

"Suzlon Energy Limited Investor and Analyst Meet 2016"

July 15, 2016





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Moderator:	Ladies and Gentlemen, I now hand the conference over to Mr. Samir Shah. Over to you, sir.
Samir Shah:	Good afternoon, friends. I welcome you all to the Investor and Analyst Meet 2016 of Suzlon Energy Limited. We also welcome the participants who have joined via conference call. Today, the senior management will discuss the growth plans and strategic vision of the Company.
	We have with us Mr. Tulsi Tanti – Chairman & Managing Director, Mr. J. P. Chalasani – Group CEO, Mr. Kirti Vagadia – Group CFO, Mr. Vinod R. Tanti – COO, Mr. Rakesh Sarin – CEO (International Business and Global Service) and Mr. Duncan Koerbel – CTO.
	The program for the session: The senior management team will make individual presentation, post which we will have a Q&A session. The presentation being made here is available on our website.
	Now I request Mr. Tulsi Tanti to address the gathering.
Tulsi Tanti:	A very good afternoon, friends. I think after a long time I am meeting all of you, some of you must be thinking maybe some surprise that is why we are here. But it is very clear that our country is continuously growing and it will continue to grow, and within that, power sector has enormous opportunity and challenges at the same time. Renewable space has a great future in our country and it will continue to give a lot of opportunity for growth. If I see the global energy market, year-on-year, irrespective of the uncertainty of the economic environment, it is continuously growing. We have not seen any year that because of deep financial crises or other problems the energy market has gone down, number one. Number two, we have not seen the trend all over the world, average point of view, the energy price is going down for the consumers. Maybe for generator like us our PPA price is going down, but the consumer price is not going down. These are two very clear trends that we can see in global economy.
	For renewables, we see a lot of voice and momentum. Entire world believes the future is the renewable energy. But till now, whatever the installed base of the global energy base is there, hardly 3% to 4% is the renewable energy contribution (in the kilowatt hour basis and not in megawatt installed basis). So that means there is enormous space lying for us to grow on that.
	So this is a very important analysis and slide is there, if you really understand differently. Approximately, 6,000 GW is the installed base all over the world for the energy production today. Out of that, in next 20 years, almost 2,000 GW capacity will be retired. So that must go because it is quite old plant, inefficient or very expensive, outdated and other things. So it will be removed from the next 20 years, so this is the new opportunity which is growing because

we have fill up that gap of up to 2,000 GW. Thus, nearly 5,600 GW is the new capacity required, so that means 2,000 GW (Retiring) plus 3,600 GW (new addition). But within that



approximately 3,000 GW is estimated to come from renewables. So almost 60% of new energy capacity added in the next 20 years, will come from the renewable. Apart from strategic requirement of the global economy, this is also required from the climate change, cost of energy and energy security perspective. Renewables are becoming the high priority for the world.

Each and every nation after the COP21 have changed their directions and momentum is increasing to bring more and more renewable energy into the basket and it is happening. If we translate into the investments, \$5.86 trillion investment for the renewables will come in the next 20 years. So we should not be worried about the demand and market size, because a lot of time we have speculative discomfort whether there is a demand, whether there is a market, whether there is a margin, whether there is sustainability or not. We believe the renewable sector will bring the global economy sustainability and that is why it is extremely important to grow the sector. Even at the last World Economy Forum also, a very clear long debate was there that how to bring the continuously long-term sustainable economy, what is the one driver or one sector can bring that stability, it is the renewable sector. So that is a very clear consensus across the political leader, the regulatory systems and the global CEOs, so everybody is now believing in that and you have seen so many corporates in the worldwide now directly or indirectly they are hedging their power cost through the renewables and they are investing in the renewables. So this new trend is increasing and growing very well because it is becoming more and more affordable, sustainable and reliable energy.

We say always the future looks good, let's take example of 2015 – \$300 billion investment has happened in the global power sector. Out of that \$180 billion investment has happened only from renewables. And if I go for the installed capacity, 200 GW of the total installed capacity in 2015, 120 GW has come from the renewable, of which 60 GW is from wind and 60 GW is from the solar. So it is a reality. So renewable energy is no more an alternate energy, it is a mainstream energy. So we have to become a more serious player for the power sector growth to bring this more stability in the power sector. The renewable energy companies are playing now a hugely different and an important role in the global power sector today.

If we see the solar also will continue to grow, but we have to understand in solar two parts are there. Part one is the utility scale. Because of the cost competitiveness and other things, now slowly very good growth is happening in the utility scale solar. But till now the residential, commercial and roof top application has been there. So that will continue because it is much easier and faster to implement, unlocks the certain high cost of the consumers requirement.

We believe both the sources (wind and solar) world needs and it will continue to grow, it is not competing each other but it is complementing each other.

A new challenge as everybody is feeling is that solar module price is going from \$0.60 to \$0.50 to \$0.45 and it will continuously go down and everything. But we should not forget that the cost competitiveness of the wind today and tomorrow for the next one or two decades, it will continue to be competitive. Because the opportunity in the wind and the through



technology the enormous space is there. Just to give you a very simple example, you are all learned people who can do mathematics easily, the Rs.7 crores installed cost of the solar is there today in Indian market. What is the efficiency of the solar plant load factor? Maximum 20%. The same Rs.7 crores we are selling the wind asset in India market and what's the plant load factor? Minimum 30% and now gradually it is going to 35% to 40% level. So you can imagine what is the cost competitiveness is already there. Still it is not enough for wind because wind have more opportunity and within three to five years down the line we are bringing the product and technology for Indian market which we will deliver up to 50% plant load factor also. So this is where the space is available, where the solar I see down the line for the next 10 years, it is very difficult to enhance the efficiency because that manufacturing process and that semiconductor industry's applications are there where a very huge and high CAPEX is required to improve even 1% efficiency, it's not so easy job.

So while there is lots of challenge in Solar, we believe both the source of energy will continue to grow. But solar will not be able to compete the wind in next 10 years. So it is very clear because high technological edge in the wind is available.

The global wind market will continue to grow. As per some analyst report, it is 6%. But my belief is that it will go 10% because for lots of new emerging economy markets, statistics and information are not available. Nearly 80 countries are investing in wind power projects and solar project, but next five years you will see almost 160 countries will start investing in wind power projects. Those opportunities are not counted in this number. We are getting some of the countries enquiry and it is promising and people are going more and more for wind and solar installation. So we strongly believe the sector will continue to grow because after the COP21 and global climate change requirement, from energy security perspectives and to bring the low cost of energy in its home grown energy, most of the countries' focus is very high in renewables.

Indian market will continue to grow by 14% CAGR by 2022. You may not believe, but I will show you why it is possible and our team will share with you more detail that how the Indian market will continue to grow very-very strongly. Now see, the Indian market today is 1,100 billion units in terms of energy consumption. By 2030 it is estimated that energy consumption will be almost four times and that is just 9% annual growth. Is it enough? 350 million populations does not even have access to electricity today. Further our economy is growing by 7%. More than 10% growth in energy generation is required. We are not yet that high energy consumers (on a per capita basis) to focus on energy efficiency. So our demand will continue and increase, there is no doubt about it. And that is why the government after the Prime Minister has taken charge, has set 175 GW target for the renewables. Because we are highly unsecured because of the other source of energy, its availability is a big risk plus uncertainty is huge and it is expensive. Out of 175 GW, 60 GW is wind and 60 GW is solar. Out of 60 GW Wind, 27 GW wind has already been delivered and balance 33 GW will come in the next five to six years.



