



## **Bharat Heavy Electricals Limited**

### **Q4FY22 Earnings Conference Call**

**21<sup>st</sup> May, 2022**

**Management:** Dr. Nalin Shinghal – Chairman and Managing Director  
Mr. Subodh Gupta - Director, Finance  
Mr. Renuka Gera – Director, Industrial Systems and Products, Additional  
Charge of Director (Engineering, R&D)  
Mr. U S Matharu- Director, Power, and Additional Charge of Director (HR)

<b>Moderator:</b>	<p>Ladies &amp; gentleman, good day. I'm Inderpal Singh from Bharat Heavy Electricals limited. Welcome to BHEL Q4 FY 22 earning conference call. This call is being organized on Microsoft Teams. To begin with, all participants are on the mute mode only. There will be an opportunity for you to ask questions after opening remarks of the management. The participants who wish to ask the questions can signal the operator by raising their hand, who will then unmute you. Please note that this conference is being recorded. Thank you! And now I hand over the conference to Dr. Nalin Shinghal, Chairman and Managing Director of BHEL. Over to you CMD sir.</p>
<b>Dr. Nalin Shinghal:</b>	<p>Good evening everyone. I am Nalin Shinghal - CMD, BHEL and I have with me</p> <ul style="list-style-type: none"> <li>• Shri Subodh Gupta, Director, Finance; and</li> <li>• Smt. Renuka Gera, Director, Industrial Systems &amp; Products, with Addl. charge of Director (E, R&amp;D); and other officers of the company</li> </ul> <p>A very warm welcome to all of you.</p> <p>As we all know, the Power Sector is in the midst of a major energy transition and the country has made specific commitments in COP 26, in this context. At the same time, the focus on infrastructure development coupled with sector specific PLI (Production Linked Incentive) schemes as well as the government's AatmaNirbhar Bharat initiative would result in continuous growth of power demand for which the country is looking towards a sustainable energy mix comprising of renewables coupled with hydro, nuclear, as well as clean coal.</p> <p>While, this is likely to result in substantial opportunities in the Hydro and Nuclear sectors, at the same time, in view of India's huge coal reserves and lack of oil and gas reserves, coal is expected to remain the primary energy driver with emphasis shifting towards Clean Coal. We are already witnessing a rebound in the thermal sector with a visible pipeline of over 7,700 MW of coal-based power plants. Your company is capitalizing on these emerging opportunities with a two-pronged strategy focusing firstly on indigenous development of clean coal technologies such as 'Coal to Chemicals' especially coal gasification, providing comprehensive solutions for emission control, development of lower rating supercritical plants; and secondly on growth in non-coal business including nuclear, hydro, railways, defence, and aerospace, amongst others.</p> <p>BHEL's focus on Nuclear and Hydro sectors has resulted in strong order booking in these areas in the recent years, and we have maintained market leadership and are further expanding our available offerings.</p> <p>In fact, in the last financial year, under the fleet mode procurement by NPCIL, the company has received the largest ever order for EPC of Turbine Island package for 6 units of 700 MWe Pressurized Heavy Water Reactors from NPCIL. In addition to this, orders for supply of Reactor Header Assemblies as well as for Steam Generators have also been received in fleet mode. I am proud to say that BHEL continues to remain the sole Indian company to supply nuclear turbine generators.</p> <p>Your company is also making efforts to enter into strategic partnerships with Global OEMs, to leverage the upcoming opportunities in areas of rail transportation, defence &amp; aerospace and new energy sources. This has resulted in BHEL securing an order for 16 sets of 3-phase IGBT based propulsion systems for Vande Bharat Express Trains from ICF Chennai, amidst highly competitive bidding, marking its entry into domestic semi high-speed mobility segment.</p> <p>In FY 21-22, BHEL has booked orders worth Rs. 23,693 Crores. With this, the total order book as on 31st March 2022 stands at Rs. 1,02,542 Crores out of which power sector is Rs. 85,664 Crores, industry sector is Rs. 11,836 Crores, and export projects account for Rs. 5,042 Crores.