, I'm Manish Agarwal, CEO, Conductor and Telecommunication Business and I take care of APAR T&D Projects Private Limited as an MD.

Prior to joining APAR Industries, I held the position of CEO and Whole-Time Director at Sterlite Power Transmission Limited where I led the company's global product and services business. It's been just two months since I have joined APAR Industries. Today I wish I were with you all in person as I speak with you from the US and thank you CMD and MD for setting up the tone.

With this, let us dive into the presentation of mine. Though the CMD and MD have given many details what's happening into the Indian and global arena, I will take up a few things more on the same site, how demand is going in India and globally. So, first of all, let's talk about some of the mega trends that are driving electricity demand in India.

So, I'll take five points, four are on this slide and fifth one is coming in the next slide. So, number one is India GDP. So Indian economy is demonstrating resilience in the face of geopolitical challenges. It is estimated to have grown 8.2% in FY '24, reaching 3.5 trillion, setting the state for achieving the $5 trillion target. There's an orbital shift from 10th

largest economy 10 years ago. The demand is tightly interwined with the nation's aspiration to become third largest economy.

While India's per capita energy consumption, which is roughly around 1300 units, is below the global average, which is about 3000 units, the economic development shall spur the electricity demand. By 2030, it is projected to reach approximately 1800-kilowatt hour to 2000-kilowatt hour per year, as per various estimates, including that of Central Electricity Authority, which is CEA. There is a need for decarbonization of economy, which is another demand accelerator, if you see on the right top.

India's hydrogen mission is a prime example to the need for RE to produce green hydrogen, the integration of hydrogen in industrial and transportation sectors, and the role of hydrogen in energy storage and grid management. As the mission progresses, it is expected to significantly boost electricity demand, particularly from the renewable sources. Down below, you see the EV part.

Government is keen to shift the narrative towards EVs with the vision of 30% EVs adoption by 2030. Increasing percentage of the population moving into cities, as per World Bank, 40% of country's population will be in urban areas, up from 31% in 2011, as per the last census. So, these mega trends collectively shape electricity demand, driving the need for more capacity and obviously robust grid infrastructure.

Can we move to next slide, where I will talk the fifth one, which is around the climate change, climate action. Yes, thank you. So here you see that climate change will accelerate investment in RE and power grids. So, if you see on the left side, there's a chart of IEA. So, if you see, undoubtedly, climate action will accelerate investment in RE and Power Grids. As per

International Energy Agency's net zero scenario, 4.5 trillion investment is needed in clean energy, majorly into the clean electrification. A 2.5x increase from current levels in the given scenario. India's climate commitments have a significant impact on the country's electricity demand and energy strategy. In COP26, India presented the five nectar elements, the panchamitra of India's climate action.

I'll mention all five. Number one was committed to reducing emissions intensity with respect to 2005 of its GDP by 45% by 2030. Second being reduction of 1 billion ton of carbon emission from 2022 to 2030. Third, non-fossil capacity to 500 gigawatt, which I'll talk, you know, soon. Fourth, meet 50% of its energy requirements from renewable energy by 2030. And last one is Net Zero by 2070.

Despite a low per capita income, India has a steep climate commitment and is striving for a green transition. And if you see down below on the right, setting up the context with the number, USD30 billion is in estimated investments by 2030 to integrate 500 gigawatt of non-fossil energy into the grid. That's adding 50,890 circuit kilometer of transmission line, nearly 4 lakh MVA substation capacity at just the ISTS level, Interstate Transmission System Level.

Transmission has to match the RE capacity addition speeds. Hence, these transmission projects need to come online by 2028-29. As you know that gestation period in India for transmission line is two to three years at least.

So, if you have to achieve that 500 gigawatt, you must finish all this transmission lines by 2028-29. Let's move to the massive infrastructure push presenting multi-year opportunity where our CMD did talk about some of the offshore wind part. So, if you see on the left, it is trajectory of 37

gigawatt and the offshore wind zones chosen by MNRE which is in Gujarat and Tamil Nadu.

So, Gujarat, it's towards off Gujarat coast and Gulf of Khambhat. And in Tamil Nadu, towards Gulf of Mannar and off Tamil Nadu coast, which are identified as high wind energy zones. So, India's massive infrastructure push represents a multi-year opportunity across various sectors driven by the need to support economic growth, energy security, enhance connectivity and meet climate commitments.

A few snippets as I talked to you about one is the 37 gigawatts. And if I have to add something further, just three, four months back, union cabinet chaired by our Honorable PM approved the VGF, the scheme for offshore wind energy projects at a total outlay of INR7,500 crore approx, including an outlay of INR6,853 crore for installation and commissioning of 1 gigawatt of offshore wind energy projects, which is about 500 megawatt each of the coast of Gujarat and Tamil Nadu and grant of INR600 crore for upgradation of the two ports. So, this has recently happened, which is, you know, these projects will slowly come, you know, over a period of time. On the right, you see something more is happening.

India is building a couple of large HVDC projects, mega transmission highways in the form of HVDC are under planning and bidding as we speak. And some of them have been listed. Distribution, Discom upgradation and modernization, which is RDSS, Revamped Distribution Sector Scheme.

This is a capping investment for the distribution upgradation. Last one you see is around one world, one sun, one grid, a truly global grid represents a monumental shift in how the world could generate, share and consume

energy. Its implementation will drive significant demand for a wide range of equipment and solution from HVDC transmission lines to smart grid technologies and RE stations.

So in between you see a point around railways, you know, so Government of India has allocated about INR2.6 lakh crore budget for upgrading and modernizing the Indian railways in 2024, which our CMD mentioned initially. So, this is our diverse portfolio. I know CMD and MD both showed, what the portfolio of our industry is limited as a company we have.

I am now talking about just the conductor business, what all we carry, all kinds of products. So, as you heard the mission that at APAR Industries, we have always been guided by a simple yet powerful mission to design and manufacture building blocks for energy infrastructure, transportation, telecommunication sector that contribute meaningfully to make this world a more energy efficient, environmentally sustainable and safer place. The mission is central to our strategies.

Consequently, APAR offers a diverse range of products, not only into transmission, but also into distribution, also into railway segment. If you see, we have conventional conductors, high efficiency conductors such as AL-59, which our MD just spoke about, high temperature low sag conductors, medium voltage covered conductor, also high efficiency covered conductor. These are the end products used in the T&D industry.

If in between you see down below CTC and PICC conductors, which are integral to transformer manufacturing, ensuring optimal performance and longevity. OPGW, which is optical ground wire application extend across the power grid management, telecommunication, renewable energy integration and smart infrastructure. We also, on the bottom left, you see -

- sorry, right, you see turnkey, specialized turnkey solution, which we provide as a company, managing the entire process from conceptualization and design to the erection, even in the most challenging terrains.

Can we move to next slide, please? Interesting slide, this shows transformation journey of APAR conductors, right from 1958 to 2023. So, APAR Industries has transcended in its humble beginnings to become a global powerhouse. Conductor business of APAR has been the cornerstone of its operations, undergoing significant growth over the years. Rooted in entrepreneurship, the company has expanded into several product and solution, if you see from the left to the right offering, which is around high-efficiency conductors, high temperature low sag conductors, various types of elements.

Chaitanya Desai: If there is a connectivity issue or...

Manish Agarwal: Yes.

Chaitanya Desai: We lost you in between. Manishji?

Manish Agarwal: Sorry.

Chaitanya Desai: Yes, you are at the various type of aluminium and aluminium alloy rods.

Manish Agarwal: Sure. After that, I was saying that, as I said in my last slide, the company has also ventured into a specialized turnkey solutions for the T&D industry, which I'll elaborate further into my slides. Can we move to next slide, please?

So, this tells about the location of our plants. On the right side, mostly you see all the conductor facilities. So, APAR is one of the largest global manufacturers of conductors. INR512 crores of strategic capex was

undertaken from 2017 to 2024 to expand capabilities, increasing production capacity, improving productivity, reducing cost, ESG, R&D and adding capacity to manufacture, test and install high value-added products. That's been our focus. Last financial year, the company acquired two factories in Silvassa.

At the core of APAR's manufacturing excellence is a commitment to operational superiority, aligning people, process, technologies and resources to enhance production and quality. The capacity addition plan, which is listed below, the copper busbar, we will go from 100% to 166% if I compare the level from 23 to 25. CTC/PICC will be almost double, and then we have further planned to increase the same.

AL-59 and alloy conductors, which will be about 200%, which includes new capex in Khanvel, and repurposing of machines in our Odisha facility. Today, utilization overall is hovering at 90% across all plants that we are making.

Next slide please. I'll be talking about now convention and HEC conductors in brief. First, this is about ACSR, alloy conductors, AL-59, which is HEC conductors. So base is our estimate. India contributes nearly 20% to 25% of the global demand, if I exclude China, Japan and Korea. This market geography is poised to grow at a CAGR of 8% to 10% in the next few years.

If you see on the right, as per CEA transmission plan of 500 gigawatt are integration, as I said before, 51,000 circuit kilometer and 4 lakh MVA substation capacity to be added by 2030. Please be informed that 66% of transmission line requirement in this plan is 765 kV and HVDC, which has not happened before. So, if you see down below, our leadership and competitive edge advantages.

And also, we have been manufacturing since 1958, developed a strong expertise and rich experience. We have been largest supplier for different types of conductors. We have supplied to most of the top EPCs and utilities worldwide. We have been exporting to 100 plus countries. We have very strong design capability, focus is immense on in-house R&D, and our export mix in total conductor division has stood about 45% in the last financial year. Key markets are mentioned below, which is Americas, Europe, Middle East, Africa and Australia.

HTLS conductor, that's another very, very important product that we make and offer and we have the leadership. So, these conductors' demand is driven by the need for increased transmission capacities, infrastructure upgrades, resilience to climate variability and the integration of renewable energy resources. HTLS conductors offer significant advantage in terms of performance and efficiency, making them a key component in modernization of power grids and pursuit of sustainable energy goals.

If you see below, APAR has excellent credentials on this account. APAR's presence in HTLS so far has been 50,000 kilometers of high temperature low sag conductors supplied in domestic and export market, which is about 35,000-plus kilometers, which is operational and working satisfactorily. 140-plus reconductoring projects we have done in India. This is about close to – approximately close to 4,000 circuit kilometers.

We had done not only transmission, but distribution reconductoring projects and as we go forward, there would be much, much market creation happening around this distribution sector for reconductoring. So far, we have done 150-plus circuit kilometers in Goa, West Bengal and Odisha.

We have also done reconductoring projects about 200-plus circuit kilometers with ACCC in Nepal and Bangladesh, which is unique to APAR. And we have done quite a few prestigious reconductoring projects, about 800-plus circuit kilometers with GAP technology for power grid and other utilities. And we have had tie-up with CTC Global, USA, which is healthy and growing year-on-year.

Next one is optical ground wire, very important product. It goes above the transmission line. It is dual-functioning cable. Its ability to combine grounding as well as high-speed optical fiber communication in a single component, it makes it an essential element in modernizing and expanding both power and communication systems. APAR has developed expertise, technical expertise in fiber optic cables, proven its capability in manufacture of energy-efficient bare overhead power conductors.

APAR has integrated these core strengths in its comprehensive OPGW solution that includes what I said is optical fiber composite ground wire and related hardware. Very interesting to share that we have designed, manufactured and tested optical phase conductor cables, which is OPPC for 33 kV and 66 kV transmission lines. Very soon, we will be doing end-to-end pilot turnkey job, and we'll commercialize this offering in the next few months.

Next slide, please. Next category we have is aluminium speciality alloy rods and wires. So, this we have been manufacturing electrical grade, mechanical grade, welding grade, high-conductivity and high temperature resistant rods and wires, which is TAL, STAL, super-thermal alloy you call XTAL.

And the industries we cater to are the cable industries, fitting and accessories, which is hardware, fastener, wire mesh industries. So, this has also been growing business, and not only in the country we supply, we have been the largest exporter of these products.

Next category is railway overhead conductors. The picture shows you what all goes in electrifying the train. So, if you see the contact wire below in middle of the picture, and then there's a capillary wire on the top. So, by 2025, the Indian Railways expect to achieve 100% electrification of its broad gauge.

This is in line with the sector's target to become the largest rail network with zero carbon emission by 2030. While India is ahead in the electrification drive, efforts are needed in other parts of the world to meet the net zero requirements, and that is US, UK, Europe. These present opportunities for APAR have come true.

Furthermore, India's metro system plan is a cornerstone of the country's urban infrastructure development. Therefore, India is on track to become the world's second largest metro system, surpassing Japan, Korea and the US. More than 20 Indian cities consist of metro systems with around 870 kilometers of track, operational and additional 1,040 kilometers are under construction.

As CMD pointed out, railways are planning to increase the capacity on many of the existing corridors for increasing the speed of the trains. So, as you see on the numbers, we have the number one, we have largest market share, and we have a very good track record on the supply, and very important is we have also developed special conductors for high speed and bullet trains.

Next slide, please. Next category is the continuous transposed conductor and/or paper insulated copper conductors. So, CTC is the most used for windings on power transformers. It consists of a group of enamelled rectangular wires that you see in the picture, usually with polyvinyl formal PVF enamel, which are transposed to create a kind of rectangular strand.

The bundle of strips can be wrapped and insulated with tapes, generally in pure cellulose paper. Our CTC and PICC conductors are integral to transformer manufacturing, ensuring optimal performance and longevity. APAR is today a prime supplier to transformer manufacturing industry in the country, and we have also started exports to select countries and the target is to increase number of countries as we go forward.

A very important information, you know, if you can go back, please. So, while it's not mentioned, I just wanted to highlight that Central Electricity Authority, CEA, recently issued advisory for usage of CTC as main winding for rated current of 400 amperes or more. So, this is very, very important move by the Ministry of Power, which is CEA, which they have released this advisory that, you know, the companies should use CTC as main winding for 400 amps or more.

Next slide, please. So, we also manufacture copper rods, wires and busbars and strips. So, we are targeting the industries, as it's mentioned, switchgear industry, electrical panel industry, and electrical substation. And as you heard before, we are increasing this capacity to about 166% from 2023 due to increased demand in the sector. These capacities will be operational in the next two months' time.

Next slide. An interesting slide, the uprate, which I think our CMD and MD did talk about, so I'll come to the chart shortly. So just for information,

replacing conventional transmission line with advanced conductors could sharply increase transmission capacity, and at a fraction of the cost of new power lines, reconductoring offers a new paradigm.