So today is 27 GW installed base of the wind is there. We strongly believe, and I am fully confident that by 2022 the industry will deliver 60+ GW, no doubt about it. Because the cost of energy is becoming very-very competitive going forward and more and more states are supporting to go in this direction. The financial investors are very much interested and they have a very ambitious plan to invest in Indian market. The state and the central PSUs are going more aggressively to invest in these renewable assets. So we strongly believe the demand is there, the manufacturing capacity is there, product and technology highly reliable is there, wind resource sites are available. So market will continue by 14% CAGR in the next five to six years.

So these are all your concerns. We understand there is a market, there is a demand, everything but we don't believe. There is enormous constraint there, either its utility is not paying in time or uncertainty of the state policy or fiscal benefit policy issues or the availability of the good wind side, grid infrastructure is not enough. So, all these uncertainties are very clearly there. So let's understand, because these are your major areas of concern. The good wind site, honestly, enormous sites are available, 300 GW sites and potentiality is there. The question there is, it's a challenge for the company like us, how to make that sites economically viable and saleable. It is not difficult; through technology we are quite confident to convert those sites into economically viable. You see the earlier plant load factor was just 15% - 20%, then 30% and now 35% and going forward the PLF will continue to grow and that will unlock the sites. We don't see the constraints. The grid infrastructure, the government is building green corridors and lot of work is ongoing. More than Rs. 100,000 crores investment is coming in the next five years for the infrastructure of the grid specifically, governments are identifying the pockets where we have to build, and central government is aggressively supporting the state government to drive this investment. But what we are doing? Where we know that the potentiality of the sites is there, but grid constraint is there, we are constructing the grid infrastructure ourselves, whether it is 130 kv, 220 kv or 440 kv, upto that we are going veryvery aggressively. And we are unlocking site and we are creating a market for us and that is the USP of Suzlon, how to unlock the market.

Third area is the state specific uncertainty, lots of state have different-different uncertainty and situations are there which is creating turbulence and disturbance in the market growth and everything. But we have to understand, eight good windy states are there. If all good wind states are running perfectly all aspect, it is very difficult for company like us to build all the states. The maximum what we are doing is, particular year we are focusing on three to four state which is giving them almost 90% market and then second year another two, three states. By this way we are rolling over, so that is giving us opportunity to grow also and same time the certain state we are doing infrastructure development. Because this project's cycle time is 36 month, so it is not possible that all the states go faster and aggressively. So this is the way a roll over is happening. Sometime you have seen particular year Gujarat is doing great, particular year Andhra is doing good, particular year Tamil Nadu was doing good and the current year Andhra again will be good. But our best strategic view is, we are established in all



the eight state. So we are not concerned about the uncertainty of the market and the environment and situations.

Then there is declining tariff and incentive uncertainty like GBI and AD will continue. Honestly, we are not worried about whether GBI continues or AD does not continue, it is an IRR driven market first of all. 13% - 14% IRR is expectation for the investor because our interest cost is 11% and 2% arbitrage is required. So minimum 13% customer is comfortable to invest in the project and it is most of the financial investor is investing so they are very comfortable on IRR perspective and that trend has changed in last three years. Now how to make that IRR and same time to maintain our 14% - 15% EBITDA margin? I think that is the challenge there and that takes the birth of innovation and technology and we are so equipped being our technology setups across the world and experience of the global knowledge, which our CTO will explain you that how we are unlocking this LCOE and how we can unlock the situations irrespective of the lower PPA price.

Competitive bidding, there is a lot of confusion there. Competitive bidding is, in fact, unlocking the market, it is increasing the demand. How? Those eight states are windy states. They will continue in the FIT regime. So whatever the PPA mechanism is there through regulator, it will continue. But so many other states, they have RPO obligations and they don't have windy sites, what to do then? So they will come with competitive bidding and market place, we can install in eight windy state and they will get the power purchase and everything. So it will give additional demand and market. Same time, national and state PSU is coming forward in investment in renewable, because that mandate is given by the government that just FII is investing in that the sector, what our PSUs and corporates are doing. So now they have started and they will come out with the bidding process and they will purchase this power. So we are reducing the burden on eight states the PPA payment and everything, so it will unlock the size of the market, we have to see this as an opportunity rather than downside risk.

Next, financial health of the SEB, the concern is there, I agree with you because the payment is in six months to nine months and sometimes it is 12 months. The investors are not getting their payment in time. But this is a very typical situation of our country and our power sector is there. The government has taken a very strong initiative through UDAY and providing funding and everything. And also the last event in Goa, all the state energy ministers and energy secretary with the central government ministry and secretary were together and they have said very clear two mandates to all the states that guys you have to pay the highest priority for renewable payment because we want to build, if you are not paying then why investor will invest in our country. So you have to pay. And if you are not paying in time, we will not continue the support of Uday, number one. Number two, you have to follow the RPO and you have to achieve that volume and your RPO obligation. If you are not aligned with that, we will not support you from UDAY anything. So this way central government is forcing the systems



to work aligned with the strategy of the government to drive this growth and momentum, I think that will bring some change in the Indian market.

Same time, what we are educating the financial customer and investors, guys take six to nine months working capital in your projects and load it into your project IRR and other things and we will compete that things. So that should be very clear, so that even if money from SEB will come six to nine months late, there should be no uncertainty in the financial discipline for their investment and they should not feel uncomfortable to invest in Indian market.

So here our vision for the long-term, because as you know we have passed with very high turbulent time on last three years, lots of financial difficulty based on our global investment and uncertainty that has created turbulence in our business. But now we are back in the business, we have a lot of competency and expertise for the domestic market and global market. We have prepared the five years long-term plans and same time we have built a strong management team, they are coming with very rich experience of the sector and the knowledge and they will drive this growth and bring the new opportunity in the company for the next five years.

So vision is very clear, to be the best renewable energy company in the global market and to create the best value to our stakeholder. Mission is also very clear that large utility scale renewable projects to provide the solution to our customers and to create a value for our stakeholders.

The marketplace is also very close, we are not going so many market, very high focused, where is the growth of the market, where is the high volume there, which market is most profitable we are concentrating.

We are bringing new business model which is wind and solar hybrid solution, our Group CEO will explain you in detail because it is a very complementary value we create and that is the future for the renewable. There is no space for just wind or space for the just solar, instead an integrated solution is required so that we can gradually move to the base load level of up to 60%. So the renewable energy integrated solution hybrid will provide the 60% plant load factor in the grid which is the equal to the base load. So uncertainty of the sectors we are removing by this new innovative business model.

Best in class service so that we create value for our customer and we remain a custodian for our customers' cash flow for 25 years. Even we are fighting for the utility to pay them timely, up to that level service we are providing.

We have a crystal clear winning strategy for the product and technology. If you want to continue growth and if you want to address the continuously reducing tariff, the levelized cost of energy has to be reduced and we have a crystal clear target of 20% in next five years we will reduce. So we will remain continuously competitive in the market place, irrespective of the



lower wind site or lower tariff, we are very comfortable to drive the business through the technology.

The regional manufacturing with the global sourcing, we are the LCC, means lowest cost producer company in the world. And all our manufacturing base plus our global sourcing is in a low cost countries environment, so we will leverage and reduce on continuous basis the cost, so it is adding a lot of value for us.

Also, we are very serious and concerned about our balance sheet, that is also one of the area and that is why we have a clear plan for the next five years, you will see from our Group CFO, he will share with you how we will do asset light, debt light organization, how we can bring in the next five years and to make that happen. So one thing is very clear that in a nutshell before I conclude things, A) Indian market will continue to grow, demand is there, 14% CAGR wind market will continue to grow. B) Wind will remain for the next decade competitive against the solar. C) Within the market place, Suzlon will continue to grow higher growth compared to the market growth.

And our target is very clear, between now and by 2022, 20 GW we will build the capacity in India and outside for both wind and solar. We will reduce LCOE by 20%, improve our working capital efficiency to 10% level, and we want to reach within the next four to five years, zero term debt. So it is a very crystal clear plan, direction, strategy, action plan is there and I have very strong management team and I am confident they will deliver all these targets.