</p> <p>During the year, the Power segment has booked orders worth Rs 17,931 Crores. Major orders received in the power segment include nuclear orders mentioned earlier, and orders for Flue Gas Desulphurization Packages, amongst others.</p> <p>Orders worth Rs 5,660 Crores were booked by the Industry segment during the year. Prominent orders during the year include supply of upgraded SRGM—the main gun on Indian warships—for which BHEL is the sole supplier, strategic equipment for the Ministry of Defence, as well as Propulsion systems for Vande Bharat trains mentioned earlier, amongst others.</p> <p>Your company continues its focus on speeding up project execution, improving service &amp; quality standards, reducing material cost as well as indigenous technology development.</p>

	<p>Important milestones were achieved in project execution during the year including successful commissioning of 800 kV, 6,000 MW UHVDC link between the Western Region Grid and the Southern Region Grid.</p> <p>During the year, BHEL has commissioned and synchronized 4,119 MW of power plants in the utility, solar and captive segments and an additional 1,460 MW of Steam Generators. The company has also commissioned its first FGD plant at NTPC Dadri and the country's largest Air Cooled Condenser at North Karanpura. This Air-Cooled Condenser was commissioned by BHEL engineers in the absence of OEM support due to the geo-political situation, thus demonstrating the engineering prowess of TEAM BHEL.</p> <p>We are in the final stages of commissioning of the 100 MW floating solar power plant at NTPC Ramagundam, by far the largest floating solar power plant in the country. With this, I am happy to say that, two-third of the total floating solar capacity in the country, is installed and commissioned by BHEL.</p> <p>Strengthening technology base in existing and new areas remains a top priority. During the year, BHEL indigenously designed, installed and demonstrated 0.25 TPD Coal to Methanol Technology Demonstration Plant using high ash Indian Coal, the first of its kind technology demonstration. We are now working further on commercializing this technology to contribute to the National Coal Gasification Mission of the Government of India. This fulfils the twin objective of Clean Coal and indigenously manufacturing many chemicals presently imported by the country.</p> <p><b>Coming to the financials of the company in the last financial year:</b></p> <p>The company has made strenuous efforts during the last financial year which enabled us to not only break even in FY 21-22 but also strengthen our balance sheet. This breakeven was achieved despite the 2nd COVID wave impacting our operations in Q1 of FY 21-22.</p> <p>The total revenue from operations for FY 21-22 is Rs 21,211 Crores, which is 23% higher than the corresponding figure of Rs 17,308 Crores in FY 20-21.</p> <p>The Profit Before Tax is Rs 437 Crores for FY 21-22 against a loss of Rs 3,612 Crores in the corresponding period of the previous year. Overall, the company achieved an EBIDTA of more than Rs 1,100 Crores despite the significant pressure on margins due to sharp spike in metal prices and increase in other material and fuel costs.</p> <p>The significant cost reduction drive in the company against Manufacturing, Administrative, Sales &amp; Distribution expenses in the year resulted in such expenses being contained at 7% of Turnover compared to 9% in the previous year.</p> <p>Profit After Tax stands at Rs 410 Crores against a loss of Rs 2,717 Crores in the previous year. This is significantly aided by efforts in taxation area which resulted in refunds of Rs 667 Crores.</p> <p>For the Quarter 4 of FY 21-22, the company recorded Total Revenue from Operations at Rs 7,600 Crores, up by 13%, compared to Rs 6,752 Crores in the corresponding period of the previous year.</p> <p>Profit Before Tax for Q4 of FY 21-22 is Rs 1,098 Crores compared to a loss of Rs 1,385 Crores in the corresponding period of the previous year.</p> <p>Profit After Tax for Q4 of FY 21-22 is Rs 909 Crores compared to a loss of Rs 1,033 Crores in the corresponding period in the previous year.</p> <p>The company achieved an EBIDTA of Rs 1,280 Crores in Q4 of FY 21-22. The persistent effort to reduce costs resulted in Manufacturing, Administrative, Sales &amp; Distribution expenses in Q4 to be restricted to 5.5% as compared to 7% in the corresponding period previous year.</p> <p>Traditionally the company has seen higher investments in working capital with higher revenues. However, in the current financial year, working capital of Rs 586 Crores has been released despite revenues rising by 24%. Overall, there is a net positive cash generation of Rs 660 Crores from Operations as against Rs 560 Crores in the last year.</p> <p>The company has cash and bank balances, net of borrowings, of Rs 2,409 Crores as compared to Rs. 1,868 Crores at the end of FY 20-21.</p>