As new build lines are planned, permitted and constructed to meet long-term system needs, large-scale reconductoring can unlock renewables near the existing network and contribute to rapid and cost-effective grid decarbonization.

As depicted in the chart, the uprate solution, this specialized turnkey solution what we call, is course over new transmission line on multiple parameters you see, which is capacity increased by maximizing transmission in given corridor, capital deployment at lowest cost of ownership, development speed, including permitting ROW, keeping pace with the generation, minimum land use, ROW completion dictated by the weakest link, lowest carbon footprint to build transmission infrastructure. So, these are the highlights of this uprate.

It is very interesting to see on the right side that APAR has completed almost 165-plus turnkey solution reconductoring project, installing about close to about 4,500-plus circuit loaders since the start of SUS-turnkey business. 45-plus T&D lines comprise of 2,000-plus circuit loaders under installation as we speak. We have invested adequately in special tools, tackles, tensioner and pullers, special training for manpower for specialized projects, and also the safety supervisors for every project.

Next one, please. So, within our specialized turnkey business that we have been talking, these are the things that we offer and do. Not only you see the transmission, but also, we are into distribution. We do optical ground wire live line installation on the transmission lines, and along with that, we

do the active equipments and substation telecom equipment. We do substation augmentation work. Very interesting on the top right is we also are into turnkey for medium voltage covered conductor.

We have high efficiency covered conductors as well. So, this is very, very important product, and we are doing three jobs as we speak and we hope to complete these projects within this year and some by middle of next year. So, these MVCC solutions are designed to improve safety, increase lifespan, and reduced upkeep of line, lower risk of outage, vegetation and wildlife protection, and many more.

These conductors are used in a variety of electrical power distribution scenarios, and the four highlights would be reduced the possibility of unintentional contact with the live parts in urban and suburban settings, coastal and harsh environments, areas with vegetation, and high-altitude installation. So that's on this slide, which talks about a specialized turnkey solution that we have – we offer as a company.

Coming to our power laboratory, this is about testing and research center. So, we have – on the left, you see that we have advanced testing and research facility compliant to all the national and international standards, let it be IEC 738, IEEE 1138, IEEE 524. And the examples, there are four examples: heating and cooling curve versus ampacity, emissivity versus ampacity, creepage at different loading, sheave sizes versus conductor deformation. We have a fully equipped laboratory accredited with ISO 17025-2017, recognized by GOI.

So currently, on the right, you see there are specific areas in which R&D is being carried out by the company. One product is around alloys, 4,000/5,000 series of alloys. Second is extra high conductivity alloys for

superior grade conductor. Third one you see is mega strength galvanized core wire for gap type and ACSS conductor. These are HTLS conductor for superior design and competitiveness.

As I spoke to you about OPPC, so we have done design manufacturing testing. As I said, we are soon going to do a pilot project and then commercialize the complete end-to-end offering. Trials for a coating line involving coated conductor, this is also highlight. We are doing various trials to move to a coated conductor and this will be having many advantages in terms of lower losses vis-a-vis the current SGLS or normal conductor.

Next slide, please. So, this is our extensive global presence which is driving the exports. So, we have had been serving our loyal customers to 100-plus countries spanning six decades. And as I said before, during 2023-24 last year, this ratio of domestic export was 45-55, where premium products accounted for almost 45% of the business's total revenue. Next slide, please. Let me talk about some of the competitive advantage that APAR Industries Limited Conductor Division carries.

We have global leadership with six-plus decades of experience. We have had technology tie-up for advanced products and we are trying to do a couple of more within next couple of quarters. We have large capacities, wide range of product offerings, catering to both, as I said, transmission and distribution.

Raw material supply security with access to molten metal which MD did talk about. Quality customers and global approvals, the top-notch utilities, EPCs, developers and OEMs. We have had best of customer mindshare

and grant recall. We have a very good financial ability to cater to the bank guarantee and working capital requirements of this business.

And we have leadership in a specialized turnkey solution in the T&D segment which I talked to you about, which is around HTLS, OPGW and MVCC. So, we have done remarkably well. This talks about our new product development journey while the first point talks about the expansion which I did talk about.

The second is coated conductor. As I said, it is under trials and it reduces the line losses, improves the life especially in polluted and coastal areas, increases the capacity of the conductor. So, we are doing trials and we hope to have a final product very soon.

Emergency restoration and MVCC. So, we have developed reconductoring with HTLS using ERS in some of the projects. So, we have developed this as an added solution. As I discussed, we are doing a couple of turnkey jobs for MVCC and as we go ahead, we are further, our cable division is developing a further enhanced MVCC which is high efficiency covered conductors that we will take up with our customers in order to offer them a far better, superior solution along with the turnkey.

And the last one is we are doing a pilot project of our ACCC or Aluminum Carbon Composite Core Conductor where it will have optical fiber embedded in the core and this is a new version of, new avatar of ACCC and we are doing a pilot project, hope to finish in the next few months. So last one which is way forward for this business. So, as we have seen, India is shining where there's a strong domestic demand. So, we would like to maintain the leadership and market share in core segments. On the global market side, we will increase the market access.

We will have approvals with a couple of more utilities, global utilities, global EPCs into the targeted market. That will be another focus area. On the business side, the very, very important would be on time and full execution of capex program that we have taken. We will amplify our efforts on high value products. We will sharpen focus on productivity improvement, which is very, very important, both manufacturing and project execution leading to obviously the cost leadership. And last one around operations which is the execution muscle.

I have been talking about specialized turnkey business. So how do we build this muscle further and doing all these projects? Reinforce the safety culture, which is very, very important to our company and the customers. Upskill the talent and continue to invest time and resources further on new product development. Some of the initiatives I did for this year and create much more technology partnerships. So, these would be some of the initiatives as we go forward. Thank you very much.

Chaitanya Desai: Thank you. May I request our next colleague, Mr. Shashi Amin to please come and speak about the cable solutions. Thank you.

Shashi Amin: Good morning, friends. I would like to take you through the journey of the cable solution division. We came into existence or I would say cable division came into existence in the year 2008 when APAR acquired a company called Uniflex Limited with a turnover of roughly about INR100 plus crores and a bottom line negative.

And in last 15 to 16 years, we have come a long, long, long way. Our Chairman Kushal bhai had set the tone followed by Mr. Chaitanya where he mentioned that we are a global player. Even in cable solutions, we treat ourselves as a global player.

In the financial year FY 22-23, 51% of the cables produced in our factory was sold in the global market. In the financial year 23-24, it came down slightly because of the de-inventorization which happened in US. Specifically, we saw that US requirement came down.

So, our percentage of international business came down to slightly less than 40%. But this year, we are on track as far as the global market is concerned. And I'm happy to say that we compete with global players like Prysmian, Nexans, Southwire of the world and a massive footprint of APAR in US market.

Europe, especially Italy, Spain. Now, we have got a place in UK market. In Southern America, yes, we are in Brazil, Peru, Chile. We do a big-time business in Australia and even in India. I will take you through the journey, what we are trying to do as far as the cable solution is concerned. We are not the market leaders as we are in conductors as far as cable is concerned.

Probably we are number six in the country as far as turnover is concerned. But yes, we have an aim and ambition to be in the top three cable companies in India. So, we are pioneering cable solution.

If you look at it, we've got five electron beam facility where with this kind of technology, we produce our house wire, Anushakti wires. We produce railway cables which goes into the locomotives. We also produce cables which goes into defence.

We also produce cables which goes into solar. With five electron beam facility, we are currently the largest player in the e-beam segment. We are leaders in solar and wind. Wind probably it would be about 65% to 70% or maybe 75%-80% market share. But solar, yes, with the market share of 20%-25%, we are the market leaders.

As Mr. Manish mentioned about MVCC, it is a medium voltage covered conductor. If you see or if you heard, most of the forests are burnt out because of fire. A lot of these cables are the bare conductor which goes into the forest. The moment the tree falls on the conductor, it gets stripped and a spark is generated at that point of time because of which the forest is under fire.

At the same time, in places where the terrains are very bad and even the snowfall is very high, medium voltage covered conductors are being used. We were the first Indian cable company to come out with this product about four-five years back. Like we said, Anushakti Cables, we were the company which introduced this product.

We had a tagline saying that is tar ki shakti apar. Competition also felt that the power of this argument is truly immense and much greater. Therefore, competition has also come into electron beam house wires. Polycab RR has launched this house wires in Kerala. Finolex is yet to launch, expected to launch in next few months. So likewise in medium voltage covered conductor, it's a high-tech product.

Competition has really caught up and some of our friends in the cable industry have introduced this product. But we are one step ahead. We are trying to do research in this product and soon we would be launching a high-tech product which is far far superior to what we are currently doing.

We are the trusted partners as far as defence is concerned. INS Vikrant, INS Virat, we were the major suppliers. Currently we are working with a couple of submarine projects for Indian Navy. So, this is where we are. If you look at the product range, I think we are the only company in India

who's got this kind of product range. I think most of the competition would not have the kind of product range what we have.

Like your low voltage, medium voltage and control cables everybody makes. Medium voltage covered conductor, we were the first company to introduce and now there are about four, five companies who are into this business and they are still struggling to develop the kind of product what we are manufacturing. Then we have this concentric core anti-theft cables.

Again, very few companies in the world manufacture this. If you look at the last line, fire survival cable, this cable is being produced by many cable companies in India. But APAR is the only company who's developed cable which can sustain a temperature of 1,050 degree centigrade.

That means in the event of a fire, this particular cable can sustain a temperature of 1,050 degree centigrade and nothing will happen to the integrity of the cable. That means whatever current a cable should carry will carry those current at least for three hours at a temperature of 1,050 degree centigrade and these cables are used in Australia. We supplied these cables into Sydney Metro and Westgate tunnel project.

We are discussing with the railway authorities. We have in the advanced stage of discussion for Melbourne Metro and Brisbane Metro with the Olympics coming in Brisbane in the next seven, eight years time. There are a lot of developments happening in Brisbane and as far as we are concerned from India, we are the largest supplier of solar projects into Australia.

We are the largest supplier of cables from India to solar projects in US. I am supplying as Kushalbhai mentioned about the Nacelle cables, torsion cables and various auxiliary cables in the windmill. We are supplying these

cables to various wind companies or windmill manufacturers in US and Europe.

House wires I mentioned, we are focusing mainly on electron beam house wires and three unique products what I normally talk about or we talk about is it is a melt resistant wire. It can carry at least 50% more current and the life of this product is more than 50 years. So, we have gone into the market with three unique proposition to the customers and I'm happy to say about 6,000 odd retailers in India are selling this product.

It's an expensive product so we are present in the A class retail counters. These are some of the unique products which I wanted to speak about. Rest of the products I think most of the people do manufacture. We are the company which has got largest UL approval. Without UL approval you cannot sell cables in US market. We've got about 14 such approvals.

Recently we've got an approval for medium voltage cables. We are in PV cables, wind cables, building wires, irrigation cables, the whole lot of range what we can produce and also, we are actively involved in cable harness. When we have this tagline of cable solutions, we go a step ahead. Like your solar cables, we started promoting solar harness. We are doing wind harness. All this tower what we see in the wind, we supply cables with connectors.

They just need to plug it out at the site. Railway cables are with harness and recent entrant for us is in the data centre projects. We did pick up a job for Amazon. We did two jobs for Amazon. We did a job for Microsoft data centres. Recently we backed an order from Adani data centre.

Our focus is there in the data centre business too. If you look at the cable business of ours in last five years, we have grown at about 25% CAGR in

the last five years. In FY20 it was INR1,600 crores, FY24 about INR3,900 crores and we intend to grow at a CAGR of 25% in the next five years.

So, this business of INR3,800 crore, if we grow at a reasonable CAGR about 25%, we should reach a INR10,000 crores cable company in the next five years. If you look at the competition, on an average the top few cable companies have grown at about 20% except one company which has grown at around 26%, but we are the fastest growing company in the cable industry. So, I would just like to speak to you about the market in India.

I would speak about the market in US and I would speak about the market in Europe. Indian cable and wire market is around INR70,000 to INR75,000 crores. Around 35% of the cables are sold in the real estate.

That means your house wires, building wires, whatever buildings are coming up and the way the building segment is growing, this particular segment would grow in a big way. Real estate is around 25%, power distribution is around 15%, your industry is around 10%. If you look at, if I focus on this three alone, vertical, I think we are talking of 60% of business happening in these three verticals.

So, what we have done in APAR, in last few years we had a structure of regional manager and the branch manager or the state manager. We moved away from that and we formed verticals. So currently we have in this financial year, we have broken down our structure.

So, we have a vertical for solar, we have a vertical for wind, power, T&D, infra. Like when we did this verticalisation, if you see, we are talking of a 290 gigawatt of solar capacity which is likely to go up by 2030 from 85 gigawatt. Wind from 45 gigawatt to 100 gigawatt. Our chairman mentioned about offshore wind, 7,000 kilometres of coastline, but yes, we

are not there in India in offshore, but government is seriously thinking of putting up an offshore wind and once that happens, probably this should also go up.

Government has come out with 3 lakh crores RDSS scheme, a big-time investment into transmission and distribution, mainly into distribution, and with the PLI scheme, we think that the industry also would grow in the next few years' time. Defence, government is talking of big investment, about INR21,000 crores of investment in 2024, like target is about INR50,000 crores of investment by 2029.

Railways, yes, happy to say that. More than 90% of the cables in Vande Bharat have been supplied by us and there are about 40 odd trains which are applying and we are the major players as far as Vande Bharat is concerned. We mentioned about PLI scheme, the focus would be on electrical and machinery industries like your TBM, Tunnel Boring Machine requires cables, your cable reeling drums require cables, elevators, stacker reclaimers, so our focus will go more into that and also auto cables and EV charging.

So our focus will be there on this 8 pillars what I am talking about and we see a big growth and we have a strength here and wherever we do not have strength as far as 8 pillars are concerned, we are adding on manpower, we are adding on team, we are educating our team to focus more on this segment and we do see lot of opportunities for us when we talk about a growth of INR210,000 crores, a growth of 25% CAGR year.

We also formed a vertical called B2B channel, we were mainly into institutional, some of our competition have got distributors when it comes to cables, about some of the companies 60% to 70%, 75% of the cables

are sold through dealers, wholesalers or distributors, so we have formed a team now, so our plan is we should have a presence in about 30 cities, looking at about 50 odd distributors in those 30 cities and doing a business of INR1,000 crores in next few years' time. Coming to B2C where we were there in this business selling house wire into the retail. So, we had this vertical called light duty cables, we separated that and we created a B2C and B2B channel.