Thank you very much. Thanks for your time.

J.P. Chalasani: Thank you, Tulsi bhai. Good afternoon to each one of you. It is nice to see quite a few familiar faces here. I don't know whether the reciprocal is true or not. Tulsi bhai, what I have seen is that he is a super sales person with conviction and passion. Why I say this, it's my own experience. I worked in the sector for about three decades, some of you know that, then I though tenough is enough in the sector, so you cannot keep on looking at PPAs backing down, utility will pay or not and wishing just that whether it will come or not and all that. I said, go in the sector where you don't need to visit any of these mantralays. So I took a sabbatical and went, not a sabbatical, took exit from the sector and went into an EPC sector. Those two years where I was there, whenever we visited some Shakti Bhavan or Sashtri Bhavan or CEA or the CERC, very happy. But we always think of something but God thinks of something else, so I end up meeting Tulsi bhai. He made the same presentation to me, so we met in Delhi and then he made the similar presentation and followed it up with five-year strategy of Suzlon. So I was sold. I said I am game for it, that is why I am here today. Fine, I am still evaluating that is it right to get back and see these faces again back and trying to answer the questions, felt that whether PPA will be there or not, transmission distribution will be there or not, G-Wave will be there or not on this, back to the same set of questions which I happily forgot in the last two years.



So what I am going to cover is our focus on high volume and profitable markets and what Tulsi bhai said is wind solar hybrid being at grid scale on this. If you look here, the FY16 has been a great year for renewable sector in India and especially for the wind sector. We as a country added 3.4 GW, which is the highest in the last two decades on this. If we step back and see in the last five years history on this, FY12 we were +3 GW of capacity addition on this, but come FY13 we dropped it down almost to 1.7 GW, down by about 50%. We continued around 2 GW for the next two financial years, but then come FY16, so we will leap frogged, we moved from 2.3 GW to 3.4 GW, a growth of 48%, unprecedented growth. That is how the sector is moving.

On this canvas, if we see what happened to Suzlon on this? Somehow we followed the same graph for a different reason. So we were at 1.1 GW in FY12, came down to about 400 MW, 0.4 GW for next three years. But come FY16, then we leapfrogged, we moved from 442 MW to 900 MW, unprecedented 104% growth rate. Industry grew at 48%, competition grew at 35%, we grew at 104%. Come FY17, our own estimate is that, a conservative estimate is that, as a country we will add about 4.3 GW which is given on a larger base of last year it's a 26% jump, substantial jump. And we firmly believe that we will grow faster than the sector again this year.

If you see the history of Suzlon, which I have been observing for quite some time even from outside, I was one of the first customers for Suzlon as an utility, is that Suzlon creates the new markets, it unlocks the potential on this. For example, last year Suzlon was a pioneer to go and create a capacity in Telangana, the state which is just formed, and it also created a capacity in Kerala. With either technology, or the wind sites, it unlocks the potential and actually it captures the potential. So that is how the growth of Suzlon is, Suzlon is not killing competition; Suzlon is creating and unlocking new potential and then going other places. So therefore, gentlemen, what we are saying is that we are on a very high trajectory of growth.

If there is a growth, who are these players? If you look at next five years when we looked at possibilities of this, we believe that 75% of capacity addition would come from IPP utilities which was about 73.9% in the current FY16. PSUs which were about 2% last year, we expect will go to about 10% because the commitment of the government of getting renewable in a big way on this. And others which is basically the captive, retail and everybody else would be around 15%, is what we expect the next five years for the players are going to be. But this 75% chunk, who are they, because they are the people who are going to drive the sector. They are foreign utilities like CLP, Sembcorp and ENEL, we have Indian utilities like Tata Power, Torrent or Reliance Power. Then you have this India Renewable Focused IPPs or PE Backed and some of them are listed, like so there is Renew, OSTRO, Continuum or Orange, Mytrah and everyone on this. Then you have this Diversified Corporate whether it is ILFS or HERO. But these set of people, why we say that they are important is that they actually added 80% of the total capacity addition in the last five years, that is why we believe that they will continue to play a major role moving ahead on this. Advantage of Suzlon is that we worked with each



one of them. Today, we operate assets for most of them on this, we have a very strong relationship with a set of people who are actually 80% of the market today.

Well, if you look at the wind potential in this country, there are only eight states which actually contribute for wind. Four of them in South - AP, Telangana, Karnataka and Tamil Nadu; three in West - MP, Maharashtra and Gujarat and one in north – Rajasthan. From the electrical reasons point of view on this, these eight states are called the windy states. But if you look at the slide here, in the last five years when analysed on this, what is happening is musical chair. The top three states every year contribute to about 60% to 80% of the capacity. Even if you look at this year, the FY16; MP, Rajasthan and AP together added 70%, MP with about 1298 megawatt, Rajasthan had around 680 megawatt and AP about 440 megawatts. But there is a musical chair, the top three will keep changing every year. MP was at top last year, but I don't think it will be in the top three this year on this. The reason is that the policies keep changing, there is uncertainty with regard to power evacuation facility, and have various other factors on this.

How do you survive, how do you grow in this musical chair scenario? How do you ensure that in this musical chair scenario you always have a chair? The only way to do is that you have a pan-India presence; you are present in all eight states because the top three will always come from this eight. I think that is the advantage of Suzlon. Being a pan-India present, having presence in all eight states. It is not just a presence, if you look at last year capacity additions, we added capacity in every single state of this eight, plus Kerala, so nine states were there. So therefore we are doing business in these states. Secondly, which my colleague Vinod is going to cover in his presentation is that the manufacturing facilities, we have in every single windy state on this. So that is what we call it as a pan-India presence. Therefore even in the musical chair scenario, we will be able to capture the things. Moving ahead, in the next five years, we expect these states will play important role which is AP, Gujarat, Karnataka, Tamil Nadu and Rajasthan. And AP, as you all know that we have a great relationship, we have a first mover advantage there, we have the agreement for 4,000 megawatts to be developed there. So therefore that is an important state for us.

Wind potential, because there is huge amount of discussion, debate about wind is over, its overall good sites are over. The National Institute of Wind Energy's Research study shows that anything above 100 meter height there is 302 GW of potential available in India and installed capacity is 27 GW, i.e. 9%. 91% is still untapped. What it shows is that there is tremendous potential but this potential is at higher height, so therefore you need technology, you need to keep increasing your hub height, that is what we have been doing which will cover subsequently on this. At the same time, as Tulsi Bhai said that we have country target of 60 GW by 2022 and there is a target breakup for this 60 GW with different states. And if we look at the 60 GW breakup here, these are the states on this, and looking at the target and looking at what they have achieved till now and you see there, if you just work out simple mathematics, AP has highest potential for the next five years, it is around 6.3 GW and Gujarat topping next at 4.8 GW and Rajasthan is number three on this. So that is the potential what is available,



there is no issue of potential, you can grab the potential provided you have the required technology in terms of hub height, everything, that is what we will see as we move ahead how technology is helping us.

Unlike other renewable sectors, the technology in wind sector has been leapfrogging. I have been on the other side of the table, as an observer, and when we bought the first machine in Reliance when we started buying subsequent machines, there is a huge difference in terms of capacity, huge difference in terms of PLFs and various aspects of this. If you see early 2000, we only had about 350 kilowatt machines and with hub height of about 50 meters. From there we are now at 2,100 kilowatts or 2.1 megawatt machines and with hub height going as high as 120 meters, and this is today. And obviously I am sure that tomorrow you will see completely different on this. What this technology shift is doing, is increasing the PLF but with marginal increase in the capital cost and reduction in operating cost. Obviously this leads to a total competitiveness, cost competitiveness which is helping in terms of some of questions which have been raised again and again is that the competitive bidding will come in, this will happen, what happens to the tariff etc. This technology shift will help in meeting the demand of reducing the tariffs in terms of that. And second is, it is also going to help in converting those wind sites which we thought are not viable into a viable thing on this, which is you are seeing significantly happening now.