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	<p>The total receivables are at Rs 33,169 Crores which are only marginally higher than March 21 levels of Rs 31,292 Crores, despite revenues rising by 24%. The trade receivables at Rs 6,229 Crores are the lowest in the last 10 years.</p> <p>Thank you all once again for joining this Conference Call. We will take questions now</p>
<b>Moderator:</b>	<p>Thanks sir. We will now begin Q&amp;A session. Participants who want to ask questions, please signal operator by raising the hand. We'll give a 30 second pause to enable you to raise the hand so please raise your hand. The first question is from Mr. Mohit Kumar, Dan Capital. I again, request you to please raise your hand to enable the operator to unmute you at the time of asking the question. So, please go ahead, Mr. Mohit Kumar.</p>
<b>Mr. Mohit Kumar:</b>	<p>Good afternoon Sir. Congratulations! My question is why the other expenses are negative for the quarter? What was the one-off?</p>
<b>Subodh Gupta:</b>	<p>The other expenses are negative because of the provision effect, the provisions of around Rs. (840) Crores. Do you want the breakup for other expenses?</p>
<b>Mohit Kumar:</b>	<p>Yes, sir. Can you give the breakup?</p>
<b>Subodh Gupta:</b>	<p>Yes. For Q4, total other expenses are Rs. (385) Crores with the breakup of Rs. 423 Crores of other expenses of manufacturing, administrative, selling and distribution expenses. Provisions are Rs. (842) Crores, power and fuel cost is Rs. 125 Crores. And there is ERV gain of Rs. 91 Crores.</p>
<b>Mohit Kumar:</b>	<p>My second question is about FGD offerings. Are you expecting FGD offerings to pick up in FY 23</p>
<b>Dr. Nalin Shinghal:</b>	<p>Yes, we should expect it to pick up because at the moment the state and the private sector ordering has not yet happened and there are deadlines there. So, I think that should pick up.</p>
<b>Mohit Kumar:</b>	<p>But are you seeing the signs of, you know, the ordering picking up material in a sense, can we expect around 20-30 Gigawatt of FGD ordering in FY 23?</p>
<b>Dr. Nalin Shinghal:</b>	<p>ED marketing will answer that.</p>
<b>Shakil Manocha:</b>	<p>FGD as rightly said by CMD that most of the orders for the central sector have already been finalized. If I talk about 1,67,000 Megawatt was identified by CEA for FGD installations. Out of that, approximately 110 Gigawatt, that is 1,10,000 Megawatt of the sets have already been finalized and we have a market share of 30%, but going forward, we might feel a dampener there because now the government, even the ministry of power is also thinking that two years extension they are asking, we have given some time limits there with the latest norms.</p>
<b>Dr. Nalin Shinghal:</b>	<p>The visibility is not yet there but we are expecting visibility to happen. It is not yet. If you want to know whether it specifically order that have come out, that has not yet happened, but given our country's commitments that is bound to happen in the near future.</p>
<b>Mohit Kumar:</b>	<p>Currently, on this thermal power ordering - BTG ordering, are you seeing any signs of recovery? In fact, recently NTPC says that they're trying to revive at least 6 Gigawatt of new ordering specially LARA, Talcher, Darlipalli and Singrauli</p>
<b>Mohit Kumar:</b>	<p>Yes. So, are the tenders out as Talcher was supposed to get finalized, right. And have you seen any other tender in the market, which is, or let's say inquiry from the SEBs and NTPC and likes of NTPC.</p>

<b>Dr. Nalin Shinghal:</b>	So, as I already said, we are seeing a pipeline of almost 7,700 Megawatt, you know because Talcher, Talabira, Adani, Bhandora then Singrauli, Lara, all these are there, so we are expecting these ordering to happen in the very near future with you know the crunch on the power-supply side, this is going to be speeded up.