Currently we are there in about 181 districts, we have got a presence of 339 distributors, retailer presence about 60,000 retailers, as I said our product is bit expensive, so our focus is mainly on A class retailers in the towns where we are present. Active presence in 18 states, number of electricians about a lakh, we do lot of demonstration to the individual buildings or the builders, we do lot of them, we do electrician meet, nukad and meet and currently we are, this business is around INR250 crores to INR300 crores for us and in next 5 years' time this business will go to about INR1,000 crores.

Now coming to the global wire and cable market, I spoke about INR75,000 crores as Indian market. Globally the cable and wire market are about 210 to USD220 billion which is likely to grow at CAGR about 5% to 6%, US is around USD45 to 50 billion, Europe is around USD40 to USD50 and rest of the world is around USD120 billion. So, 50% of the business for cables and wire is present in US, Europe and India and balance 50% is in the rest of the world.

So, there is enough room for us to grow in this market. When I say about INR4,000 crores of business what you have done, out of 70,000, 75,000 we are at about 5% to 6% market share even in India and we see a lot of potential of growth when it comes to do a APAR Cable business.

Now bit of a business on US, we are focusing big time on US. US business is likely to grow by about 5% to 6% from 45 billion to around 60 billion, 65 billion. So, our focus there is mainly on renewable, solar and wind put together is around 300 gigawatts to 350 gigawatt expected addition by 2029. We also see a good amount of investment in infrastructure project and even the build a vertical.

We also studied which are the countries who are supplying cables to US, 50% of the cables being used in US comes from out of US, the major supplies come from Mexico followed by China and if you look at India it's only 0.5% of the cable which is going to US from India. So again, we see huge potential and when I look at Europe, again Europe is around USD45 billion to USD50 billion. There were 20, 21 odd countries where we are looking at, but our focus would be on Italy, Spain, UK, Germany and France. These are the five countries where we think and we feel can add value to our growth.

So here again we are looking at focus into renewable, wind and solar. I would be happy to say we are the only Indian company supplying to a utility company in Italy which is also has got a utility business in Romania, Spain, Chile, Peru, Brazil, Colombia. So very happy and proud of our association with the company in Italy for supplying cables to some of the utility companies in Europe and Southern America and when I look at Europe, USD21 billion of cables are coming into Europe from outside Europe.

Major players is China followed by Morocco because of the proximity to European countries, Turkey yes there are a whole lot of cable companies in Turkey. Tunisia is very surprising and India we are at about 0.4% and rest of the world 8.6%. Again, we see a huge potential for an Indian cable company to have a major footprint in Europe. So, when we talk about

growing from 3,800 crores to 10,000 crores in next four to five years, we need to look at expanding our present capacity.

The current capacity what we have can produce about 5,000 crores of cables. So, if I have to grow this business to 10k, yes, we need to expand. We bought a land parcel in a place called Katalgaon which is in between our two existing factories Umbergaon and Khatalwad 43 acres of land and this is expected to be commissioned in the year financial year 25-26. This will happen in a phased manner. We are also looking at debottlenecking our initiatives. We are working on industry 4.0, there are a whole lot of initiatives happening on 6x and Kaizen.

We are adding capacity in in-house compounding, we are doing a backward integration. This would be added in next few months. We also doubling the capacity of our copper wire drawing, that is copper which are required for cables and your house wires. We are doubling the capacity there and as far as aluminium stranding and wire drawing facilities are concerned, the expansions are going on every year. Most of the orders we have placed, I'm happy to say that by 26 we would also be in the business of EHV cables.

We are putting up a plant for 220kv cables, we have already finalised the machinery for producing these cables even for testing facilities. We are also looking at expanding our electron beam facility at the factory. So, keeping in mind where we want to be in next five years time, we are putting money into the right kind of machineries and looking at growing in those segments where we want to focus in next few years.

These are some of the projects what I mentioned about Lean Six Sigma. We have achieved 50% reduction in defect rate. Our production has gone

up by 15% with some of the projects what you have undertaken. Kaizen, yes, there are a whole lot of small, small projects which we have undertaken. We have significant savings, about USD150 million. Recently we started a project called SMED where we wanted to improve on the turnaround of changeovers.

Happy to say that we are participating, in fact our team is participating in various competition, quality control and industry excellence and we have got awards, platinum, gold at CII, QCFI and Kaizen Institute. Industry 4.0 is a project which we started about 7 months, 8 months back. It will take some time for us to achieve 100% goals as for what we want. But yes, we are trying to improve the overall efficiency of the equipment, improve on the energy management, savings and all other things related to sustainability.

I think this is one of the projects where leads to the sustainability aims or goals what we have. Before I wind up, this is what we are looking at. When we talk about INR10,000 crores, 40% to 45% business for APAR will come from the institution sales. When I say institution sales, it's solar, wind, railways, infra, heavy machinery, those 8 pillars what I named. 40% to 45% business will come from the international market for us. 10% business, I said I would like to take - we would like to take this business of house wires to INR1,000 crores in the next few years and B2B channel that is cables and flexibles which are sold through channel where our focus would be on the builders and our focus will be on the smaller industry that we would like to take to 10%. Thank you very much. This is all from my side. I think we are breaking for tea now, Ramesh. And let us reassemble in another 15 minutes time where we have further presentations on telecom, oil,

sustainability and other financial numbers. Thank you very much. Thanks a lot.

Girish Gupta: We have entered into the fifth realization, fifth industrial realization of the world. What exactly is that? There is a convergence of human, physical and digital world which is happening today. When I said human world to digital world, there are devices which are getting enabled to interact with or within the digital world.

When I said physical world into digital world, these are programs which are transforming the physical world into a digital world, creating the digital twins. What does that mean? That means that convergence of human to digital world and physical to digital world is creating a metaverse which will enable our workforce, which will enable our enterprises, which will enable our industrial revolution and which will enable our consumers. Whatever we do efficiently and productively, it will further enable that. But what it translates to?

There are two underlying principles for this metaverse, for this digital twin. It's cloud which is driven by primarily 5G or 6G which is going to evolve and the block chain. Two technologies are supporting this metaverse to happen. And what does this technology need? One, we all know we need a real-time performance network. We all know we need a secure data. We need to know how our device detection and location. We need to have a network sensing. We need to have a self-healing network.

And we need to have a slicing of the networks so that when I need to transform, shape up the network, increase the capacity of the network, I can slice the network and increase the network. That convergence will happen not by only human intervention. And that's where this current term

of AI is coming in, which is sensing, thinking and acting, creating an AI network for us.

What this means for us? We have been seeing the video consumptions, whether streaming, gaming, everything over the last, I say 10 years, that has been growing and that's what has caused the data growth till date. Whatever we are today at 110, 112 EB per month globally is going to move to 300 EB or 320 EB per month, but is it going to grow from the videos what we are using? No. That's not going to become the demand driver.

The demand drivers are coming from purely this artificial intelligence which will need supercomputers, which will need every time data to be monitored, sensed, captured. We are talking about, as an example, self-driving cars, how much amount of data each car will generate and needs to be captured. And we are talking about robotic world, which will enable our productivity and you can say efficiency, both of these aspects get covered only in AI basis.

But what exactly is changing from now to then? Today we need internet for our comfort of life, that yes, I can use video, I can use chatting, social chatting, but tomorrow we need this, it becomes a necessity of life. And when I say necessity of life, this necessity of life will be low latency and flexible and adaptable. That kind of network is going to get built for us for tomorrow. How this network will get built? Today we talked about 4G and some aspect 5G.

But tomorrow it will be purely 5G network, purely fibre to the X connected, fixed wireless access is going to play another role and edge data centres are going to play a larger role in this space. These are the four technologies

which will drive this. But who invest in these technologies? Who will come and invest in these technologies?

Primarily the telecom operators globally come and invest in these technologies, but they are facing the headwinds. Typically, Telco industry spent USD300 billion a year globally for last seven to eight years, but the last two and a half years, three years, they've gone overboard, invested more than that to enable the 5G aspect of the business. Their spend ratio, capex spend ratio typically stands at 15% compared to what they used to spend earlier, 10% to 12%. They are trying to bring that back. How they do that?

They are looking at every alternative technology, every alternative medium to support and make themselves relevant and with respect to whom? Relevant with respect to OTTs, Google, Amazon and all who have come up and taken up their share in the market. They have invested in the capex somebody else has come and riding on their capex and making money. So that's why there's a shift in the telcos mindset itself.

One, they are looking at every alternative technology to reach to the last mile, like low orbit satellite, some parts of the world it is accepted, India still policy is getting formulated, we are hoping by end of this year this policy should get implemented. They are augmenting their complete core network platforms, so that they can enable them with adaptability, with latency, with the scalability required at any given point of time because today I need 100 GB, tomorrow I need 1 terabit and day after tomorrow again I need 500 GB.

That scalability each operator has to arrange and manage in their networks. Third thing, we are talking about latency. The hyperscale data centres have

come up in India, but when you talk about latency of nanoseconds, there are huge set of edge data centres which will come. Google, Amazon or Facebook, these guys will not put up edge data centres. Telcos will go and put up those edge data centres to deliver that low latency networks on their 5G, to enable those applications.

Fourth and the last important thing for them still they – that is an investment they are doing, but how do they generate the revenue back into their networks? That revenue generation, they are entering into the front-end services, competing head-on against any other OTT player. They are providing enterprise services.

I don't know how many of you know, Jio provides Jio Agri service, which is based on AI. It helps the farmers to monitor their crops, to monitor monsoon, everything, augmenting their services. Today Airtel tied up with Apple directly. Apple was not able to barge in. Airtel closed their wing services and entering into with Apple tie up as a music service in India. So, there's a different set of front-end services coming in from each of the telcos to enter in this space.

So, all the telcos, communication service providers will become our digital service providers and there is a play which is going to remain. All these networks, whatever they are building, wireless and wireline, needs a fibre connectivity and that's where APAR role comes in this business. So as a APAR telecom solution like Shashi mentioned, OFC also got acquired in 2008 and we started very small, still small I'll say with respect to industry, though we are among top seven or eight in India, but still very small with respect to the global standards.

We started manufacturing optical fibre cables in this business, which we cater to different needs, I'll touch upon that. Then since 2017, we entered in a power line solution, money is touched upon OPGW, we do ADSS as well and all power line solutions is being served by APAR telecom solutions. Then last year we entered in three new lines of businesses in telecom solution.

First, we said this 5G is enabling a lot of different set of demand, that every device needs to get connected. So, we ventured into different set of products, which is hybrid cable. I think our Chairman mentioned about that, but I'll touch upon little bit in detail on this venture which we started last year. Then looking at the data centre and enterprise demand, we started venturing into the data cables business last year and lastly, we entered into the services business of the telecom network build last year as well.

So, what I'll do is going forward I'll touch upon these three or four topics, so that you get a perspective where we are heading to. We serve to telecom customers, definitely, railways and power we use our teams to serve that, defence we serve directly, enterprise we serve directly.

So, till 2010, this network of NLD or fibre network getting built in the country or globally I will say. From 2010 onwards beyond this tower the network started getting built and that's where the new products, new solutions started coming in. As of today, as we speak, APAR telecom solution is fully capable to address any need of this newer network which is required in the industry.

Whether it's connectivity to a home, whether it's connectivity to an enterprise, whether it's connectivity to a tower, we serve each and every product in telecom business to connect these towers, these homes and

these products, I will say whether it's our duct tape, we have seven or eight categories in this. Each of these products are fully qualified to serve any customer globally. So, this is the product which I mentioned we launched last year.

We went to the customer, understood his needs, where the gaps are, where the industry is struggling. The first struggle when we spoke to a couple of operators globally, the first struggle which came out is they had a number of issues managing a number of cables. Second struggle they shared with us that they had an issue of different operators working at different times in a different manner not managing the same standard operating processes.

Third issue they brought up, it increases their cost because they have to run their installer a number of times to install that and that's where the solution got carved out at our end because look at this, typically radio antennas will be six on any tower site. So, six times an installer is going and installing this product. Now the product which APAR launched last year is single time installation, no mess on the ground, absolutely no chaos, clean manhole providing a solution to him without any hazards.

Currently this is not a standard product which was in the industry, so this industry has evolved a kind of $200 million last year and I see this growth happening 20% cent year-on-year at least CGA from next five to ten years. US has adopted it, Europe is in process of adoption of such products and India will also adopt another year or two years, India will also adopt. We got awarded by Indian telecom industry for this product specifically last year, Aegis Graham Bell took our product and awarded us for this innovation in the telecom space.

But currently as APAR we have done the manufacturing set up, we have gone to UL certification around that in US and currently supplying to the US market these products and I believe personally it will cater 15% of our revenue this year and going forward. The second set of products which we launched last year is data cables, which is primarily to address the data centre market demand.

But what is data centre market demand? Data centres growing in India at much faster pace, globally they are growing at 6.5%, in India they are growing at a pace of 25% CAGR. We are investing, India is investing 2X in next three years, another $5.7 billion investment is going into the country, that means 800 megawatts is getting added onto the ground, what does it translate in terms of kilometres or square metres, 10 million square feet of space, new space is going to get built which will consume our power cables as well as data cables.

That's where this market is evolving, right now this market what we see is primarily seven hyperscale locations where it is happening. Beyond this, this market will grow around at least 100 locations in India for edge data centres, which is not mapped yet, because it is being done in silos by different telcos. So, this market alone will give a huge demand to our power cables as well as data cables.

As a part we have invested in data cable manufacturing last year, the process is set up, the products are under qualification right now with the different authorities, once it is done, we start generating revenue. We'll have some initial revenue in this year, but that's the second line of business we added to the telecom solution. Third line of business which we added to the telecom solution last year is fibre network services.

This again is a different ball game and this vertical, under telecom this particular business there are more than thousand players who play in this space. Our objective was if we are entering in this space why we should enter, I think me chairman and a number of guys we had a lot of discussions around that, why we should enter in this space. We went to our customers back, primarily the two large telcos tried to understand the challenges they faced in their networks.

So, the three larger challenges which we fixed for them is if there can be a hassle-free deployment for them, if there can be a delivery which is progressive, which can be delivered on time and in a progressive manner and third is the complete ownership. We looked back, reflected back into the system, we created an environment where every environment of installation we can do, because this is a start-up this has got a lot of ROW permissions, it has got inter-city and intra-city networks, so we looked at it, built a whole ecosystem based on some technology intervention based on some tech enablement, based on service partners which we build across India.