After the Paris Convention and whatever commitments we made publicly, you are actually seeing the action underground in terms of government is concerned. For the first time we are seeing that the government walking the talk. And if you look at various policies what they have done and if you look at the National Tariff Policy which talks many things about renewable compared to number of previous national tariff policies, it talks about anyone wants to setup a coal based or lignite based power plant, they would be obligated to either setup the certain part of that capacity as renewable capacity or procure and bundle and sell on this. This has to come up on a specified date so this is going to come which is called the renewable generation obligations on this. So clearly moving in the direction that if you want to setup a conventional based power plant, fossil fuel based power plant then you also need to bundle with the renewable energy.

RPO, we all know that where is the major issue of RPO not being met and there is no compulsion or stress to meet that obligation, which is now changing and what now you are seeing more and more stress towards RPO obligations. You are seeing some areas, Supreme Court verdict saying that even the customers that were not with the DISCOMS how to meet the same RPO obligation, so therefore whether you are a CPP or you are an open access customer, you also need to meet RPO. Various things are happening and the Government of India is expected to come out with RPO obligation trajectory for each of the states shortly. So therefore there is going to be more and more pressure in terms of RPO, even we are hearing the things like three years RPO obligation meeting could become a precondition for meeting the funding under UDAY scheme. So there are various ways the Government of India is thinking of making RPO obligation mandatory.



What does it do? The moment RPO obligation become mandatory, the states which do not have wind resources either they buy RECs or they setup the wind capacity in windy states and take the power. So that is what is going to happen, you are going to have the demand coming from non-wind states. If that demand comes, obviously we are now talking about interstate transmission, we are talking about the renewable energy becoming the main energy than being the fringe player till now on this. So that is the reason again the National Tariff Policy talks about the zero transmission charges and losses. So that is one good thing which its talking about.

So all these steps what the government is taking would move towards the more and more renewable energy capacity being created. Obviously to support this, the transmission which is one of the major issues, we are seeing green corridors, we are also talking about scheduling and forecasting. If you really want to become the main energy player, not a fringe player, then obviously you need to get into scheduling and forecasting which we are seeing today starting with many states. Similarly, a number of draft policies which are in the offering now with some of them have come out for the comments, some of them are likely to come out shortly on this. One is hybrid policy which we will talk later on this, repowering of the existing power stations, even the existing wind turbines. If you see the National Tariff Policy, it clubs the repowering, exactly same as conventional, modernization of existing fossil fuel based power stations, means similar importance to like what we give for conventional repowering here. And it talks about repowering even before the life or the PPA life is got completed on this. Offshore wind policy we already have and we hear that there is a draft Renewable Energy Act coming up.

It is a major debate, wind versus solar. So therefore I think in our opinion it is a myth, wind versus solar. If you look here, when you talk about 175 GW of renewable energy capacity by 2022, which Tulsi bhai was talking about, 60 GW is wind and 60 GW is solar, utility scale and 40 GW of solar as rooftop on this. So we are talking about equal capacity coming up, base could be different, but we are talking about creating identical types of capacity for both wind and solar. Our opinion is, if you are making stuff wind versus solar, you make wind and solar and marry them together, you will have much better life thereafter which is what we will see in the hybrid policy.

Having said that, just to address the limited aspect of wind versus solar, though we don't believe in wind versus solar, we think it is wind and solar and we want them to get married, if you look at the peak generation wise, 50% is wind and 25% is solar. And if you look at the Make in India concept of Government of India, and especially the PM's pet subject on this, that is with wind, solar - everything is import, very few is what is indigenous on this. On Water front, which is going to be critical, fine, even solar needs less water compared to Conventional but relative to wind you need more water in term of solar, especially solar thermal if you are going, obviously huge amount of water requirement is there. Technology wise, you are seeing wind technology mature technology, it is only growing further in the technology. In solar we



are still seeing the technology remaining the same, only cost of manufacturing is coming down but technology is still nascent.

Why do we think Suzlon can be a major player going ahead in the next five years? If you see the pan-India presence, we talked about that why it is important, the musical chair scenario, we should be there in all eight states. Then therefore you can take the opportunity of whichever state is coming on this. And strong customer relationship, which we talked about previously, 80% of the capacity addition created by these customers and we have a relationship with each one of them, we are operating their assets today. 20 years track record in this country, and we have been the pioneers in wind sector in this country. Rakesh is going to tell you the best in class service. And many people don't realize, including many of my colleagues that we are the second largest utility in this country after NTPC. We operate 15,000 MW of capacity on this, 10,000 MW in India and 5,000 MW outside. Even if you look in India, we will be third largest because Tata Power after 100 years achieved 10,000 MW capacity recently and we operate 10,000 MW assets today in India, and globally 15,000 MW. The only other Indian company which operates more than 15,000 MW is NTPC. Technology leadership, which my colleague Duncan is going to speak about, and that has been the lifeline for us. And innovative turnkey solutions, I think that is the DNA of Suzlon has been.

If all this is the case then where the order book for Suzlon? And what is the quality of order book? Both are equally important here. This slide has three, four messages, actually three messages which I am going to explain in detail. In March 2015, or the financial year FY15 we had 1,123 MW of orders but predominantly these orders were old, earlier technology on this which had Rs.6.13 crores as an average price of realization on per MW basis. Come FY16, two things have happened, one is we booked 1251 and delivered 1131 which is very important for any wind company that its bill to book ratio, that is how much we booked the orders versus how much we delivered, is greater than 1. If your booked orders are more than you delivered, means you are actually accumulating the order backlog which is good for you, that means we are getting more and more orders and you have the capability to deliver on this. So the 1251 we got and 1131 is what we delivered, so that is one good message that our bill to book ratio is more than 1, better than one. Second is that this orders what we got, 70% is for the new machines which is 97-120 and S111 which actually give us better price, resulting in an increase in average price to Rs.6.43 crores per MW. But the cost difference between the two is not the same, so therefore what is happening with these new machines is that while we pass on the benefit to the customer in terms of the reduction in prices or improving PLF so their tariffs are coming down, we also improve our returns. And therefore we ended up with 1243 megawatts as opening order book on 1st April, 2016 which has a third message which houses the 89% is IPP and 9% is PSU, plus 1% from others. If there is a concern on AD, we have less than 1% dependent on AD.

Now coming to solar business. There are many questions that why is Suzlon getting into solar, it is a strong wind player, their DNA is wind and India you talk about wind and you get one photograph flashing that is Mr. Tulsi Tanti, why are you getting into solar, they have huge



amount of concerns on this. Because we believe that it is not wind versus solar but it is wind plus solar, therefore we thought there is strong opportunity in solar, we will just be a spectator there or we are going to play a role. So our wish was to play a role, everybody can have a wish but can the wish be fulfilled.

When you actually analyze there, the strength what we have in terms of project development, in terms of the construction, EPC or the O&M, the wind is much, much more complex than the solar sector, in all three areas. So we have strengths in creating much more complex sector called wind in terms of project development, EPC and O&M, so therefore it should be much easier for us to do similar things in Solar. So why not leverage our strengths there, it needs much lesser strength in fact in solar, so therefore a huge opportunity for us to move ahead there. Similarly, in addition to that, we understand the regulatory framework, we know each and every customer, because most customers are same for solar and wind and we also understand the financing set of issues.