<b>Mohit Kumar:</b>	Last one on the coal gasification. The government has a target of FY 30. Are you seeing any sort of information or looking for tender which can materialize this in next 24-36 months?
<b>Dr. Nalin Shinghal:</b>	Yes. In fact, in the budget, four plants were already announced and we are already moving with some of the leading power, coal and lignite producers on that front. So, this is something I think, which is going to get speeded up further.
<b>Mohit Kumar:</b>	Thank you sir. Thank You.
<b>Dr. Nalin Shinghal:</b>	Thank you Mohit.
<b>Moderator:</b>	So, the next question is from Mr. Puneet Gulati, HSBC. Mr. Gulati, We're unmuting you. Now you can go ahead and ask the question.
<b>Puneet Gulati:</b>	Can you hear me?
<b>Dr. Nalin Shinghal:</b>	Yes, please. Go on.
<b>Puneet Gulati:</b>	Thank you so much. So, my first question is, are you seeing any, increase in talks towards nuclear power plant, any prospective orders that you foresee in next couple of years?
<b>Dr. Nalin Shinghal:</b>	So, in nuclear already, the fleet mode ordering has happened. And, as I mentioned we have already received the order for 6 sets of 700 MWe, TGs, which is worth Rs. 10,800 Crores.
<b>Puneet Gulati:</b>	Okay. Anything else that you expect coming here?
<b>Dr Nalin Shinghal:</b>	Not immediately, but yes in the future, I think nuclear will continue to play a very strong role.
<b>Puneet Gulati:</b>	Okay, got it. My second question is on the industrial side, can you talk about any new JVs that you've recently formed or enter new product lines?
<b>Dr. Nalin Shinghal:</b>	So, on the industrial side, as I already mentioned, the defense is a major area. In fact, last year's order booking has been the highest we've ever had Rs. 1500 Crores as against almost, you know, we were below Rs. 500 Crores always before that. And, in the current year we are looking at that going up further. So that's a very major focus area. And I think the, the existing geopolitical situation has also added to the urgency to indigenize in that area. Then as I mentioned on the railway front, we have already got the first order for the Vande-Bharat and we are again focusing on that segment in a very big way. Other area, we are looking at is space where we are looking at some orders for tankages etc. from ISRO, anything else you'd like to add Mrs. Gera?
<b>Renuka Gera:</b>	I think sir, we are looking at even having some orders, where we join hands with some developers in renewables.
<b>Dr. Nalin Shinghal:</b>	So, what we have done in floating solar, I think that is something we will try to build on further.
<b>Renuka Gera:</b>	Right now, we are having as you rightly said two-third of the share of the complete floating market in India.

<b>Dr. Nalin Shinghal:</b>	So, going forward with our diversification initiative, we expect that to deliver results.
<b>Puneet Gulati:</b>	Okay. But, why not go towards module manufacturing where government is now offering PLI? Any thoughts there?
<b>Dr. Nalin Shinghal:</b>	We have explored that, but at this point I think the call is not to get into this.
<b>Puneet Gulati:</b>	Any progress on the monetization of any assets, any timeline you can share?
<b>Dr. Nalin Shinghal:</b>	So there actually, you know, the government has now set up a separate body to handle asset monetization. So, that'll now go into a different sort of phase.
<b>Puneet Gulati:</b>	Okay. So, it will now be completely dictated by government.
<b>Dr. Nalin Shinghal:</b>	We have identified certain properties, but that process, you see, the procedures will have to fall in place. So, that, I think we are expecting that clarity to emerge quite soon on that.
<b>Puneet Gulati:</b>	Understood. That's great. Thank you so much. And all the best.
<b>Dr. Nalin Shinghal:</b>	Thank you Puneet.
<b>Moderator:</b>	I repeat that the participants who wish to ask the questions, please signal the operator by raising their hands. Next question is lined from Mr. Rahul Gajare, Haitong Securities. You are now un-mute, you can ask the question.
<b>Rahul Gajare:</b>	Good evening. You're able to hear me. Right?
<b>Dr. Nalin Shinghal:</b>	Good Evening. Yes, we can hear you.