So right now, we have more than 100 partners registered with us as our partners to work for us along with us in this particular project. Then we not only built this capability to roll out the fiber network, but we also built the capability to install the active networks, we built out the capability to do O&M in case required. So that's how we became an integrated end-to-end network provider for the market.

As of today, if I speak, we are building this network for one of the largest telcos in the country. We just initiated, we have signed the contract with them, we have got the initial peers and we're looking forward to peers to

grow in this space. Next is another project which you guys must have heard BharatNet.

It has been talked about for last 10 years and this project has been a prime project for our Prime Minister Narendra Modi. In 2019 in his speech on 15th August he mentioned he wants to connect 100% villages of India and still it took four years to launch that project. It has to connect 250,000-gram panchayats across India.

It has to connect 625,000 villages across India. It's not a small and it's all rural connectivity. So, they launched a tender for roughly INR75,000 crores earlier this year in February which got participated in you can say last week of July and it has got companies who will get awarded will have to build take three years to build this kind of project and will have a 10 years of operation and maintenance on this project.

Roughly 10,000 kilometers of cable will get deployed, sorry 10 lakh cable kilometers will get deployed under this project over next three years. Never this scale project has been executed in India and I don't see in next 10 years this size project will be there in India. So, this project has not only fiber rollout, this project has got further than that.

It has to put the whole active equipment routers, switching, everything in that network. You have to build the state NOCs in this project and you have to integrate those NOCs with the central NOCs available in the market for the customer. So, it has got a full-scale network integration into the project beyond fiber overall.

So, it's a middle mile network which will get built. It will be a last mile network which will get built and last mile network will get built over 10 years period as the demand grows in the market, as the demand grows in

the villages that network will start getting built and that's where APAR has gone ahead and participated in this tender. Results are awaited.

We have to keep another two months keeping our fingers crossed and hopefully we'll get some business out here. So as APAR telecom solutions over last one year we are strategically aligned to upcoming industry investments. There are three set of investments I put it.

One is an urban network which gets built, second is a rural network which gets built and third is a defense network which gets built in any part of the world, in every part of the world. And as APAR for US market, for European market we have got all our approvals done. We are now ready to go into the market.

We have started making some inroads with some initial orders and we make much larger. This alone market, US and Europe alone market is more than $100 billion. India market is again another billion-dollar market from fibre to the home perspective and another $10 billion market with respect to BharatNet.

So, I spoke briefly about BharatNet but beyond the 16 states there are another eight states which has again investment of INR40,000 crores which is not released yet, which will get released in next two years period. We'll have again a play in that. We are expecting two of those states should get released in next six to 12 months.

So that's additional opportunity where we see in BharatNet going forward. So that's what will bring the services business to sustainability. Another defence networks, typically Shashi mentioned about INR21,000 crores and INR49,000 crores.

Defence typically spend INR1,000 crores on telecom products, pure telecom cables which we manufacture as an organisation and we have got ourselves DGQA certified this year. Now we are fully eligible, capable to participate in these tenders and I'm hoping to grab some business possibility here as well. So, all the opportunities which are getting released in next two to three years, APAR is fully capable to go ahead and grab the business.

Competitive advantage, beyond standard advantages what we have with respect to others, I've just compared my competitors to put this slide up. We looked at three aspects, one from growth perspective, second from premiumisation perspective, third is from optimisation perspective. When I talk about growth, we definitely have a market access but what we have different from others.

We have the largest range of UL and CPR certifications to address US and European market which most of the other Indian companies don't have. We have a largest global access to power utilities and EPC companies in US and Europe because of our conductor division where which industry itself is going through a transformation, where they are putting up their SCADA networks, where they're getting into the digitalisation, where the demand of our telecom products is going to go up. Premiumisation, we have already spoken about hybrid cables which we have changing the face of the industry with this product that the demand which was going in a different direction, converging that demand into a single product or single site.

The second set on renewable side, the market growth Shashi has spoken about, we have the whole connectorized solution for renewable sector, oil, gas as well as wind and energy which is only available to APAR in India,

no other company. Till last year these products were imported into the India now they are being bought from APAR. Last, we have the widest range of fire rated cables.

We have approximately 900-degree Celsius product which can withstand three hours. Look at this, when data centres are driving the cars on the roads, what kind of cables they will need inside the data centres. That's the product which is required.

In case of fire, you don't have an accident on the road, the products need to be like that and that safety standards are there outside in outside India but they are coming into the Indian market as well. So, the demand of these products will also go up. Optimization of the business, with this IoT demand what is happening is everyone is looking at different set of products, different set of cables and we as an organization, we had a polymer science department who understands polymer science and all cables what we make need to know the polymer science and that's where no other company in the country has got a polymer science knowledge.

We are the only company who brings that knowledge and capable to make a new product in the most efficient and fastest manner. We are leveraging our capacities to give a product to defence, whether it's fibre, whether it's copper. Certain products like torpedo and TAC are absolutely exclusive to APAR the certain products which are generated which we quote as a team.

Just to summarize, market will remain around 300 billion for next five years but there is enough room for APAR to grow where we are today. We are augmented ourselves with innovative products and approvals for all upcoming investment into the industry. We are building a strong competitive edge to expand our presence with relevancy and premium and

last, we are expanding ourselves beyond products for end-to-end services into the market and that's how we feel we are enabling the lives and connecting the lives. Thank you. Let me invite Rishabh for the oil presentation. Rishabh you will do or? Okay. Thanks.

Sundar Subramanian: Good afternoon. I like to take you around a few slides on the lubricant side of the business that we do. Before we start, the first slide is just to run you through an overview of the automotive market.

India is among probably the top three automobile markets globally. Some of the key statistics that would be very interesting to you is we clearly, everybody knows here that we are clearly the largest two-wheeler market in the world. We have an installed production capacity of close to about 1.5 lakh, 1.5 million vehicles of two-wheelers per month which is approximately 18 million a year. Follow that up with three-wheelers, we do close to about six lakh three-wheelers annually. Tractors, we do almost close to a million, 9.6 lakh was what was the production number last year. We are the second largest construction equipment manufacturer in the world, significant numbers.

Within the construction segment, we are the largest backhoe manufacturer, backhoe JCB, synonymous to JCB. We are the largest backhoe manufacturer in the world. We are the second largest bus market in the world.

We are the third largest truck market in the world and we are the third largest passenger car market in the world. So just to give you some more details on the passenger car market which is probably what most people look at in terms of automotive industry development, the largest market

clearly is China which does about 27 million cars a year, followed by US which does about 13 million.

India is the third which has touched almost 4.8 million a year, followed by Japan which does about 4.1 million a year. So, the gap between three, number three market with the top two markets is significantly large and that clearly is a much bigger up room as the market tends to become, as we as economy become more developed. So, the upside in terms of automobile numbers are significant. We don't see this market slowing down in any way.

On the other side, a lot of you are interested here to see about how the electrification is coming in and going to affect this side of the business. Just to give you numbers on the two-wheeler side the average registries of electric vehicles over the last quarter has been approximately around 75,000 units a month. If you look at the two-wheeler industry side, the industry grows at about 6.5% CAGR which means that it adds close to about 1.1 million units every month.

The electric vehicles have still not breached the growth that's happening in the two-wheeler. So, it's still significantly small. We expect this to continue to eat into the growth and we see the ICE markets to be a little flat moving forward but we don't see the overall numbers significantly reducing.

The gap between electric vehicle costs and the ICE cost are still significant close to about 25% and this industry the only hope for this industry in the near term is clearly with governmental interventions in terms of subsidies and stuff before the cost of the battery starts to keep going down for the vehicle sales numbers to start to rapidly pick up. It's a different story in the three-wheelers. The penetration of electrics has almost reached close to

about 40% and we see that moving in because the three-wheeler is what I call last mile logistics and the last mile logistics are more prone to earlier adoption of electrics.

So, we will see the three-wheeler side getting at least in the commercial cargo three-wheeler space becoming moving more and more electric. Apart from this, from a significant movement point of view, buses, if you look at the bus side of the business, if you clearly look at buses between intercity and intracity operations, we clearly see the intracity operations going electric and the intercity operations moving from fuel lead to gaseous fuels. That will be stage one before it starts to move into other technologies.

But more or less on the other side of the businesses, which are basically tractors and construction equipments, they will continue to remain fuel lead at least for a decade for sure. That's probably to give you an overview of the segment. In terms of numbers, the market's close to about 3 million metric tons in size, relates to a turnover of close to about INR38,000-odd crores in totality.

The top 10 players in this market contribute almost close to about 80% market share by volumes. That's just to give you a scenario. Even though the market's heavily fragmented, the big really take over the top business positions in the segment. Coming very clearly to give you an idea of the growth in the segment, in the current scenario we clearly see that the automotive markets will, automotive industrial both put together, the lubricant market will continue to grow at close to about 3% CAGR.

We believe the automotive industry will slightly lag this number by around, we look to see this at growing at around 2.5% CAGR and the industrial

side, because of rapid industrialization, China Plus One that was talked about a little earlier, and with a lot of manufacturing moving in, alternative supply chains being created globally, with India being a key benefiter for this, we believe that the industrial side will grow far more aggressively.

We look at that numbers to be close to around 4% on a CAGR basis. The agriculture markets will remain robust, which is a key part of our economy, and we believe the lubricant business is going to be dependent on agriculture moving forward, which is a key component in this whole sector.

The governmental focus on mining and infrastructure has been very high, and this is going to drive in a lot of high-performance lubricants, and a lot of consumption coming in. So off-highway segment as such in the lubricant side of business has been aggressively growing, and it will continue to grow at least over the next 5, 6 years.

With a lot of activity going on in manufacturing, there's a lot of requirements coming in for specialized fluids on the industrial side of the business, especially in metalworking, as we move away from cast iron and steel kind of product lines into speciality products, aluminium, copper, aluminium alloys, copper alloys, especially coming in through the EV side of the business, you will see a lot of action on the metalworking fluids, and the requirement for speciality metalworking fluids is exponentially growing.

And finally, at the higher end of the industrial spectrum, compressor oils, full synthetic gearbox oils, you have a slew of product lines coming in at the higher end industrial applications, where we believe the market's growing aggressively, both in terms of volumes as well as from a value perspective.

So that's an area that we look at, and we remain confident on the growth story on the lubricant side of the business. Just to give you our relative positions in this overall segment, like I mentioned, the market's close to about 3 million metric tons. The top 10 players contribute close to about 2.25 million metric tons in the overall pie.

Apart right now with our volumes that we did last year, we rate ourselves to be around the ninth largest lubricant player in this country, doing almost around 72,000 KL for the year FY '24. We are clearly among the top 3 agricultural lubricant manufacturers in this country. We are among the top 3 in the industrial segment, among the private players, keeping aside the PSUs off in that volume.

We're keenly looking at exports in our business, and we have started to expand our footprint into the Middle East and Africa in a big way. Our export businesses have significantly started to grow, and we are seeing significant traction in these markets. With the focus as a group that we have around ESG, we have had a slew of offerings that we have been giving on the lubricant side of business too with regard to a key focus on ESG.

Products offering fuel saving, products offering long drains, products being manufactured to take care of durability, and also looking at products that are aiding emission requirements which are non-lubricants like diesel exhaust fluids or AdBlue as you may see. Some of the products that we have done over the last couple of years, which are helping us grow and cementing our associations with some of the key OEMs that we have.

So, this is just to give you, a picture as to where and all we are playing in the lubricant space. Of course, on the automotive side, we are present both on on-road and off-road. On the on-road applications, we have a slew of

offerings on the motorcycles, passenger cars, and of course the commercial vehicles, light commercial vehicles. We play the entire space in the on-road applications.

Coming on to the off-road side of the business, predominantly two segments to take care of construction and infra, and the second one being agriculture. Significantly positioned in agriculture, relatively small in the construction and infra-space, and which is an area of focus for us to grow. On the industrial side of the business, we basically look at maintenance products and speciality products which are revolving around metalworking.

So, we have a slew of products there too, on both the segments. Pretty big on the industrial side, we continue to grow both on maintenance as well as on the metalworking side of the business. So just to give you from a split perspective basis, we do almost close to about two-thirds of our numbers through the automotive side of the business and one-third of our numbers from the industrial side of the business, just to give you a proportion as to where we are positioned.

From a distribution infrastructure space, we of course single manufacturing facility out of Rabale, Bombay, a central warehouse located at Bhiwandi, four regional warehouses to cater to the four zones in the country, 14 satellite depots. We manage a space of close to around 2.35 lakh square feet within our logistics to handle products and distribute products throughout the country and also take care of whatever we are doing for exports.

On the AdBlue side of the business, we manufacture and we also have eight outsource filling plants from where we manufacture this because this is distribution of aqueous urea, so transportation and logistics have a

significant impact on the cost of the product and hence you need to be closer to the demand centers and hence the requirement of outsource filling plants.

So, just to give you some of our numbers from a distribution standpoint, we have a distribution strength which is significant, close to about 500-odd distributors operating across our various segments. You have the numbers up there. What's more interesting is that we have started to digitize our distribution network both from the point of sale at the distributor level, subsequently tracking the sale through retailers and then finally having digitizing through the influencers who help sell these products, which are basically mechanics.

So, if you'll actually see this program which has started over the last 5 years that we have done, we have reached a level wherein we have the ability to trace close to about 50% of our products that we sell through this pipeline, enabling us to better communicate with the retailers, enabling us to better communicate with the influencers.

So, our marketing schemes can be very highly targeted and thereby get a better ROI on the investment that we do on the marketing. Some of the advantages that I would like to leave on as a player that we have in the lubricant space, we clearly are, like I mentioned, among the top 10 and if you look at it from the oil space that we play in totality, we clearly are the largest private player in the Indian market by the sheer volume of base oils that we handle.

That clearly brings in economies of scale. A very strong partnership that runs with E&I which we signed in 2006 and commercialized from 2007. The partnership has been solid and has been running over the last 15, 16

years now for the brand. Very strong presence in agricultural OEMs, tractor OEMs. You will see that in the next slide.

We've been working in the agricultural space from as early as 2009, having significant presence with key OEMs with significant share of business. We are associated with most of the big global additive suppliers, so we have the access to technology for lubricants. A very, very flexible manufacturing facility to take care and manage the entire OEM and private label range, which helps us grow in scales, grow in volumes in our lubricant business.

And finally, to cement our relationships with OEMs, we've moved one step ahead. We're just not focused about product selling. We've moved into product management, thereby helping them manage the product through their channels and also helping them getting logistic solutions in place for them.