So what is our business model? We want to be pure turnkey solution provider, pure turnkey solution provider like exactly what we do in wind is what is going to be our solar thing. But how do you get there? There are two ways, the step one is that for us to establish ourselves as a turnkey solution provider we went ahead and bid on our own, won certain projects, we want to execute those projects, in the process establish ourselves as turnkey solution provider, divest, and therefore you are not having any stakes there. In fact, my next slide I will explain to you how are we achieving this target. And thereafter, once we establish then parallelly we try for third party orders. So you become equally strong turnkey solution provider like wind and similarly in solar. You will see us in a significant way in solar in near future on this.

What is our business strategy? We want to have minimal CAPEX, capital investment on this, we don't want to have any manufacturing capacity, we will procure and supply and we do even outsourcing model and the lower working capital. Plus, the low fixed cost because we are going to take advantage of the existing set of people who are experts in both EPC and O&M. What will it lead to? It will lead to higher margins for us both in turnkey as well as in O&M of solar. That is the reason we are in solar with a clear target of what we want to do moving ahead.

To achieve this target, we won 280 MW of bids at a weighted average tariff of Rs.5.38 which is very important today because when the tariffs are low where are those companies today. So they are non-existent on the radar today on this. Out of this 280 MW, 100 MW we already divested. How we did this? Like I said, if you look at it, which is what we have seen that we have done with CLP. The SE Solar Limited which is the 100 MW SPV for Veltoor Project in Telangana. The entire debt is going to be raised with CLP and its balance sheet, so we have no obligation to raise a debt. Of the equity, 51% would remain with us under the PPA conditions till one year of COD and 49% with CLP. So CLP brings 49% money. Including this, 51% financing is what we get from our customers in terms of an advance. Effectively, we are not putting any money into the project, then what are we getting? If you see that, the SPV is giving



the turnkey EPC orders as well as O&M order on this. So therefore without any capital we are getting order to execute and operate and maintain. So the moment we do this 280 MW in this manner, we are there, we are there as a 280 MW player, we established ourselves so therefore everybody can believe us we are a strong payer. Already we have the canvas of wind, so therefore we can grow in a big way on this. That is a model why we went and bid for these projects.

This is my last slide, which is what we are talking about instead of wind versus solar we want them to get married. If you see today, many of the states, the constraint for capacity addition in terms of renewable capacity is the power evacuation. You use that word always PE approval, I have a PE approval so therefore... I remember once up on a time when the private sector started in India there was an MoU concept on this so everybody used to flash the MoU saying that I have an MoU to develop a project. Like that today the PE approval is so important. We are not able to add capacity because of the power evacuation, which is the constraint. So we are looking at can we unlock that constraint and create additional potential on this.

What on the right hand side this graph shows is that, if you are draw at 24 hour basis, hour to hour the wind generation capacity, so you have a curve, the bottom curve which is coming on this. On this, you draw a solar curve for 24 hours you get a different graph. If you see, when the wind is dipping the solar is picking. So therefore if you have a common transmission corridor where the wind is flowing on this, there is an x capacity of solar you can install without augmenting any PE capacity, it would not be 1:1, it will be 2:1, with 100 megawatt of wind you can do a 50 megawatt of solar. So what is it doing for us? Today we have 9,000 megawatts of wind capacity we are operating in this country, we have the PE capacity for this 9,000 megawatts. If you go with the ratio 2:1, it is unlocking a potential for 4,000 megawatts PE capacity without any additional grid for us to create the solar capacity. That is what the hybrid does, one is its unlocking the potential, giving us the market. The second one what it's doing is its improving the grid's stability. Any transmission line when it runs at lower load, we always hear about overload in this country, this line getting over loaded and tripping then you reduce the load. But even if you have a lower load the grid stability always comes into picture, it's a problem on this. In this process what we are doing is we are improving the grid utilization, so like if you do an individual solar or wind you are using 20% capacity, by putting on hybrid with the same line you are using 40% capacity. And if you do an incremental storage capacity, just incremental storage capacity which is integrated one, you have got 50% - 60% on this. That is where the link when Tulsi bhai talked about renewable sector is moving towards the conventional, we will give stable power like what the conventional power gives, it is not intermittent power. That is what the wind and hybrid does, to unlock the potential it improves the grid stability and it reduces the cost because you are not creating additional PE capacity, the land required is much reduced on this, so overall cost of megawatt is going to come down. So it is advantage, win-win for everybody on this. So therefore we firmly believe that moving ahead, hybrid is the solution. So therefore if hybrid is the solution, wind and solar would get married, don't be wind versus solar.



Gentlemen, that is what I wanted to say. Now Rakesh will take you through the international business, the services business as well as the SE Forge. Thank you.

Rakesh Sarin:Ladies, gents, very distinguished guests. I am truly excited to be here for two reasons, reason
number one, You. It is a house full and one can see your interest in the sector and also I am
really grateful for the reason that you have come here that is Suzlon. The second reason is my
personal reason, I used to be the global president of a very-very successful energy company, I
was president for the power plant, having successfully delivered into 270 countries these
power plants. And my biggest concern when thinking forward used to be renewables. Now
today, six months later, when I am standing here in front of you, that concern is no more a
concern because that concern is an opportunity for me as Rakesh.

I am very excited for the winds of change which are happening in this world and you are all knowledgeable people, you are all learned people, you understand that what is going on around us. If I take you in a memory lane, how many of you remember the small clinker or the dust of coal which would get into our eyes when we peep out of the window of our compartment. I handled Indian Railways for long time and I remember in 80s Indian Railways had, and why I am giving this example is that it is a capital intensive industry utility, there were 9,000 steam locomotive, after 10 years, zero, in the museum. Two years back the world delivered more renewable energy plants as compared to the fossil fuel plants. So the wind of change is there and we are very excited to be part of that and we are in a very-very opportune moment and what I am going to talk to you right now is, while my colleagues spoke to you about how well we are placed in the Indian sector, at the same time I am going to talk to you about how well also take you through with the services, what Suzlon stands for and also for our group company called SE Forge, I will try to give you little view of SE Forge which I call it as jewel in the crown and I will give you the reason why I am saying that.

Suzlon has 6 gigawatts of wind farms operating around the world. We are positioned in all the six continents and what should I say, the way this business was started by Mr. Tanti, today when I look at the locations where these power plants are operating, these locations are the locations. So these power plants which are wind farms which are operating around the world in the geographies are the geographies which are progressing in a rapid pace with regard to renewable energy. So we are there, for last few years we have been little silent but we are still there with a very-very strong service support into those countries. And if you look at the capacity which is operating into these continents, North America we have close to 3 gigawatts of capacity. If you look at South America, primarily in Brazil we have over 800, close to 900 megawatt operating there. South Africa, we have very-very successful plant and that is the best plant of that country, it is operating. Europe, 0.5 gigawatt. Asia (ex India), its predominantly China where we have close to 900+ megawatts and then we are also present in Australia and Australia is known for their very-very strong support in COP 21 and their heart with the future of green energy. So we are very strongly positioned in this market. And what we see that this base what we have, these very well performing plants what we have into these geographies



give us a readymade base to catapult and to leap frog into these geographies when we want to. And that when we want to is now and we are absolutely getting ready to march on into these geographies.

If I move to the next slide, what you see here is our strength and strategy. Let me say that we have one strategy which is a global strategy, but what we are doing is that we are adapting that one global strategy into different country approaches. So how we approach Australia versus how we approach America versus how we approach Brazil, the approach may be different but our strategy is rock solid. And what is our strategy, we are in fact positioning our strategy in a very smart way. We are looking at risk mitigated, equipment supply and supervision. So most of the places we are not looking at taking risk on the EPC, we are looking at supplies, installation supervision. Because we are reentering into these markets after couple of years, so that is how we are looking at entering into these geographies.

Cost effective manufacturing from India, because India we have a great base over here, lot of activities are going on because India is a bubbling market and you have seen the numbers already. So we have that mass available and we are looking at piggy backing on this capacity and the production what is happening out of India. So we are getting the scale of economy getting into these new geographies.