<b>Rahul Gajare:</b>	Yes. I've got a couple of questions. I was not able to get the tax refund number that you said, can you please repeat that number?
<b>Dr. Nalin Shinghal:</b>	Which number?
<b>Rahul Gajare:</b>	Tax Refund numbers.
<b>Dr. Nalin Shinghal:</b>	I'll request Director (Finance) to give us that.
<b>Subodh Gupta:</b>	<p>Tax Refund. We have PBT of Rs. 437 Crores and PAT of Rs. 410 Crores, the effect of Rs. 27 Crores only tax liability is appearing for two reasons. Current tax we are seeing minus Rs. 77 Crores. Basically, that includes the impact of refund, as CMD sir said in the opening remarks. So that has contributed as the additional income also in that provision part and the interest income part is also there, which we'll discuss separately, but Rs.77 Crores basically include Rs.126 Crores of tax refund, basically income for us under that head.</p> <p>Let me clarify further, basically there are two components of the whole tax refund. One is the interest component, which has gone into the income. And second is the tax, you know, which we had earlier expensed, you know, now book to income. So, because in the tribunal we won all this disputed tax cases prior to 2010-11. So that refund basically we could get the last year. So, the effect of that ultimately had to just see the gap between PBT and PAT. It's just Rs. 27 Crores. It is because of the</p>

	early tax refund, which were expensed not taken as income in two heads, one is interest portion taken to other income and the tax part taken to Taxes first.
<b>Rahul Gajare:</b>	Thank you. Sir, my second question is on, given that we've seen significant rise in commodities, I want to know how much of your order book has price passed through built in?
<b>Dr. Nalin Shinghal:</b>	Has? Sorry, can you repeat that please?
<b>Rahul Gajare:</b>	Yes. So, given the way commodities have increased, I want to know how much of your total order book has a price pass through.
<b>Dr. Nalin Shinghal:</b>	Well, you see the price variation clauses are largely there in many of our orders. However, may be let us say about 50-50 with or without, but the major issue there also is that the pass through percentage even then does get limited. So that is an impact we are facing and we are working on.
<b>Subodh Gupta:</b>	Actually, what CMD is telling the impact of material cost itself is very high. If you see the rise in the price of scale of all the TMT steel, copper, various metal, global impact is much higher as compared to the PVC what we get from customer. Basically, there's a limit also, there's a cap of PVC. Because of the restriction what's happening, our revenues are lower and the material cost is going up. So that is really one added challenge and risk for the company. Though various cost optimization efforts are on in the company and we are too trying to even, we have saved a substantial amount last year also. In that range of Rs. 600-700 Crores, we could save for engineering optimization. So those things are going on, but certainly there was an impact and because of that impact, you will appreciate one fact that whatever profit we have shown here Rs. 437 Crores as PBT, this is after taking material cost as 72%, which is all time high. If you see the financials of BHEL (prior financials), it was always in the range of 60%. So that really further impacted us. Otherwise, things are well under control and whatever we have already factored into this material cost into our current financials also.
<b>Dr. Nalin Shinghal:</b>	So, essentially to sum it up, that is a major concern area and we are trying to mitigate that through engineering efforts, as well as procurement efforts from both sides.
<b>Rahul Gajare:</b>	Okay. But that PVC restriction, is there a percentage cap of 10%, 15%, can you share?
<b>Dr. Nalin Shinghal:</b>	You see, there is a cap also, the other issue is PVCs are largely index based. So, the index may not rise as much as let us say a steel price or a copper price or a cement price.
<b>Rahul Gajare:</b>	Understood.
<b>Subodh Gupta:</b>	And one more thing Sir, time extension request, because of COVID reasons we have already submitted to customer. Once we get the time extension approved by the customer, some benefit of PVC will also happen.
<b>Dr. Nalin Shinghal:</b>	Yes. But anyway, though, that's the major front we are working on in the current year.
<b>Rahul Gajare:</b>	So, my last question is on CapEx. I remember your CapEx was planned for about Rs. 250 odd Crores for FY 23. I want to know, is there any change in FY 23? And if you can also talk about FY 24 CapEx, that is one part, and you had also indicated that if you were to get certain orders from DRDO, the CapEx will increase. So, if you can throw some light on the entire CapEx for the next, FY 23 & 24.