So, we operate both the product management as well as logistics for them, so that we are able to cement and the stickiness of business with us is much higher in comparison to a typical lubricant player. So, some of the key OEMs that we do business in the tractors, so if you look at this space that we do, why is this significant?

So just to give you some data points for you as to why we play the segment, this is probably one of the largest consumers of lubricants among the automotive sectors. Just to give you a percentage in terms of loops to fuel, this consumes close to about 2.5% of lubricants to the fuel that it burns. Significantly high.

The only two segments that are above 2% are agriculture, which is tractors and 2-wheelers. The rest of the industry as such, if you look at it from a

loop to fuel ratio perspective, is under 0.5%. So, it's very significant to stick to this business as these are high volume loop guzzlers, as we call it in the industry, and so a focus on the site has been done by us as an organization very early on in our lubricant business, which has helped us grow and get skills.

So, we are present across, so if you take the top 7 tractor manufacturers in the country, they almost hold a market share of close to about 90% and among the top 7, APAR has a business of over 50% with the top 4 in the top 7. So, a significant play in the agri side of the business. Apart from this, we do, we are associated with a significant number of other OEMs and private label manufacturers, which is what helps us get our skills and get our volumes in this sector.

So finally, some of the areas of strength, repetitive in terms of our positions in tractors. We are a leading player in the ultralight commercial vehicle segment, the small last mile transportation segment, both in the three-wheeler as well as in the Tata segment that you can see. We have a significant aftermarket position with our brands, very strong OEM associations that you have seen in the earlier slide, and we are probably the only company right now which has started to blend and manufacture full synthetic base stock-based lubricants within the country for automotive products.

On the industrial side, we clearly are among the top 3 private players, in the industrial maintenance great space. A significant push and presence in port and infrastructure, that's a sector that we focus and work on, which is again a high lubricant consumption space. We have some specialized solutions coming up for the gas infrastructure, gas pipelines that are being put up.

So, we have speciality lubricants solutions being offered to CNG booster compressors, which help transport gas through these long pipelines. And finally, we will be working in a niche area for refrigerating compressors, because refrigerants in these refrigerating compressors are going from, they are becoming economically, so they're moving into an ESG perspective.

So different refrigerants will call for different refrigerating compressor oils, and we are working on a slew of products in the refrigerating compressor side, both mineral and synthetic, to take care of these changes in the refrigerants that are happening in the refrigerating compressors.

Some key products that we have done, just to give you a highlight on what we are focusing on around the theme, which is on ESG. So, on the agricultural space, which is key for us, we did launch products with fuel saving 2.5% fuel saving over conventional products, mineral products, extended drains, on an average of around 250 to 300 hours to 600 hours drain interval is what we are trying to deliver, double the drain life with fuel economy. That's the kind of products that we launch to bring down the footprint, carbon footprint.

A lot of low viscosity product lines that we have drawn for transmission. So, if you'll actually see the automotive side, most of the fuel economy work has been done around the engines. We have started to move from engines to transmission, so the entire powertrain is being now captured by going lighter to bring in fuel economy, and that's what we have done with our lower viscosity UTTO products, for bringing in fuel economy as well as high speed operations with hydrostatic transmissions.

A similar work that's been done on the passenger car side, with a special synthetic oil, low viscosity synthetic oils meeting the new emission requirements and both for commercial as well as for passenger vehicles. Why do we do this? Clearly, we're trying to get into differentiated offerings with better USPs to help improve our unit realizations and thereby demonstrate the superiority of the product in the marketplace to build in customer loyalty.

That's the objective. On the industrial side, similarly on the cutting fluids, we have a slew of products that we have done. Biodegradable ester-based fluids to take care again on the industrial side for ESG requirements. On the refrigerating side that we mentioned, POE-based products coming in for compressors, which have the new generation refrigerants coming into place.

CNG Booster compressors that we mentioned for gas distribution pipelines and again 100% PAO based products for gear and compressors, helping double the drain lives in case of conventional gear or conventional lubricants for gear-based applications. We see huge opportunities on the industrial side to upsell products, improving unit margins and thereby getting into a branding space for B2B sales.

This is an area that we are clearly working on and we see tremendous progress being made on the side of the business. Finally, where are we focused on? We continue to see significant opportunities both on the automotive and the industrial side. We remain focused on the OEM side of the business. We believe the OEM side of the business will continue to grow and internal combustion-based engines, will continue to stay at least for a decade. The impact that's going to come in from EVs is not going to be as soon.

The growths probably start to taper off around 2035 is what is our estimation. So, we are expanding our product lines and product offerings both from the lubricant side as well as from the non-lube side to capture this market. We remain export focused. We want to get into the Middle East and African markets, growing our footprint there and the first target that we want to take is to do at least about 10% of our overall sales in export markets.

We probably should be at those numbers by the next year, without fail and we are also working on interesting models for filling at the last mile in markets of high tariff, with high tariff barriers, especially in Africa and some of the markets in Southeast Asia. So that's an area where we want to work on.

With these, we still believe that we will still grow easily at around 3x of the Indian market growth rate in the lubricant space and we've been clocking much higher numbers in the last two quarters given the scenario with our volumes. So, we believe that this is a doable number. That's all I have. Thank you.

Rishabh Desai: Hello, good morning, everyone. My name is Rishabh Desai, and I will be giving the presentation further on specialty oils. There's a lot to cover in very little time so please bear with me. So, I'll quickly introduce you to the range of products that we have. I covered it in depth last year, so I'll just run through it very briefly. So, there's four major product lines.

The first one, our flagship product being transformer oil. Now for you just to appreciate what transformer oil is for people who weren't there last year. As you saw in the Chairman's presentation, when the electricity power is generated, there's a step-up transformer, then the electricity is transmitted

towards the city and then near the city there's a step-down transformer so that we get the voltage, much lower voltage at our house and our sockets.

So, these transformers, they're big machines. Some can be the distribution transformers are small, maybe this big. Power transformers are huge, it can be bigger than this whole stage and the beauty of this product, it's a coolant and an insulant and it's also a diagnostic tool, because the transformer is connected to the grid so you cannot just switch it off and study the health of the transformer.

So, like you draw the blood of a human being to see the human's health and study, the various things. You can draw a sample of the transformer oil and based on studying the health of the transformer oil, study the health of the transformer. Also, I mentioned you can't switch a transformer just on and off.

So, for you to appreciate, in engine oil for example, you can switch the car off, change the engine oil every 10,000 kilometres or whatever the norm is. With transformer oil, the transformer has to be running continuously for 20 years, 30 years, 40 years without changing the oil. So that's how good the technology and the quality of the product has to be because if there is any failure, it could lead to an explosion and that could be disastrous. It could cost money and lives more importantly.

Second is technical grade white oils. So that's used more in industrial applications. It's used also in certain agricultural applications for pesticides. It's used in textiles, paints, a whole bunch, there's about 50 different applications.

Pharmaceutical grade white oils, we have 15 plus grades of both technical and pharma grade. The pharma grade is generally used more in cosmetics,

in any application that's in direct contact with the human skin. So, it's non-carcinogenic, non-cancerous, it's water-white, colorless, odorless product. I'll get to that a little later in my presentation.

And lastly, we have rubber process oils. It's used in EPDM, tires, rubbers, conveyor belts. There's a whole bunch of applications. Again, we have 15 plus grades. Despite having the set number of grades though, we consider ourselves tailors in that sense. We can tailor make any product to any specification were master blenders. So even if the client or customer has a unique set of specifications, we pride ourselves in our ability to be able to meet whatever their requirements are.

Just very briefly, global approvals. This is specifically for transformer oil. As you can see, I've just listed down a bunch of utility approvals. So, we have global approvals from utilities all over the world. So, you see Saudi Electricity Company, OETC Oman, MEW Kuwait, Eskom South Africa, Power Grid India, most importantly, WEG Argentina, which is underway. So, we are basically present in utilities all over the world.

We have all the major OEM approvals. You can see GE, Schneider, Tyree in Australia, Siemens, ABB, Hitachi, Hyundai, Hyosung. All the major names have approved Power Oil as their trusted brand for transformer oil. We can meet all the international standards, IEC, which is European, ASTM American, BS is British. So, we can meet all the various specifications from around the world.

I thought I'll take this time rather than to spend time on each product. I thought I'll just highlight two of the major innovations in the transformer oil space. Firstly, I can get to synthetic esters. I just put a picture of a transformer; it just gives you an idea of what the machine is.

The oil lies within the core. So synthetic ester is a specific type of transformer oil and the base of the synthetic ester can be a natural base or a synthetic base. The synthetic base generally coming from an alcohol hydrocarbon base. We have catered our synthetic ester from a natural base, so it is almost a hundred percent biodegradable. That's in line with our sustainability goals.

So, through our natural ester, it improves the ability of running for the transformer. There's operational safety, I will get to that, but basically it has a much higher flash point than a regular mineral oil, which means it's much safer. There's a larger, a lower carbon footprint and it's readily biodegradable. So that helps with our sustainability goals and most importantly, the performance is consistent and stable.

We've done very stringent testing and got all the major approvals. So, what makes the synthetic ester unique? It has a superior oxidation stability. So, our paraffinic mineral oil passes a 164-hour oxidation stability test. Our current natural ester, it's found to last even 400 to 500 hours. So, it's got a very superior oxidation stability.

It has a really high flash point. So, a mineral oil has a flash point of about 150 to 170 degrees Celsius. Here it's above 250 degrees Celsius. So, it's much, much safer. And of course, as I mentioned, it has a much smaller carbon footprint because after 20 years, 30 years, whenever it is, the oil has to be replaced. The waste oil is biodegradable, so it's not environmentally damaging.

So, some of the applications where the synthetic esters come into use, it's whenever there's power generation, so there's power generation near a

water body. So, you can see the picture there. It's an ecologically sensitive area.

Similarly, in mines, which are generally deep in the forest and stuff, if there is ever a leakage of the oil from the transformer, the oil is 100% biodegradable. So, there's no damage to the ecosystem. When there's the step-down transformers I mentioned in urban areas, like near housing societies, near schools, whatever it is, the oil, as I mentioned, has a higher flash so it's much safer. The chances of any sort of malfunction or explosion or whatever it is, is minimized with synthetic ester.

And we were talking about solar power and wind turbines and offshore wind turbines. So, when there's wind turbines in the ocean and stuff, the oil is biodegradable, so it will cause no harm if there's ever an incident. So that was one product which we have now launched and it's going to be the future. We're going to be focusing on synthetic esters.

We've just acquired a plot of land in JNPT, so our mother plant in Rabale, there's going to be a little extra space and capacity. Right now, we are buying the natural base for the synthetic ester from abroad, so we're importing it. I guess in the near future, once we open up that space in Rabale, we will look to manufacture the base as well for the synthetic ester in India itself. So that's something also for the future.

I think the second and really exciting product is for chip cooling. So, I think currently AI is the talk of the world. I think everyone's seen the success stories of ChatGPT and everyone's seen the stock price of NVIDIA just skyrocket. So, data processing is massive right now.

So, where the oil comes in is, right now there is air cooling done for 90% of server farms all over the world. It's very inefficient. I'll give you the

statistics shortly. What we do, transformer oil, that is basically a dielectric fluid and for chip cooling, the most efficient solution is submerging the server into a dielectric fluid. Of course, the specifications are slightly different. We are currently tailor-making our product to meet those specifications, but it's something that we're working on very actively.

So, as you can see in the diagram here on your left-hand side, there's two types of cooling, number one is immersion cooling, where the entire server is put into the dielectric fluid. The second type is direct-to-chip cooling, where the dielectric fluid is brought to either the GPU or the motherboard directly through these tubes, because that part gives out the most heat. So only the chip is cooled, and then of course the heated dielectric fluid is then taken out through another tube for cooling.

So why is cooling necessary? I'll just quickly run you through that. Electronic or electrochemical reactions generate as much heat as they consume electricity. Air is an excellent insulator, but it's not a good conductor of heat. Liquids, especially water, it's a very good heat transfer fluid, but it's highly conductive, so it's really not ideal for direct cooling.

Dielectric fluids, they are excellent conductors of heat, and they're fully insulating up to 60 kV. Plus, we are working on making our dielectric fluids biodegradable and non-corrosive, as I told you in the natural ester segment. So, the challenges in thermal management, as you know, the data farms are just growing. Even in our country itself, to protect our data, instead of storing data abroad, they want to build server farms and store data within the country.

So, heat dissipation basically is the limiting factor. With these super powerful GPUs, heat waste can now exceed more than 4,000 watts per

device. As you guys know, for computing AI, one AI search, like on ChatGPT, uses 10 times the computing power of a normal Google search.

So, if that is truly the future and we're going towards that, there's going to be a lot more energy requirement, there are going to be a lot more powerful processors, and those processors are going to give away a lot more heat. So, it needs to be cooled.

As I mentioned, air cooling is extremely inefficient. Almost 40% to 50% of the total facility energy use is used for cooling. Imagine that. It's huge. 30% to 40% of the power is consumed just by air conditions and fans and associated devices. And 5% to 20% of the power is used by the devices, the small onboarding fans within the device. So almost a third of the space in the data centers/mines are dedicated just for cooling requirements, which when you think about it is absolutely ridiculous because these server farms are massive.

So, it's just a huge waste of space. And of course, also the capital costs are really massive because instead of investing on the servers, now you're investing in cooling technology, which is just a waste of money and resources. That's why we need liquid cooling.

So liquid cooling within the data center, it removes heat with the direct contact to the electronics. There's a variety, there's the two major varieties which I spoke about, but the common denominator is that they use a dielectric fluid. So yes, that's a little bit about this and I'll just quickly tell you what the advantages are.

So, as I mentioned, there's a lesser capital cost, there's a reduction in the energy footprint, so that again ties in with our ESG goals, less floor space, faster CPU performance. Basically, they say the dielectric fluid conducts

heat 12,000 times better than air, so it's way more efficient and the CPU can perform faster and it's much more reliable. So that was just a little bit on the future and we are devoting a lot of resources to develop this product.

It's still in a developmental stage, we don't want to release this to the market until obviously the product is perfected. Also, there are a few challenges, as I showed you for transformer oil, there are set specifications, there's IEC 60296, ASTM, they are set standards. Over here, because it's such a new space, there are no real standards in place, so each company is developing their own product with their own specification.

Today also if you approach customers, say you approach Amazon, they have their own internal spec. If you approach say a Microsoft, they have their own internal spec. So, it's a little bit of a challenge on what product exactly to develop because you cannot develop 50 different types of products just to cater to each customer.