Third, lean management and minimal fixed cost. When we go to the other countries, and in my past experience what I have seen, many of the people shoot themselves in their own foot by expensive infrastructure and expensive manning capacity what they have there. So here, being an Indian multinational we are very frugal, we understand the value of money and we are penetrating these geographies in a very smart and clever manner. We are keeping the brain of the company and the strategy out here from Pune and then moving out into these geographies in a very smart and clever fashion.

Then we are talking of market with established service base and that is what I was saying. So we are not right now aiming at getting into geographies which is a virgin territory for us, we are getting into our home ground where we already have a service base, we have our teams there and most importantly we have established relationships over there. Now here if I may say one thing, if you want to get out of this slide is that customers love us. The reason they love us is they have seen companies going up and down, they also saw Suzlon moving up like a jet and also seeing Suzlon in tough times and they were scared, what will happen to their wind farm. I met lot of customers in these few months and one thing which came out common from these customers was, the reason we love Suzlon is that Suzlon has never shown their back to us. While we were skeptical but Suzlon was not, Suzlon was committed, they completed the projects under the toughest of situations and they maintained our wind farm in the best possible manner in the tough times. And the wind farms have been the best running wind farms in the country. For example, in Brazil out of that 25 top performing wind farms, 15 of those 25 farms are Suzlon plants and therefore this strong relationship what we have with these customers is credibility what we have generated with these customers, that gives us huge



confidence that if you want to get in there we will be very flexible. And lot of our customers are asking us that when are you getting back.

Well, if I move on to the next slide, we don't want to be very greedy. We understand sustainability and we are doing this international business now in a very responsible manner. So what we are doing is that we have prioritized markets and we are building huge amount of discipline and focus in how we want to progress in these markets. For example, our first phase or wave, if you may call, is America. Why America? Because that is where the highest potential is. US has announced the PTC, Production Tax Credit. And there production tax credit on renewables, and this is a firm policy for five years, and there the credit what they get is almost equivalent to the PPA value what the utilities and the generator gets at this moment of time, the market value. And we are very actively engaging into that market and that today if you ask me, I would say America is our first priority. At the same time, we have projects right now running in Europe, so we have a good pipeline of projects, we have good visibility and that is how in the first phase we are looking at America and Europe. Followed by Latin America again, as I mentioned we have a huge relationship base there, we are getting ready for Latin America, we are getting ready for Asia Pacific. For instance, Australia is a great place where we see a pipeline of five gigawatts in next four to five years and then not to forget the emerging markets like Middle East, Asia and our neighboring countries, near about the far east countries as well. So that is what we are looking at global strategy and country approach with the same global strategy.

Of course there is a huge market, if you look at this graph there is 330 gigawatts of market, including China and China is a giant in the wind industry in this sector. We are also present in China, as you saw that we had over 900 megawatts there and we have a joint venture in China. And there again in China we are looking at that how do we re-strategize to get into that country.

Well, if I leave you with one thought again, that one thought is that the reason we are very confident to get success in these countries is because our rock solid credibility what we could establish with our services business and a low cost entry.

Then let me come to the backbone of any business, and that is the service business. Very interesting to see here is the last two decades what Suzlon has created, if you look at the ice berg, the mass is Rs 90,000 crores worth of capital equipment which is ageing, which is rotating, that is the mass which is there on the ground. And this mass of equipment is generating energy with zero fuel cost. So what is required in this mass is a good service and then the fuel cost which in a fossil fuel plant contributes something like 80% - 85%, and then O&M charges and this and that, out here the fuel is zero so 85% is zero, it is only the O&M and operation and maintenance services which is required. Now as my colleague Mr. Chalasani mentioned, we are the second largest utility operation maintenance company in the country, OMS of 15 gigawatts. Our track record for renewal is 100%. Now this is very unique and I was a bit confused that why is it that we are having 100% renewal rate. And the reasons



are very obvious and I will take you through in the next slide, that why is it that we are getting 100% renewal. It is very unique in this sense, in my last three decades of experience in energy sector I have never seen any company where the renewal rate for the services in a very-very competitive market is what we have in Suzlon. And then in five years period what we are looking at, we are looking at a CAGR of almost 20%. We are looking at creating the same value in terms of growth what we did in last 20 years. So revenue growth of more than double and we have a good margin level already, our contribution margin level is of 55% and we are looking at enhancing that by 1% every year.

Now it is very important to understand that the way we want to enhance this margin is not just by increasing the price, the way we want to enhance this margin is by providing value add products to the customer on a win-win basis so that they are the winners and we also win and I will explain that to you in the subsequent slide.

So these are our let's say five focus areas in the operation maintenance services. The first is that if I look at the back view mirror, the whole industry is working on the machine availability. We want to be the market shapers and changers and what we are now focusing is that how do we get to the bottom-line, because today the shape of the customer is also changing, the needs of the customers are changing. And what a customer is wanting from us is energy and not just the machine availability. So we are looking at ways and means, how do we help the customers to improve his bottom-line on a win-win basis and we with the help of the technology we are looking at generating value add products, for example energy boost where the customer can have ROI of 1, 1.5, 2 years time where whatever he invests the money is back in his pockets in 1.5 years time and then he is winning, winning and winning. In the process Suzlon also makes money, that is the win-win what I am talking about for our customers.

External stakeholder relationship, you heard that how we are taking care of the customers because our customers are coming from retail, they are coming from IPP, they are coming from state bodies. So we are giving a full wrap service so that once they have invested money on Suzlon wind farm they don't have to run helter skelter, we provide a single window opportunity or single window service to all our customers. Now this single window service to the customer is so comprehensive and that is the answer to my question when I was asking myself that how come Suzlon has 100% renewal rate. The answer lies there that we gave a full comprehensive service. And I had read somewhere, a vision statement to be the most value add business partner of all our customers. And I can see that in Suzlon that Suzlon is the most value add business partner of all our customers, because once the customer invests in our technology and our turbines, they don't have to worry much, Suzlon takes care of it for the lifecycle of 20 year plus.

Then we talk of way the world is going. Suzlon has state of the art SCADA system. All our turbines around the world are connected and we can see every single moment what is going on in these turbines, sitting there in the control center of Pune. But the way world is going, the



way technology is going, we are on a very-very heavy and a fast track path of digitization. And we want to build transparency with our customers so that the customer can see on his tablet or mobile that how his wind farm is performing or how his wind turbine is performing, how is it performing financially, energy wise, whichever way wise. And building this transparency with the customer also puts a very positive stress on to us because we are not hiding anything from the customers. So it is both way traffic and that is where we are looking at further enhancing our performance for the customer. And then we have lot of products in the pipeline, we have lot of products on a win-win basis where if we sell it to the customer, the customer have an ROI of 1 year, 1.5 years, 2 years, at the end of the day over a 10 year life or 15 year life of these turbines which are already operating, customer become a winner. And there are many products like that. I give you one example, LBRT, some of you would have heard but I will not get into the details, but this is a huge opportunity, it helps the nation to build national security on one side, it helps our customers, meaning the generating companies to support reliability of the grid and it helps us to make more revenue and margin. And this opportunity is thousands of crores worth of money value. But with our technology we are putting us at a very high pedestal in terms of providing the retrofit products for the lifecycle support of the customer. So once our technology delivers a wind turbine, it is not there for the life to operate in the same performance level, but what I am trying to say is that we continuously work to provide value add products for our customers for the life cycle.