<b>Dr. Nalin Shinghal:</b>	So, the plan as of now is Rs. 231 Crores for the next year, but if you're looking at specific areas, then we are already looking at for ISRO for tankages.
<b>Rahul Gajare:</b>	Your voice is cracking. I couldn't hear you. Can you repeat the number?

<b>Dr. Nalin Shinghal:</b>	Can you please mute your mic. I think there's the interruption coming from that side. Okay. Fine.
<b>Dr. Nalin Shinghal:</b>	So, the CapEx for the current year is Rs. 231 Crores for FY 23. And, if you're looking at the long term, the major areas we are already, taking up CapEx for the ISRO tankages, which will be almost Rs. 200+ Crores and another about Rs. 140 odd Crores for the upgraded SRGMs. And in addition to that, there will be substantial CapEx required in the coal gasification side. So, these are the various ones which are upcoming that we will be having going ahead.
<b>Rahul Gajare:</b>	Okay, then thank you very much.
<b>Dr. Nalin Shinghal:</b>	Thank you Rahul.
<b>Moderator:</b>	The next question is from Mr. Atul. Mr. Atul, please state your full name and organization name before asking the question. Mr. Atul? I think Mr. Atul from Citi.
<b>Atul Tiwari:</b>	Hello, sir. I'm Atul Tiwari from Citi Research. Sir, just one question on this 7700 Megawatt pipeline that is emerging, could you break it across different projects and could you give your rough estimate of any timelines or status of readiness.
<b>Dr. Nalin Shinghal:</b>	I'll request Director (Power) to respond to that.
<b>U S Matharu:</b>	Good Afternoon. There are certain tenders where bidding is in advanced stage, that is close to some 4000 Megawatt. But we are expecting another tenders in next few months. But timeline for 4000 MW, as I said is already bidding is in advance stage. Another, 3000-4000 Megawatt, we are expecting that within one-year span, these tenders should be out.
<b>Atul Tiwari:</b>	Which are these 4000 mega projects, which are in advance stage of bidding?
<b>U S Matharu:</b>	Actually, there one is Talabira - 3 units of 800 MW of Neyveli Lignite Corporation in Odisha and other one is in Bhandora- 2 units of 800 MW, these are where bidding is in advanced stages. And we have already preparing for the other tenders like Talcher, we are preparing to submit the bid, so, that is another 2 units of 660 MW. So, this is the current pipeline. After that we are expecting two units in Singrauli of 800 MW and Lara phase-2: 2 units of 800 MW.
<b>Atul Tiwari:</b>	So, you said Talabira 3*800 MW and Adani 2*800 MW, both are under bidding, right? Your voice was little shaky.
<b>U S Matharu:</b>	Yes. That's right. Talabira and Adani – Bhandora.
<b>Atul Tiwari:</b>	Ok Sir. Thank You.
<b>Moderator:</b>	Next question is from Mr. Girish Achhepalia from Morgan Stanley.
<b>Girish:</b>	Sir. Can you hear me? Sorry I joined the call a little late. Apologies. Just wanted to understand the break-up of orderbook and receivables break-up, if you can help with that and order inflow. These 3 break-up please?
<b>Nalin Shinghal:</b>	You want the order book breakup sector wise?
<b>Girish:</b>	Yes sir.
<b>Subodh Gupta</b>	Yes. The order receipt for FY 21-22 is Rs. 23,693 Crores. Power sector is Rs. 17,931 Crores. Industry sector is Rs. 5,660 Crores and international operations Rs. 102 Crores. So, that makes it Rs. 23,693 Crores. You want the break-up of outstanding order book as well?
<b>Girish:</b>	Yes Sir.



<b>Subodh Gupta:</b>	So, Power sector outstanding is Rs. 85,664 Crores, Industry is Rs. 11,836 Crores, International operation is Rs. 5042 Crores. So, combining together is Rs. 1,02,542 Crores.
<b>Girish:</b>	And if you would help with the split of receivables sir?