So that is a work in progress and we'll need some sort of government intervention from a federal level to kind of standardise. But also, because we have a good experience in the dielectric fluid, there's a lot of influential people in our R&D team who have a say on these matters, we're trying to push certain standards and use that to our advantage to kind of standardise things.

Very quickly, I'll just take you through white oil. I won't spend too much time on this. The global white oil demand outside of India and China is about 950 kt, so that's 950,000 metric tons. It's an even split between the technical grade and the pharma grade. APAR, we exported 1,30,000 metric tons, so almost 17%-18% of the global market share outside of India

and China belongs to APAR Industries. We're not looking to go too much above that in terms of volume. We're now focusing our energy just to cater to certain niche and high-end applications that will generate a better alpha. I just wanted to go through a few interesting applications.

I was mentioning there's about 50 different applications of white oil. And there's some really unique ones. We discover new applications every day. So, recently in a trip to Australia, we went to a pharmaceutical giant and they are actually buying our pharmaceutical grade white oil and testing it for use in animal vaccines because the white oil is a good carrier of the strain of the vaccine.

So, that was a really interesting revelation for me. It's used for egg coating. We've actually, our R&D team has done a huge amount of research on this and actually a pharmaceutical grade white oil coating on the eggs increases the life of eggs by about three to four weeks.

So, then also on my trip, I had visited a bakery, one of the biggest bakeries in Australia called George Weston Foods. They use our pharma grade white oil in the bread cutters. So, they dip the bread cutters in our oil so that when it's slicing the bread, there's no remnant or stickiness of the bread on the cutter or in the blender where they blend the flour.

So, there's just every day we're discovering new applications. It's a huge market out there and we're trying to focus on finding these niche applications and that's how we differentiate ourselves from our competition. Another application which I spoke about last year but I also want to mention again is the Hot Melt Adhesives.

So, the Hot Melt Adhesives, it's used for example in diapers. I don't know how many of you guys are moms and dads, but we use disposable diapers

all the time and that sticky part in the diaper which you stick together, that's actually a hot melt adhesive and we manufacture that oil. Even in all your water bottles, for example, Bisleri bottle, the label is stuck, right?

So, that sticky glue, it's actually a Hot Melt Adhesives, which is the base of that is a naphthenic base oil. So, that's a big market. The total market size is about $10 billion globally and it's growing at 5% CAGR and that's where our specific focus is because it's niche products with high margins.

Lastly, I just want to tell you a little bit about the global success story of you can say the power oil brand. I'll focus on six geographies. The first success story is Turkey. We've partnered up with a company called Arkema in Turkey. They have a local manufacturing facility in Istanbul. APAR has 3,500 metric tons of storage in a bonded warehouse in Gebze Port.

So, there's a famous saying, I don't know how many of you watch F1 but there was a legendary F1 driver by the name of Senna and dad likes to quote him a lot. There's one particular quote saying that on a sunny day when the conditions are perfect you can never overtake 15 cars, but when it's raining you can do that and when conditions are adverse and challenging like, how they are today with the global supply chain as you know, the Red Sea issue and there's bombing by the Houthi rebels on ships and whatnot.

This is the perfect example because we've kind of omitted all that, beaten all of that. We get our material in bulk from the United States of America directly to Turkey and we then manufacture the product and sell it all over. So, as a result we've completely destroyed the competition. We have 50% now market share overall in Turkey for transformer oil and 85% market share for the paraffinic oil.

So, none of our Indian competitors are even close to being competitive right now and we've pretty much taken over that entire market. Last year volume was almost 15,000 metric tons and we're planning to grow above that. In South Africa we have a similar setup. We work with a company called Engine Petroleum. We used to bring in oil directly from the US there as well. Due to certain logistical constraints now, we supply the finished product.

They have tankage over there. They handle and market the product. We have now one over 60% of market share in South Africa and we're one of two companies that has the ESKOM approval. That's been a major success story as well. In Australia we've partnered with DKSH. They're a EUR10 billion trading giant based out of Switzerland.

They have a strong presence in Australia. Why it was important to partner with them is they have a local storage capacity of 2000 KL. Australia is a huge country. It's a country continent. It's basically a continent by itself and as you know, Australia is rich in natural resources. They have coal, they have a whole bunch of gold, coal, uranium, a whole bunch of resources and these mines are located far into the desert, into the forests etc.

So, the last mile delivery is extremely important and that's something being an international company you can never master. That's why we've partnered up with DKSH, so that they do the last mile delivery very efficiently on a need basis and as a result, we've taken over now 50% market share in transformer oil, 57% market share in white oil. Our volumes have grown steadily as you can see. 16% growth in the last 2 years and we expect it to continue to grow.

Fourthly in Malaysia we've partnered up with a company called Glide. We had zero presence in Malaysia 2 years ago, because they have a law saying that they will only give preference to Bhoomiputra meaning local owned companies. So, from doing 0% market share we've done the same thing in the sense we follow the Coca-Cola model whereas we supply them the base, we supply them our IP which is the additive.

They blend it up over there. They've got the approval of the local utility which is TNB and last year from doing nothing 2 years ago, last year we did 1450 metric tons. This year we're on course already to beat that and I think that's been a wonderful success story for us. I won't spend too much time on the UAE. I covered it last year, but that's our own facility, that's where I'm based.

We crossed 100,000 metric tons in production last year and we're now doing an expansion, because we want to grow the business. Lastly Saudi Arabia, that's the most exciting thing coming up. So, as you know, in Saudi there was a huge plan for Neom City. That's been scaled back a little bit, because I think in Saudi, they've bitten off more than they can chew. They have the Expo 2028. I think many of you might have heard of Expo 2020 which was in Dubai.

So, they have the same thing in Saudi Arabia in 2028. They have the FIFA World Cup in 2030 and I don't know how many people have been to Riyadh, but it's a very dilapidated old city, which needs a huge infrastructure overhaul. You might have read that in the UAE they put out 50,000 hotel rooms just for the Expo 2020.

In Saudi they're going to have to do the same thing and they want to do the same thing. So, there's a huge potential for growth. Secondly, they

want everything made in Saudi. So, they're putting up barriers, import tariffs etc. To stop people from abroad supplying in. So, what APAR has done, we have partnered up with Luberef, which is the subsidiary of the Saudi Aramco. It's the base oil subsidiary.

They have offered us a plot of land opposite their refinery. So, it's like going to the source, like going to Gangotri and getting the base oil. So, it will come in a pipeline from across the street directly to our tanks. So, you cut out the entire supply chain, freight rate. Generally, we buy from Korea or from Saudi. The material comes in ship and there's a cost associated.

Here it will just come by pipeline across the street, eliminate all of that. We will sell within the Saudi market plus we will sell to North Africa and other countries in the GCC because then we will be part of the Arab trade agreement. So, we get a zero duty for any of these countries. So that's the exciting project now that's underway.

We've already put in a land application and hopefully by the time, I come here next year I'll give you a very positive update on the progress of the factory. Thank you very much. I took a little extra time. Apologies for that and I'll pass it on to Ramesh. Thank you.

Ramesh Iyer: Good afternoon, everyone. I'll take you through the financial overview for the company. Let me begin with by listing down the transformation initiatives taken by the company over the last 3 years which has driven financial outcome. There have been strategic transformation initiatives that the company took that has actually driven all these financial outcomes and a lot of these initiatives were actually taken in the past decade and as electrification requirements have been accelerating recently, we were able to tap the opportunities all in our way over the last 3 years or so.

We are an innovative and customer-centric company and this has actually allowed us to gain first mover advantage. We continue to hold significant market share in all the key product verticals that we launched, in terms of innovation and customer centricity. To name a few there are these HTLS, MVCC conductors, CTC, Bus bars, wind cables and cables that are used for specific industry application.

As we launch products with an innovative mind-set it has always allowed us to remain ahead in the race vis-a-vis competition and this has actually allowed us to beat the competition and either penetrate the market or to continue to maintain the shares or to improve the gross margins. Products that launched were this E-beam technology, a market leader in the domestic business for the special grade transformer oil as well as the AL-59 conductors.

These products were launched with a competitive mindset, innovative mindset that has allowed us to beat the competition and again penetrate the market as well as increase the share. The result of the innovation, customer centricity and competitive edge products have resulted in revenue grow up from FY '21, which is about INR6,400 crores to about INR16,000 crores in FY '24 showing a CAGR of about 36%. We have also been strategically focusing on premiumising our product portfolio.

The premium range of conductors has grown about 38% CAGR over the last three years as well as there has been higher emphasis on special application cables the cables that are used for renewables, defence, railways, shipping etc. The CAGR has been 48% in the last three years. The result of this premiumisation has been that the EBITDA margins for the company as a whole that used to be about 7% in FY '21 has now gone up to double digits in FY '24.

We are widening global presence with exports growing about 40% CAGR over the last three years. We sell to more countries now than what we used to do about five years ago. There has been strategic investment in growth levers.

Our capex has steadily increased to over INR300 crores in FY '24 with a clear focus on premium business verticals as we expand our production capacity ahead of market demand to leverage the opportunities coming our way.

We have been optimally allocating capital across all the three business divisions. The net fixed assets of the conductor division were about 315 crores in FY '20. That has risen to over INR400 crores in FY '24. The oil division, the net fixtures has gone up from INR267 crores to about INR288 crores. And in case of cable division, the fixtures have gone up from INR300 crores to about INR550 crores.

Our fixed asset turnover ratio has steadily increased to about 10x to 12x with higher turns for the oil and the conductor business and relatively lower turns for the cable business. The result of the allocation of capital into higher margin products has really seen the margin profile going up with the competitive edge and innovative products that we talked about earlier. Across all the three business verticals, we see margins going up.

The conductor EBITDA per metric ton has gone up from about 11,000 per metric ton to close to about 40,000 per metric ton in FY '24 with the margins going from 4.7% to 10.8%. The cable margins have been about 11 odd percentage steadies over the last three years. And oil EBITDA has gone up from about 3,000 per KL to about 5,700 per KL. Again, the margin jump has been about 5.2% to 6.4%. As we allocate capital to

products division with higher margin profile this has actually improved the overall efficiency for the company as a whole with the ROCE which used to be about 10 to 12% in FY '2021 has gone up to about over 30% in FY '23 and also to about 34% in FY '24. As we did the QIP towards the end of the year, there has been the base of INR1,000 crores sitting the denominator due to which you see the ROCE coming down to 26%. But if you look at Ex-QIP the ROCE has been about 34% for FY '24.

Our financials indicate strong capability to generate positive cash flows over time. If you see from where it began in FY '20, we had a beginning cash flow of INR400 crores. The operating cash flows, we added about INR2,000 crores during the period from FY '20 to FY '24. Of course, in the financial, you will see about INR1,136 crores. The INR983 crores of QIP was deployed into working capital. Therefore, you see a number of INR1,100 crores. But Ex-QIP, we generated about INR2,000 crores of operating cash flows. About INR700 crores was deployed towards income tax. We invested INR900 crores of these cash flows back into the business through capex and about INR334 crores was paid as dividend, with the closing cash flow of about INR587 crores. So, the money that largely got generated, a substantial part has been invested back into the business through capex with the potential to generate further revenues in years to come.

Over the period of time, our free cash flows have increased to what it used to be negative INR200 crores in FY '20 to about INR170 crores, INR84 crores, INR342 crores. And Ex-QIP, we have been generating about INR121 crores in FY '24.

Over the last five years, our revenue has grown by about 15%. Our EBITDA growth has been about 27%. Our EBITDA margin has increased by about

3.6% from 6.5% in FY '20 to about 10.1% in FY '24 backed by premium products, innovative products, products that we launched with customer centricity in focus. There has been a very strong focus on keeping working capital tight under control. Our average net outstanding days based on last three years has been just about 50 odd days of which more than 50% has been within secured receivables. We have been very tightly focusing on whom we sell, who are our customers and more than 50% of our receivables are backed by either letter of credit or insurances. We have less than 2% exposure to state-run distribution companies. And with a strong monitoring of working capital, we are able to strongly manage the cash flows. The net debt, which was about INR153 crores in FY '20 has turned to a net cash positive of about INR180 crores. So, over the period, we generated a net cash of about INR335 crores in the last five years.

The QIP that we launched last year further strengthened our balance sheet of INR1,000 crores getting into the kitty. We deployed that into the net working capital that has helped us to improve the working capital ratios. It has reduced the debt equity ratios from 0.14 to 0.1, as well as outside liabilities to total equity has come down from 2.67 to 1.48.

There exists robust growth drivers and strong head rooms for growth based on the renewables and transmission expansion, as you've been hearing since morning. Growth opportunities exist from differentiations as well as improvisations. We'll benefit from the shift from China plus one happening. The macro environment is conducive for our kind of business. Along with that, a dominant market position and leadership positions across all the three categories is actually helping us. Our operating efficiency, we are able to leverage on that. We've already reached double digit EBITDA margins. Our PAT margins have been about 5% that has

increased steadily year after year. We have a strong capital structure. We work on very less debt. Our debt equity ratio has been just about 0.1. The credit ratings have got upgraded from the last few years, which we expect further to improve with the QIP funds coming into the company. We delivered about ROE of more than 20%. With effective risk management strategies, we feel that we are appropriately positioned to tap the long-term opportunities coming our way.

The EPS, which was about INR36 in FY '19 has gone up to over INR200 in FY '24. The conductor division has added about INR115 per share over the last five years. The cable division has added about INR37 per share over the last five years and the oil division adding about INR23 per share. Across the divisions, we have been expanding across the globe, predominantly in US, EU and Australia, that has helped to improve the top line as well as bottom line. There has been a clear focus on premiumization across all the business verticals, improving the margin profile for the company. As I said about innovation and customer centric, I have already spoken about that. And the per unit EBITDA realisation has accelerated, which has improved overall margins as well as EPS for the company as a whole.

Lastly, through FY '28, we feel that over the years, we will aspire to maintain leadership position across the key business verticals with continuous innovation and cutting-edge products will be launched over the years to come. We will be very keenly focusing on capex to improve capacity, especially in the premium business verticals, which we have.

We will continue to tap domestic opportunities coming our way at the same time expand a global footprint as well. And overall, we feel that we will be

able to tap the opportunities and to leverage the energy transition that we are going to see in the future. Thank you so much.

Suyash Saraogi: Good afternoon. I am Suyash Saraogi. So, what is the objective of this presentation? It is to highlight how important sustainability is. If you want to remain plugged in into the global supply chains, sustainability becomes extremely important. As we are seeing that exports are going to be a key lever for APAR and sustainability will become key to qualify for this business.