Now I come to SE Forge, which I mentioned jewel in the crown and I will tell you why I am saying so. The vision of Mr. Tanti has been to integrate and when we integrate, at times the integration synergies that when the whole is much, much greater than some of the parts. So in Suzlon we have lot of integration there and SE Forge was conceived as one unit where we can manufacture some of the key components of a wind turbine through a subsidiary. That is how SE Forge was conceived. But at the same time SE Forge is also available for the competition, for the wind industry in India and outside. Now when you see these numbers out here, 42,000 and 120,000 and 55,000, now these numbers if it is a small auto component, it is nothing. But friends, these are huge big elements, here we are talking of heavy rings, flanges of diameter of five meters, 18 feet, these are real humongous, big components. We are talking of 10, 15, 20, 25 tons weight of castings. And these are world class products and I would say that I have witnessed many of industries in the manufacturing sector from my previous experience globally, world over and I would say that this SE Forge unit of Suzlon, I would rate, and it is not my saying but I heard it from other customers of SE Forge, SE Forge would be amongst top six or seven or eight companies of the world in terms of the kind of machines which are there, in terms of sophistication, in terms of machining capability, in terms of work force. The beauty of SE Forge is it is a most energy efficient company of the world when we do the benchmarking. And here if you see, we have all recognized important good brands out there on the chart over here. And the proof of pudding is in eating it, and recently few months back we received the best highest vendor award from none other than GE. And it is not only in the foundry or forging segment, it is all over, that means including instrumentation, including medical side, including whatever side you take amongst all kind of vendors which are supplying to a mammoth like GE, SE Forge has been adjudged as the best company for them.



Now this shows the customer segmentation of SE Forge. If you look at our customer base, while 40% is Suzlon but 60% of the production of SE Forge goes into non-Suzlon segment. We are now focusing on that how do we enhance the sustainability of the company that it should not depend on one sector. So if you see, there is something like 6% is supplied to non-wind sector, but we are focusing on that how do we expand this, how do we expand 6% to 10% and 15% and 20% in to this. For example, defense is one sector we have entered and we are looking like this into many more segments, if you see in this slide transportation, power, oil and gas. And you would have heard space odysseys and India taking part in that and you would have heard about Mangalyan last year.

Now, we have a relationship with Mangalyaan. Because Mangalyaan had components supplied by SE Forge. Mangalyan is a success story of India. We feel very proud of being a part of that yan. Why SE Forge we are betting heavily is because the Wind sector is growing not only in India but outside India and it is in SEZ. We are growing in a non-Wind sector and we have also seen that the anti-dumping duty imposition just in December on castings where the Chinese were getting big inroad but that thanks to government that we are in a good shape now. This unit can operate with a positive EBITDA at 20% capacity. Right now, at this stage we are at the level of about 40+% capacity utilization in the last year and we are looking at a very aggressive growth and the balance 60% we are looking at filling it up in the next two-tothree years. There again that means the CAPEX requirement for this growth would not be predominant; it will be only minor tweaking what would be needed. So we see a good aggressive value add growth from there.

So Friends, with this I would say that Suzlon is turning around rapidly. Timing is absolutely right. We are all very excited. The wind and sun are in our direction thankfully. We are very-very confident of the delivery for all the good reasons I mentioned and most importantly being the credibility what we command in the eyes of the customer and of course one of very important component of that is that we have world-class technology and we are not satisfied, we are even going forward on top of that. I have a person here whom I really respect for his huge acumen, creativity and power to get the ideas put together with the teams and come up with a very-very concrete and successful product. That gentleman out here is Duncan, my colleague. Duncan, floor is yours.

 Duncan Koerbel:
 Thank you very much, Rakesh. Good Afternoon. Namaste. My name is Duncan Koerbel. I am

 the company's Chief Technology Officer. I joined Suzlon in 2008. It is my pleasure to spend a

 few minutes with you and show you where we are headed technology wise.

In preparation for the meeting today, we wanted to do a quick check on our fleet and I was suspicious we were close, but amazingly we are going to talk mostly about our 2.1 MW fleet, but just last week that fleet of over 3,500 turbines accumulated its 100 million operating hour. So we have been working on the 2.1 MW platform as a remark I am going to show you and going to tell you how we are going to continue to grow that platform and be the baseline for our future projects. We are pleased about that. I want to share with you that we had a great



event down in Pune, we call Tech 2020 in January and our theme there, we had all our customers in, was to tell them our vision which we are going to share with you again, i.e. taller towers, bigger rotors, and our model there was hard work and innovation, because that is what this is about, there is no real magic in this company, it is just hard work and innovation. When we talk about how long we have been here and how long we work. I say I have been here 8years. Tulsi say, I have been here 20-years. I say, Tulsi, you have worked twice as hard as anybody else. He has actually worked for the company for 40-years already. We have 400 engineers that are around the world working on Suzlon technology. I think what is unique about our company is when Tulsi built the company, we did not try and put everything in India because that is where our headquarters was. We got the best people in the right spot. So up in Northern Europe, we got great engineering and the turbine systems in Hamburg and Rostock, we got one of the best aerodynamics in people in blade technology in Netherlands and then we do the heavy lifting, really hard work down here in Pune, I am going to talk about the process on the next slide. So the guys who kind of do the systems and the architecture and the blueprint in Northern Europe, we do the detail design and the validation down here in India, we have a blade test center up in Baroda, where I will be tomorrow, about which I shall share with in a moment and then we have couple of other places in Denmark - one for Systems Technology and other for SCADA which Rakesh talked about and then my last slide I will talk about our brand new blade science center or centre for innovation that we just opened in Vejle, Denmark and explain you why that happened. So with 400 employees in technology we might not be the biggest. But I can tell you we get more bang to the buck out of that than most anybody in the industry. I worked with some of the largest companies in the world and before I joined Suzlon, my career was in Aerospace. Bigger is not necessarily better. So we have 400 people we are very efficient, but also with our cost structure with a smaller team in Europe and a bigger team in India, we get the biggest buck.

We put all these together in a process, this might look boring to you, but this is we wanted to be boring. We want our turbines to be boring, we wanted to be bullet-proof, we want us to solve a lot of the problems before they ever get in the field. So after we develop the S88 we adapted 10-stage process, is the stage gate process at the end of each gate, we have a milestone that we have to pass to get approvals proceed, we follow this religiously. As I said earlier, the unique thing about our engineering team is the architecture of the Northern Europe where we do the feasibility study and then we get the project planning, we get the under stage Gate-III which says we got a business case, we achieved the levelized cost of energy improvements that we want, the commercial terms work we go to the board and we get authority to launch the systems, launch the turbines for markets around the world and go to market. After that we complete the systems engineering a preliminary sign and then we come down to India where we do the heavy lifting and do all the hard work, the detail design, is the right place to do because it is most cost-effective and of course our supply chain is here, the factories are here, we want the engineers who do the detail design to be closer to the product. After that we go into heavy systems validation, as we said, we want to solve all the problems in engineering, we do not want our customers to do that, and then of course we get the initial launch and series



launch. I tell people that you cover your own businesses, if you do not have a model like this you should get one. It works, call us, we will help you. We are really proud of it.

We will turn a little bit from people on the process now to the product, this is just our evolution, this has been 20-years of hard work and innovation. Actually our very first wind farm just celebrated 20-years of continuous operations as well. I am going to talk more about the 2.1 MW platform that are my right of the screen as I look at it where we currently have introduction today and then I am going to let you know of we are building brand new... you are going to be the first people to hear about that in this afternoon's presentation.

So everybody behind me has talked about the levelized cost of energy. That is really very simple equation on the math guy. We have got energy, we have got how much of cost to produce it. So our goal at Suzlon is to get more and more energy...just kind of the green color on the left hand side of the slide, for less and less cost. What is unique about Suzlon is we are one of the best in the industry, end-to-end focus on this because we do everything, we buy the land, we put foundation in, we have to manage logistics from the start to get the equipment to the site and then we build the turbine which is what a lot of the other wind companies do, then we service it for 20-years.