<b>Subodh Gupta:</b>	If you look at the break-up of receivables, it is 36% in central PSU, state utility is 41%, private customer - 14%, export - 8%. I am talking of Rs. 33,168 Crores including contract assets.
<b>Girish:</b>	Sir last question, this other expense split can you provide for the full year.
<b>Subodh Gupta</b>	<p>For the full year, the other expenses Rs. 162 Crores that have been mentioned here. The other expenses of manufacturing administration selling &amp; distribution are Rs. 1,355 Crores which was Rs. 1480 Crores last year. Current year, it is down to Rs. 1355 Crores. Provisions are Rs. (1,526) Crores, power and fuel cost is Rs. 415 Crores, and there is ERV gain of Rs. 82 Crores.</p> <p>I want to clarify one more thing. This number would appear to be much lower as compared to last year, because last year the company management has taken a call to provide for Rs. 1,827 Crores as merit-based provisions last year. So, this year there was no requirement of creating merit-based provisions. So better withdrawals have happened this year. And because of the better withdrawals we could basically improve the number of provisions. So that's why the number is negative. Otherwise whatever provision creation we have done it is done as per the policy in line with the policy, but there was no requirement of merit-based provisions. So, it has not happened. Secondly, the manufacturing expenses of Rs. 1355 Crores we are talking about, I think it is the lowest in last many years, the company has made a very good effort that CMD has said in the initial remarks that level has come from 9% to 7% of top line, despite top line going up other expenses going down. So, it's a major achievement, it's a breakthrough achievement. Because we know that market is competitive, so company's focus is also on how to basically improve the bottom line through middle line also.</p>
<b>Girish:</b>	Thank you so much.
<b>Dr. Nalin Shinghal:</b>	Thank you Girish.
<b>Moderator:</b>	So, the next question is from Mr. Ashwini Sharma. Mr. Sharma, please state the name of your organization before asking the question.
<b>Dr. Nalin Shinghal:</b>	Can you please unmute yourself? Mr. Ashwini Sharma, can you please unmute yourself?
<b>Moderator:</b>	Okay. We can go to the next participant. The next question is from Mr. Mohit Kumar, Dan capital. Mr. Mohit, we are unmuting you, so you can go ahead with your question.
<b>Mohit Kumar:</b>	Hello, can you give us the break of contract assets and trade receivables number at the end of FY 22? And what was this number at the end of FY 21?
<b>Dr. Nalin Shinghal:</b>	I'll request Director (Finance) to give us the details.
<b>Subodh Gupta:</b>	Trade receivables at the end of Mar'22 is Rs. 6,229 Crores. And the contract asset is Rs. 26,940 Crores and last year Mar'21, Trade receivables were Rs. 7,213 Crores and contract asset were Rs. 24,079 Crores. One more fact, I would like to share with all the investors here regarding the increase in contract assets that we have a basically, if you look at the payment terms, what we had in many of the NTPC projects which are going on or other products because of that unfavorable terms which we were usually getting in past now we are not getting because of that also there is an additional in contract asset to the tune of Rs. 3,600 Crores. Those will be coming but after some time because we cannot show under investment in the company. So those are also reflected as contract asset. Otherwise, it's indirectly a funding for the projects from BHEL.
<b>Mohit Kumar:</b>	On the power sector orders. Are they mostly BTG or EPC orders? I'm talking about NLC Talabira, Adani, Talcher, Singrauli, Lara.
<b>Dr. Nalin Shinghal:</b>	These are largely EPC orders.
<b>Mohit Kumar:</b>	Okay. So, the quantum is very high.
<b>Dr. Nalin Shinghal:</b>	Other than Adani which is a BTG, they are all EPC orders.

<b>Mohit Kumar:</b>	Lastly on this, which are sectors you are very bullish on the order in-flow for FY 23 and let's say for the next 24 months.
<b>Dr. Nalin Shinghal:</b>	As I already mentioned defense is a major sector where we are bullish on and railway are the two sectors, we would be quite bullish on. And then of course on the thermal side, of course which has been a traditional sector, there also, there are, we've already given the details. So, some of these should certainly happen in this year. And if not, this year, most of them will be complete by FY 24.