Also, I would like to show what we have done on sustainability at APAR. So, I just want to spend a minute on this slide. COP stands for Conference of Parties. It is the main decision body of the UNFCCC and includes representatives from all the countries. There are 197 countries. And the COP meetings are crucial for funding key decisions on issues related to climate change, such as emission reduction targets, financial support and adaptation measures.

And these meetings are held annually. The last one was held in Dubai in 2023, started from Berlin in 1995. So, what happens is that based on these COPs, each country has accordingly declared its NDCs, that's Nationally Determined Contributions, and now is requiring their corporates to reduce their energy emissions.

So that's what's happening. So therefore, these corporates from Europe, from US, from Australia and other countries are pushing their supply chain partners, that is companies like APAR, to reduce their emissions. So that's how the pressure is coming. And this pressure is increasing as the days are going by. So APAR's customers who have committed to Net Zero as per their country's mandate are demanding low carbon product from their

suppliers. Some of these customers have put stringent sustainability criteria as bidding qualifications.

There are some tenders you can't quote if you don't meet the sustainability criteria. In addition, there are regulatory compliances. I'd like to mention CBAM, which is Carbon Border Adjustment Mechanism, which I'll touch at the end of my presentation. And of course there are cost savings. When you reduce your carbon emissions means you're using less energy. Less energy means less cost.

So, I'm going to spend the next part of the presentation on the alignment of the organization's purpose, strategy, business and governance. So, sustainability is an integral part of APAR's business. So, there are three parts to it, economic on the left, environment and social. So, the economic piece has been adequately covered in the previous presentation, so I'll stick to environment and social. So, APAR has integrated sustainability into its core business operations. It involves adopting eco-friendly processes, promoting social responsibility and aligning the company goals with sustainable development goals.

So, APAR has formed a board-level committee, the Corporate Social Responsibility and Sustainability Committee, and the purpose is to review sustainability goals, ESG risks and opportunities, ESG targets, and performance against established sustainability metrics, as well as sustainability-related policies, programs and initiatives. So, our CMD has also completed a course in business and climate change towards Net Zero emissions from the Cambridge Institute for Sustainability Leadership, just shows the commitment from the top. Now we'll come to measurement, disclosure and target setting.

So quickly, so it's good to talk about it, but what have we done? So, oil business, we have reduced our emissions from 0.009 tons of carbon emission per kiloliter of product to 0.006, it's a 33% reduction over two years, the emissions intensity. In the cables and conductor business, we have reduced it from 0.321 tons of carbon per ton of product produced to 0.275, which works out to 14%. Our total Scope 1 and Scope 2 emissions, Scope 1 is the fuel that we consume inside our plants and Scope 2 is the grid electricity that we get, is about 1,24,000 tons. So how have we reduced it?

We have increased electrification, reducing from fossil fuels to electricity, we've implemented various productivity measures, we discussed about industry 4.0, KAIZEN, Six Sigma and all those things in the earlier presentations, and we've increased the share of renewable energy. Just to let you know, like in Gujarat, for example, we are getting a lot of renewable energy, it costs INR3.5 per kilowatt hour lower than grid electricity, so it makes good business sense also, and it reduces our carbon emissions.

So, I mentioned in the earlier slide that we had an emission of 1,24,000 tons of carbon, so we got it verified by DNV. DNV is probably one of the most credible organizations for certification. Water. Water in India is free, although India is one of the most water-stressed countries. The problem is, what happens if the water goes out? What do you do with your plants?

So, what we are doing is that we have reduced our water consumption from 3,25,000 kiloliters in 2022-23 to 3,14,000 kiloliters, in spite of 20% increase in volume of production, so this is the absolute reduction. This has been done through demand-side management as well as supply-side management, and a lot of focus is going on in that, because water security is going to be a key risk for the future.

CDP disclosure. CDP is a global platform; it's called the Carbon Disclosure Project. Customers want us to declare in CDP, CDP rates us, and they want to get the scores directly from CDP, that's for our global customers. We got a score of B's last year, and only 27 companies in India were ahead of us, most were the IT companies and companies like ITC and Tata, which had started way before us. We are going to make our submission this year in October, and hopefully we'll get the result by December.

EcoVadis. EcoVadis is a renowned evidence-based online platform, providing supplier sustainability ratings and allowing companies to assess the ESG performance of their global suppliers. We got a silver rating last year, and we are submitting our, we are making our submission in September, we hope to do better this year.

BRSR, we all know is mandated by SEBI, it's part of our annual report, we have done our BRSR submission also. We make – annually we make our ESG reports and the third edition of the ESG report is available at our site, the fourth one will be done by, within October. That is for 23-24.

TCFT, Task Force on Climate-Related Financial Disclosures. So, we are not only assessing the climate risk, but we are also quantifying the risks, and setting a process for regular monitoring and mitigating it, by integrating it into our ERM, that is our Enterprise Risk Management. So, this TCFT is a very critical thing, it goes with CDP, so we do that. So, we are working on our report, it will be ready by September end.

Then there are these EPDs, that is Environmental Product Declarations. So, we have measured and reported the EPD for four products, it's there on our website. Basically, what it does is, it communicates the carbon emission of the product, that it starts from the cradle to the gate. In other words, like

for our aluminium conductors, it would mean starting from bauxite mining to the time the finished conductor is ready for delivery from APAR's factory gate. So, we do this cradle to grave thing. So that becomes very important for the customers to know what is the carbon footprint of the product that they are buying?

We are working on 10 EPDs, which should be ready within this year, in addition to the four that have already been done. SBTI. SBTI is Science Based Target Initiatives, we have registered for it, and we are committing that by 2030, our products will have – our products, that includes the raw material, will have 50% less carbon emission per ton of product produced from what it is last year.

So that's the commitment we are doing, which will require effort at our plant, effort with our raw material suppliers, inward logistics, everything, so that's the level of commitment we are doing. This becomes critical again to become part of the global supply chains.

So, the fact is that with these five disclosures, that is CDP, EcoVadis, ESG report, TCFD and EPDs, we can be sure that our global customers and other stakeholders will find us adhering to the highest standards of transparency and commitment.

Now we'll come to the path to Net Zero. So, what is our energy transition plan? So, first is renewable energy adoption. So, our target is that by March '26, we'll have 29% of our electricity will be through renewable energy. By March '28, we expect it to become 45%. Of course, there are energy efficiency measures that we are doing in terms of we've had energy audits at all our plants, we've identified where we can reduce our energy consumption, and we are working hard on those things.

And of course, like we said, I said earlier, 50% GHG emission intensity reduction by 2030. There's a target that we have taken as a company. Of course, there are development of low carbon products, which we had mentioned in the previous presentation. It's ACCC conductors, Poweroil NE, Poweroil NE Premium, natural ester-based and synthetic ester-based transformer fluids, and of course, APAR's advanced automotive lubricants. These all were mentioned earlier, I'll not spend time on this.

Most important thing is procurement. Like I mentioned, that when we look at our carbon footprint, we have to reduce our raw materials, the intensity of the raw materials. And remember, suppliers are not in our direct control. So, a lot of work has started happening. So, what are we doing about it?

We are actively working to identify and reduce our scope 3 emissions through collaborative initiatives with our suppliers. Procurement of low carbon embedded raw materials, including green aluminium, increased engagement through regular supplier awareness programs, making suppliers understand, agree and sign the APAR supplier code of conduct. Use molten aluminium as direct raw material at our Orissa plants, which actually reduces our scope 1 and scope 2 emissions. Increase recycling in the manufacturing process to reduce wastage and of course, increased use of aluminium and copper scrap as raw material. Buy scrap and use it. It's also cheaper and also it has very little scope 3 emissions. So, we got the Great Place of Work certification last year. Sorry, this year.

The last is the challenges and forward path. So, I want to spend a minute on this CBAM. CBAM is Carbon Border Adjustment Mechanism. This has been introduced by the EU. It is going to start next year. So, what it basically does is, I'll go to the next slide. So, the CBAM will require Indian exporters,

including APAR, to monitor and report the carbon footprint of the aluminium products.

This is a legislation that is imposed by the EU, which will basically tax the embedded carbon in the products that we do. So that's why it becomes very important to reduce the carbon intensity of both our raw materials as well as our finished products.

Now, what is the impact of APAR? So, we checked the CBAM regulation and said, which of our products are affected by the CBAM because Europe is a key market for us. There are only two products. One is ACSR conductor and one is ACCC conductor. So, our estimates were that based on the carbon tax that is there currently, which is not being enforced right now, but just as a reference, and based on the current volumes that we are doing right now, the impact would be about INR10 crores.

But of course, next year, 2026, when it starts, it'll be a lot less because we'll have reduced our carbon footprint in those products significantly. But the good part is that I'm sure that our competition will be nowhere close to it. So that will give us a great competitive advantage and of course, improve our brand.

So, what's our forward path? We will complete our TCFD report. We will disclose in September, October to CDP and EcoVadis. We will augment our wind, solar, renewable energy capacity. We will engage more seriously with suppliers for scope three emissions. We will complete the 10 EPDs for our environmental product declarations for our cable products and of course, we'll increase our scrap processing to reduce costs and reduce our emissions. Thank you.

Kushal Desai: We started a little bit late and I think we've gone a little bit overboard in terms of time, but apologies for that. I know we stand between now and lunch, but I think after having heard all these presentations, a few questions would be in order. And so, we'll make an attempt to answer those questions which have already been put up. Pradeep, are you going to? Yes, so Pradeep will come up with the question. Thank you.

Moderator: Thank you so much, Kushal bhai and the speakers for the detailed presentations. So, we'll take up the Q&A. We'll be as brief as possible in the interest of the time. There is also a QR code on each of the desks and in case you can scan and put in your questions.

Moderator: So, the first question for Kushal bhai, what is the current revenue from the turnkey solutions and what exactly do we do in turnkey business and the future outlook? And what is the reconductoring contribution, reconductoring margin in India and our market share?

This question is from Amit Anwani from Prabhudas Lilladher.

Ramesh Iyer: Hello. So, the current turnkey solutions that we do in the conductor division would be about somewhere about 10% to 12% of the total conductor business. The HTLS, which is High Transmission Low Sag, plus the turnkey put together would be about 25% of the total conductor business.

And in this reconductoring, we do only a mini reconductoring, which is removing the existing conductors from the tower and putting in place a new conductor, which is a High Transmission Low Sag conductor, wherein the conductor cost would be about 70% to 80% of the total turnkey solutions.

Moderator: Thank you so much. This question is for CND sir. For the US and Europe market, what kind of new products are we going to target in the medium term and possibly highlight the market share in the competitive landscape?

Chaitanya Desai: So currently in the US, mostly the conventional conductors are used, but because of their environment difference, there are some cold areas with ice and all that. So, they are a little different version of the ACSR conductors. Similar is the case of Europe, where mostly conventional conductors are used. But in future, we see a lot of work happening on reconductoring in the US. So, a lot of active presentations are being given to the authorities there. And in times to come, even the HTLS varieties of conductors will be used.

Kushal Desai: Just to add to what Chaitanya has mentioned, contrary to what we would think intuitively, to build a new conductor line in India, it takes about three years to get the permissions for putting up the line. When you move to the United States, it takes closer to 10 years. So, in fact, there is a huge backlog of approvals that are required for transmission lines to be set up. And there are two major drivers to it. One is you've got a lot of solar farms, wind farms etc. in the pipeline or which have got commission that are not able to actually evacuate power.

Secondly, the United States is by far the leader in terms of putting up data centers and hyperscaler data centers. And the consumption of electricity there is going to triple or quadruple as these data centers come up. They're concentrated right now in just five states. 90% of data centers in the US are just in five states. And even in those five states, there will be a big increase in transmission lines and power required. Even if you move as Rishabh says, from air-cooled solutions to liquid-cooled solutions. So, I think over

the next five, seven years, there is a massive opportunity for reconductoring.

And in fact, if you see Manish Agarwal put up, made a reference to India's 500-gigawatt renewable energy plan. It's a central plan. It's something that Prime Minister Modi has been really pushing for. So that plan actually outlines where these 500 gigawatts of generation is going to come from and it has also 500 gigawatts of transmission that will evacuate the power from these sources.

What it is missing completely is reconductoring opportunities. It covers only new lines that are coming in. Now in reality, that's not going to happen. Right away is so difficult.

And increasingly in India, as I was speaking to some of you in the breaks, every person in India has discovered the value of their land. Just to give you an idea, when we bought land in Khatalwad, same place, it's a relatively rural area in, you know, compared to the urban centers. In a span of 14 years, you're paying 10 times the value of the land.

And this is the case across the country, whether it's in Mumbai or whether it's in some small town, even the guys in Kutch have realized that their land is very valuable if 30 gigawatts need to be put in here. So, as you saw in Manisha's chart, and just by the way, this presentation will come up on our website today. So, you will have access to it right away.

There is going to be an explosion of reconductoring opportunities around the world, because this problem which is there in India is there everywhere. And with the United States having this decade long policy, because you know, it's, if you think India is uncoordinated between center and states, you've got to look at the US. It is a mess.

So as a consequence, the best solution is to reconductor because you don't need a right of way. The only stakeholders really are the utility company, and the supplier that's going to do the reconductoring for you. So that's why, you know, you may have any plan, but if you really want to do something, there is going to be a lot of this happening.

So, the reason I bring this up is that it's a new dimension. It's not covered under the possibilities which are there when you saw that 50,000 circuit kilometers, etc. It's talking about new lines, but the whole reconductoring will happen and the logic for it, which we have been also lobbying with the CEA and the ministry through various bodies is that if you're going to see a 4x increase in electric consumption, you actually need to optimize the amount of power that can be carried on each and every line that exists.

And if you reconducted it in 10 years, 12 years, again, it's going to get saturated. So anyway, you're going to require parallel lines to take place. But until you get those ROWs and put parallel lines in place, you need to max out all the existing lines.

So, it's a long answer to your question that in the US right now, as Chaitanya says, they're using very base products. India is far ahead in terms of the technology that we use on transmission, but they are also going to have to transition to it.

Moderator: Thank you, Kushal Bhai. We have the next question. This is for Mr. Shashi Amin. How much capex is required for the total of the targeted INR10,000 crores of revenue in the cable division over the next four years or five years? And who are the key global and local competition in the US and Europe? And in which verticals are we targeting in the market sharing phase? Yes, thanks.