<b>Mohit Kumar:</b>	One more question, which are the capabilities of building in the medium term, to cater to, let's say to growth.
<b>Dr. Nalin Shinghal:</b>	So, if you're looking at, generically, we are looking at engineering, we are looking at updating the manufacturing. But the specific, if we come to specifics, you see a very major one, which I mentioned was coal to methanol. Now that is a major capability we are looking going forward, defense side & especially their support, service support, engineering support. Those are the various other things that we are looking at the moment.
<b>Mohit Kumar:</b>	Anything in particular looking at railway side?
<b>Dr. Nalin Shinghal:</b>	Yes, railway of course is a major area that we are working on. So, as I already told you, we've got the first order for the Vande-Bharat trains. And that's a very focused segment where we are looking to move ahead. Technology tie-ups also are in the pipeline for supporting that sector.
<b>Mohit Kumar:</b>	Anything on the hydrogen side?
<b>Dr. Nalin Shinghal:</b>	Hydrogen is another area which we have been working on. So, we have already, as I mentioned in a previous con-call, we had set up a dedicated business group around hydrogen. We have already developed 5 kW fuel cell and are looking to now upgrade that capability. And in parallel, we are in discussions with various international majors for technology tie-ups for the electrolyzer. So, the hydrogen economy is something which is going to be important going ahead.
<b>Mohit Kumar:</b>	Understood. Thank you & all the Best.
<b>Moderator:</b>	Next question is from Mr. Amit Anwani from Prabhudas Liladhar Pvt Ltd. You have to unmute yourself.
<b>Dr. Nalin Shinghal:</b>	Can you please unmute yourself and speak? Mr. Amit?
<b>Moderator:</b>	Okay. Mr. Ashwini Sharma, we are un-muting yourself. Now, if you want to ask the question, you can ask question. So, if there is any other question, please raise your hands. Mr. Aditya, next question is from Mr. Aditya please state your full name and organization name.
<b>Dr. Nalin Shinghal:</b>	Mr. Aditya, will you please un-mute yourself.
<b>Moderator:</b>	Mr. Abhineet Anand, you can go ahead with your question, please un-mute.
<b>Abhineet Anand:</b>	Thanks for the opportunity. I just wanted to know the terms of the contract for the new coal-based plants that are coming up. I remember a few years back, they had gone very unfavorable because you know, some of around 10% was to be given after the performance guarantee and all. Can you tell us what is the terms now in terms of payments?
<b>Dr. Nalin Shinghal:</b>	I'll request Director (Power) to answer that question.
<b>U S Matharu:</b>	There have been certain contracts where we have encountered very unfavorable payment terms, but after that in particular, we have engaged with NTPC and for the future tenders, they have modified the terms which are quite favorable or maybe close to what traditionally it used to be. For example, we had difficult payment terms in Patratu and some FGD projects also but for new tenders of NTPC like Talcher, payments terms have been amended in tender documents.
<b>Shakil Manocha:</b>	For Talabira, it is same sir more or less like the earlier tenders. Now you have that 10% one, and you have some 75% on the seed of the material, but 10% will always remain as a deferred payment towards the PG test and the trial operation that is always there. 90% of the payment will be available to us. This is what I would like to say.
<b>Dr. Nalin Shinghal:</b>	So, in this regard, you may also be aware that even the government has issued guidelines in October regarding payment terms to be incorporated in major tenders. So, that I think is also going in the same direction.
<b>Abhineet Anand:</b>	Thank you. Thank you, sir.



<b>Moderator:</b>	So, we'll once again try last question, Mr. Amit Anwani, you have to also unmute yourself after we unmute. Mr. Amit, please go ahead and ask your question. Okay. Now, there's no other question. So, with the permission of our chairman, sir, can we close the conference?
<b>Dr. Nalin Shinghal:</b>	Thank you. Thank you, ladies and gentlemen, for your patient hearing and in an interactive Q&A session. Thank you very much for your interest in BHEL. Good Bye.
<b>Moderator:</b>	Ladies and gentlemen. Thank you for joining us. You may now disconnect your lines.