Shashi Amin: We are looking at a capex of about INR600 to INR700 crores to scale up our number from INR4,000 or INR5,000 crores to INR10,000 crores. And regarding the competition in the US, it's the global players, Prysmian, Nexans, Southwire, then you have Aconite, who's a competition for us when we talk about covered conductors, Hendrix. These are the few I can think of.

As far as Europe is concerned, it's again Prysmian, Nexans and Turkey, also a lot of players who are supplying cables to that. Then you have LAP, then you have Leone. Smaller players are also there in European countries.

And as far as our target is concerned, it's mainly, our focus would be on renewable, solar and wind. Currently, as we said, we are market leaders in India. We are supplying solar wind cables to the US. There are a few manufacturers of wind in Europe. We are focusing on that in the next few months. And Europe is mainly rooftop solar, so not much of solar farms.

But in the US, Australia, it's more of solar farms ranging from 250 megawatt to 1 gigawatt. So, the focus is mainly on renewables for us.

Moderator: Thank you, sir. This question is from Sean from Aberdeen, for Ramesh, sir.

Moderator: Any growth and profitability targets that you can share?

Ramesh Iyer: Yes, so we have been guiding growth for all the three divisions. We feel that cable division will be the fastest growing sector for us, growing about 25% per annum due to the addressable market being high as compared to other divisions. Given the scale of transmission and expansion happenings, we feel that the conductor division can also grow by about 10% to 15% year on year.

And given the scale increase that's happening across transformer oil, we feel that the oil division would be growing about 5% to 8%, of which the transformer oil is likely to reach to double digit growth. And these kinds of numbers, we are looking for a medium to long term perspective.

Kushal Desai: When we did the growths, our transformer oil business, if you take the domestic and the export, they're almost equal in terms of their growth. We've grown, last five quarters, we've grown at about 18%. And it's going to be linear with, as Chaitanya mentioned, that the current expansion is much more substation intensive.

And the most expensive component in that substation is the transformer. So, as you start moving into higher voltage categories, you have transformer rectifier combination. So again, the amount of oil that gets used is higher in terms of volume. Also, the insulation requirements and characteristics become very high. Because what you need to insulate 33,000 volts versus 765,000 volts is a little bit different. So, the specifications are different.

The criteria are also different. And to tell you very interestingly, in most markets around the world that we sell, other than India, the competition is between three to four players. In many markets, it's just two.

It's only in India where people manage to use various connections and means to get themselves approved and supply. So, when the total cost of ownership comes in, which is the prevalent standard in most of these countries, they're very conservative in terms of who will buy. The other thing that we have, just a little snippet in here, you saw from Manish's presentation that there's a huge addition of HVDC cables, transmission systems coming up.

So, APAR today has over 85% market share in transformer oil that goes into HVDC. And we have been condition monitoring from the initial transformers that we have filled in of HVDC. So, the first transformer that was filled in is in 2001.

And we do condition monitoring that every six months, that oil has deteriorated almost nothing from 2001 to 2024. And it has been certified for 20 years of additional usage. So, we really produce a very high-quality product.

The hydrocarbon composition and the formulation are quite strong. So, I think the growth will come in the oil sector will come largely driven by transformer oil. Also, what Sundar covered was the increase in volume.

There is also a massive premiumization that's going on in the lubricant industry. Because drain intervals, and he did mention about some products, the drain intervals on a truck, for example, in the last 15 years has gone from about 5,000 to 7,000 kilometers to closer to 100,000 kilometers. So even though the vehicle park is going up, number of pieces of vehicles, two things are happening.

One is that the distance has been increasing. The distances that trucks with GST coming in, there is a lot more mileage that's going on compared to before. And secondly, the drain intervals have substantially increased. So, in spite of having a 15-fold increase in drain interval, you're still having a growth in the overall sale of lubricants. So, the value story is another story compared to the volume story.

Moderator: Thank you. We have this question from Gautam from Nepean Capital.

Moderator: This is for Chaitanya bhai. The conductor margins have been very strong. Any expectation of normalization and could it hold the FY23 levels? And another follows up question is, are there any plans to start or acquiring new businesses?

Ramesh Iyer: So, on the conductor margin, we have been saying that because of premiumization, clearly the margins has gone up almost three to four X as what it used to be in three to four years earlier. While we premiumize our portfolio, we have been having the margins about 38,000 to 48,000 per ton. We don't expect it suddenly to come down in a quarter or two.

But what we expect is that as competition catches up and with all the favorable benefits, if everything goes out of the benefit from APAR, even then we'll be able to maintain about somewhere about 28,000 per metric ton is what we have been saying. At the same time, we feel that the opportunities are high, especially on premiumized premium products and reconductoring business. So, we may expect that our margins to be on a higher side.

But on a conservative note, if you want to make a financial plan for three years, five years, that's where we have been guiding a margin of about 28,000 per metric ton.

Moderator: We have a question for Manish, is he available or can I ask this question? Sure. What is the current AL-59 revenue contribution and how much growth or revenue contribution can we expect from AL-59 in the coming years?

Ramesh Iyer: AL-59 has been about 15% of the total conductor volume and in the domestic market we have completely substituted the ACSR products with the AL-59 which is a much more premium product than the ACSR one.

Chaitanya Desai: This year we may go more like 33% by volume...

Kushal Desai: So, you know in that chart as you saw, what's happening is that this was a first step where the market is changing and I'll spend a minute to just explain to you how this is happening. So, until a couple years ago, the CEA had mandated, Chaitanya had put up a little table there which gives how a tender looks like. So, they mandate in there everything, the type of conductor, size of conductor, all that sort of stuff.

So, it used to have just one column. Then they added a second one which was triple AC, that's an all-aluminium conductor. Now they've added AL-59. They're hopefully moving towards actually then opening that subject up completely and this is what we've been working with in terms of the CEA and the ministry saying that India has to look at the total cost of ownership. Once you look at the total cost of ownership, low loss and high efficiency conductors and all these other premium conductors, there's a completely dramatic difference in terms of the paybacks when you use these high efficiency conductors over ACSR and AL-59 are also in the 5-year, 7-year, 8-year range when the life of that conductor is 35 years.

So, the whole equation will further change, you know, as they bring about that regulation. So, to answer that question, as what Ramesh is talking about, over a period of time we would expect the conductor margins to normalise to 28,000 a tonne, you know, if some of these tailwinds and these things are removed. But when you start having these sorts of legislation changing or the options that you can use changing and start bringing in these other paradigms, you know, total cost of ownership, etc, etc, reconductoring, the whole margin profile can again undergo a reboot. So, if you just stick to this and continue to innovate in this particular space,

the opportunities will keep on increasing as the environment changes and as the legislation starts changing.

Moderator: The next question for Rishabh Desai, how much of transformer oil demand comes from new transformers and how much is that in the aftermarket at the industry level?

Rishabh Desai: So, I think the split is 85-15 and most of the demand comes from new transformers. I think over the world the grid is expanding, there's new power stations coming up, new cities being built, Egypt is shifting its capital, Indonesia is trying to shift its capital, there's a lot of development going on. So, there are a few top-up jobs in which we supply to drums, to the utilities, but that's much smaller volumes.

As I said, the oil is supposed to last for about anywhere between 20 to 40 years, depending on the quality. So, there is some conversion over time of the oil to sludge, but of course the quality ensures that conversion is minimum and just a small top-up job has to be done. Yes, 5% odd top-up per year.

Moderator: So how is the freight impacting your export business and do you think some of this will lead to low margins in the near term?

Kushal Desai: So, freight has been a complete yo-yo. So, we had very low freight during the COVID period, freight had fallen to almost unworkable levels. Then you had this one ship coming in and blocking the sewers and then freight went completely ballistic for the next 18 months.

And then as things normalised, interestingly, freight came down to most destinations below what it was in 2019, until the US decided to increase tariffs on Chinese products, which will kick in on the 1st of September. So,

there is a whole set of products, which includes all aluminium-based products, where there is approximately a 25% increase in custom duty coming in. So, from whatever estimates we have, the Chinese manufacturers along the solar supply chain were holding between one and two years of inventory in terms of panels, junction boxes, and all these things.

And with this tariff coming on all aluminium-based products, including batteries and certain other EV components, there has been this huge push that has taken place, to the US, which is what has disrupted freights. In fact, containers have just not been available. Typically, we saw that, after the situation started normalising, it took about a year for the previous cycle to normalise.

It could take anywhere between six months to a year for this cycle to again normalise. Because what happens, containers start getting stranded in certain places, they need to come back, into where the supply chain is. Some geographies will come back much faster, like Southeast Asia, Middle East, etc. But when you start shipping across, to the US and Europe and Latin America, it may take a little bit longer. It's just anybody's guess how quickly that freight situation will improve. But my sense is that you will start seeing improvement by the end of the year and by middle of next year, it will probably get normalised.

Often containers start getting produced more when you have a spike in freight, which is exactly what happened, because of which the freight rates fell up below the 2019 levels as such. So, if at all there is a problem, it's not going to really be a long-term structural issue. It's a, a much shorter-term problem.

As far as our overall demand is concerned, I think we have an advantage here in India that the home market is very strong. So, if, there are some delays or there are some EPC players who may push out deliveries because they have to pay for the freight and so as a consequence, what would have gone in the next quarter may go after another quarter or two quarters. So, in the meantime, you've got a strong domestic demand where you can repurpose, some of your equipment and sales.

So, there will be some impact, but I don't think it's going to be enough to derail the train. Usually once it starts normalising, you start seeing a big surge and a catch up that happens in the markets which are difficult to service because of freight. I hope that answers the question.

Moderator: So, for the conductor division, how do we describe the moat in our business, the barriers to entry, given that new players are entering like KEC possibly? And I'm not sure, but if KEC is also getting operational in the conductor division, what is the moat in our business?

Chaitanya Desai: One is, of course, as I mentioned the technology of the new products. So, these have been developed over a long period of time and it does need a fair amount of metallurgy. So, we need to be backward integrated in terms of making our own alloys. In terms of the competition, some name you mentioned, so they are basically a cable manufacturer who have the equipment to make conductors. And we believe that it would be easy for them to make conventional type product, but for any new party to get into the more value-added products, it will take a fair amount of time and effort.

Kushal Desai: I think there is a fundamental difference. If you take, you specifically mentioned KEC and they are a great company and a very good customer of ours as of date. But they are an EPC company that wants to make

conductors reduce cost. We are a conductor company that wants to make conductors to be a very important part of this whole energy transition which means that and as you may have seen through the presentation, we have been working very closely with customers to understand what are their pain points, what are their problems and then develop products and services to be able to deliver that.

So, if you see the whole high efficiency conductors, the whole HTLS, the whole hybrid products that Girish spoke about extensively, the ester-based transformer oils that have come up, because you are going to have offshore solar. In India, there is already a lot of solar that is coming up on the water.

So, they are using lakes, they have started using the rivers to build solar. So, we are actually very focused on delivering solutions to our customers. And for that you need to have a certain technology understanding and experience too. There is a lot of money that has gone into the R&D facilities in place. If you, I mean, some of you may have visited the plants. There is a lot of work going on in Rakoli, so we took people to the other plant, which is Athola.

But if you see, there is a huge amount of work that has gone in over the last 10-15 years, and it's not something that one can catch up. Secondly, the culture that we build in the company is one which is focused on innovation and solutioning. And yes, you can buy equipment and put it in the plant, but buying culture is a bit more difficult.

So, I think, yes, there will be competition. People will see numbers. In India, if you do anything good, five other guys want to jump into it. But hopefully, we've gotten on to momentum where we are able to, you know, remain at least a step ahead of the competition.

Moderator: We'll take up last two questions in the interest of time. So, this is for the telecom division. On the target of INR10,000 crores of total revenue, are we considering the telecom division as a part of that or separate?

Ramesh Iyer: So that telecom will be separate. Currently, telecom is a very small proportion, but overall, INR10,000 crores, we are looking at excluding telecom.

Moderator: Capex guidance for the next two to three years?

Ramesh Iyer: Capex we are likely to spend about INR300 crores to INR350 crores year-on-year, and that may see over the next few years. As we need to build turnover, as I said, turnover ratio is about 10 to 12 times. We'll need about INR300 to INR350 crores capex over the next two years, next few years.

And largely around the capex will be spent about in the cable division as well as in the conductor division. As oil division, we have still spare capacity, but a lot of capex is likely to be spent on these two divisions.

Kushal Desai: Just in terms of our last comment, just a closing comment that we've titled this as energy, enabling the energy transition. The only thing I wanted to leave you with a thought here is that two things. One is that energy is the biggest business in the world. There is no business that comes anywhere close to energy in terms of the physical volume and the dollars that are involved, because it covers everything from oil, gas, coal right down to renewables, nuclear, all that.

Secondly, when you're looking at 20% going to 40% and the kind of growth of 4X that is going to happen, it's not going to be an energy transition, it's an energy revolution that's happening. And we don't feel it

so much because you can't touch and feel electricity it just comes here and it lights up the bulb, you don't realize how it has come there.

But for people who are in this industry, believe me for the next 20 years, 25 years, the kind of opportunities that is going to throw up for people who are along the entire supply chain, globally is just unprecedented. I've never seen, I've been around now for 35 years, never seen anything like this. It's really a tsunami of change coming in. And this revolution will be as big if not bigger than the whole steam engine.

You don't realize the amount of transition that's happening. And in many cases, because it's so huge, you will have bottlenecks and you will have problems, but I can tell you that for someone in the industry and who's been playing across many verticals in here, the end destination point, which is a 4x growth is pretty much written in stone. What will vary is the timeframe in which you will hit that. And different countries will be able to hit it at a different pace.

What we are seeing really is that the G20 countries are the ones where most of that work is happening. Because they have access to capital, they also have a much better regulation in place. So, in case a producer puts in assets, there is a dispute or there is a problem, there is a proper mechanism for being able to address it and source it. So, there will be growth happening. Most of this growth will come from the G20 countries. You won't have someone queuing up and running to put a one-gigawatt power plant in Zimbabwe, for example.

Whereas it's much easier to put it in India or in Australia or in the United States. So, the growth will be a little bit uneven geographically. The time could be elastic a little bit, but that destination is going to happen. And

finally, those numbers will have to pan out because there is no other choice. So, if you if you are patient with this space and you're looking at it carefully and seeing which players are actually innovating and doing the right things in here, then I'm sure that their stories will play out over a period of time.

I thought I'd just leave you with that last comment. And I guess lunch is pretty much ready. Apologies again that we've gone a good. We started half an hour late because of the rains, just to accommodate more people to be able to come in, but we are around here during lunch. Happy to answer any further questions. Thank you.