Our focus on increasing energy is two-fold on rotors and the turbines. From the rotors, advanced aerodynamics I will talk a little bit more that, but we are in a really young industry. I have been in aerospace for 25-years. Aerospace is an almost 100-years old, wind is only 20-years old as an industry. There are a lot of advancement to make and of course larger rotors, which we are going to tell you about, also help. From the turbine side, we have got very effective drivetrains and very importantly we need to continue to get the turbine higher and higher above the ground, which I will talk about.

For everything we do on the left hand side and the right hand side we focus on reducing cost and that starts with the materials that we use, advanced materials and then from the entire erection processes, as I mentioned foundations and logistics we are focused on that as Suzlon, end-to-end.

Volume obviously helped everything as well. So part of our job in technology is to figure out how we continue to grow the volume. JPC talked about the new combination of solar and wind, make our grid more compatible and more friendly to the utilities as they predict energy generation each day. So we work with solar and our wind forecast do better and continue to employ better digitization today to have better forecasting. On the right hand side, we need to continue to take India sites that have wind and make them more viable by making wind turbines that are easier to transport to the site, erect, and get those sites economically viable by getting the turbines high enough in the air that our clients get an appropriate return on investments.

So, how we have been doing this? We will continue to do this, it is based on 2.1 MW platform which I said completed over 100 million operating hours. S88 was the first turbine we



introduced with now over 5.5 GW, it is all around the world. We developed 9X Series and then we went to the S111, our newest turbine with 111 metre rotor diameter and then on top of that we have engineered and developed new towers that are taller that go from 90 metres up to 120 metres in height and we are going to go higher still.

This is a very simple slide try to reiterate what JPC said about, the amount of wind energy that we still have in India. Where you look at the map on the left hand side is the red is the highest wind that is kind of little difficult to get to. So next color green is where we want our wind turbine. Where it is blue, there is not lot of wind. What JPC tried to say, is if you go this far off the ground there is a certain amount of wind energy, and that is with the graph is on the right. You get higher above the ground, wind actually gets stronger or to look at the opposite way as you get close to the ground earth slows down the wind. So by just going slightly higher, you can see, you get above the trees, you get a little bit more wind, you get slightly higher above the trees, you are going to get even more wind. So if you look at the map of India at 100 metres and above there is 300 GW of wind energy in this country. So our job in technology is to go, get that. The way we do that is to make higher tower. Of course, this has to be economical and has to be something we can transport to the site. This is Suzlon 120 metres hybrid lattice tower, a very unique combination of lattice base, very wide support system, uses actually 30% less concrete than classical tubular tower and then half way up we engineered a massive transition piece, basically acts as a foundation for the classical tubular section, this is the 120-metres tall, we engineered this several years ago. We just received "Asia's Golden Peacock Award" for this, this month. We put the S97 on that, just recently we put the S111 on top of that and certified that in June and that is now certified for production, and next year there will be S111 on 90-metre and 120-metre lattice tower along with S97. So that is how we get higher and higher into the wind in India as we continue to unlock the market.

The newest turbine, which you are the first to hear about, is the Suzlon S128, it is going to be 128-metres in diameter, and it is going to have a global coverage. We have designed this for Class-II and Class-III wind sites. The Class-II has slightly stronger wind, Class-III has more moderate wind, more typical is the India environment. We are going to use the same rotor on both machines with help of Vinubhai, because of all the things we do in the company our most capital-intensive piece is of blade manufacturing. We have engineered the same blade aerodynamics into one blade that we can build for two different models, higher wind and the lower wind, in India we will use 2.6 MW generator and outside of India we expect to have higher wind speed, we will use 3.0 MW generator, we will use same rotor system to both turbines and we will get global coverage. We will also get a start in 120 metres and then go up to 140 metres. So that is how we continue to unlock the market and get an improvement in levelized cost of energy which is more production at larger rotors, better aerodynamics, higher height and all the time focusing on cost. As I said, I joined the company in 2008, this turbine will basically sell for the same price as we sold the S88 for eight years ago but will have almost twice as much energy. Quite honestly, we are not going to stop there. If you think about the slide, I showed you a few minutes ago, 20-years of unfathomable with a very small 350 kilowatt wind turbine there few who built a blade by itself that was 63 metres long. There is



really no reason to think that we are going to stop that innovation in Suzlon. This is just what is next and I am happy to show that with you today.

This is the best slide in the whole presentation. That is the first demonstrator test blade for S128. We built that last month. It is up in Baroda at our blade test facility, and tomorrow I get to go there and break it. We are going to go structurally test this to failure, because we want to understand how the blade works, its maximum efficiency. So on our first demonstration test, we will go load the blades with its normal loads it would see in its life time, then we have gone ahead and test it to failure. This blade will be our first blade to employ carbon fiber technology which is what is used heavily in aerospace. Together the whole rotor diameter now, this is almost the size of a cricket field. So carbon fiber is very important, much stronger, more expensive, so we use it judiciously. But it is much stronger and much stiffer, because these blades are massive. The test center where I am going tomorrow is 3 times the size of this room. So, we want to make sure the blade is strong enough and has to be stiff enough because in the worst conditions they can never strike the tower. What is also very important is because carbon fiber is so much stronger, we can make the blade much thinner upwards, and with that we can put much more efficient air flow, that are thinner which gives us much more lift, much less drag, because it is a tip of one of these turbines. The tip speeds up at 270 km/h. This will be the biggest turbine that Suzlon has ever built. As I said, we are going to start at 120-metres and go up to 140-metres.

One of the other things that we talk about in the levelized cost energy is the CAPEX, common tooling, common production lines we use for both models of 2.6 and 3.0 MW this is why we changed the structure inside the blade.

The tower concept which is very important because we look for sites in India and around the world, just like oil & gas and coal, things first start you go take the easiest site, you put a coal mine where it is easiest, your oil well where it is easiest. You put your wind site around the world where it is easiest to get to. Logistically, we have to be more clever, so that we have a great idea about this hybrid lattice tower, we can make this massive base, transport it quite effectively to the site, erected the lattice section and last thing we put on it is the steel tubular tower up above.

The other thing it is really important in Suzlon is our management of pitch control. Each one of these blades is adjustable. If you think about a blade, a rotor the size of a cricket field, the wind at the bottom and wind at the top is different, every revolution. We are continuing to optimize the pitch angle of the blade, each blade for every revolution, I think that might be boring, we run something for 100 million operating hours, every percentage you can get help. So our advancement in software is also one of the things we made great strides in the last year and we will continue to excel it in the next 5 or 6 years as we continue to pursue innovation.

Brings me to my last slide which is literally a gift for our company. With Tulsi's blessings, for the first time in my career, we have been able to establish a totally separate R&D center. Most of the time in my life we got the smart guys, work in R&D, but you got the daily business of a



new product development. This is always very intense and you tend to bring people back into the action to work on the crisis in hand. Tulsi has given us the funding and the commitment to invest in the standalone R&D center, we purposely to my very first slide we put Vejle, Denmark to shamelessly we want to steal the best talent. So the competition is up there, some of the tier-1 blades suppliers are up there, to be located this in Vejle we can get the smartest people in aerodynamics, in acoustics, structures and bring them to the center, hired a gentleman named Dr. Thomas Buhl who is one of the off the chart smart guy, he has been working for 15years in R&D at DTU, where we end up with about 15-engineers and scientists there. This is the first time we are going to be able to purposely focus on advancements. When I talked about that stage-gate process early on, one of my jobs is to continue to compress our development cycle time. So, our customers, our investors, everyone wants new turbines faster and more often. So we are currently at about 18-months by doing the work upfront in the R&D centre, we will be able to accelerate that even further, 18-months down to 16, 16 down to 14. So we are going to work on Aerodynamics and wind tunnel testing, blade and rotor optimization, smart pitch control which I talked about and part control optimization, is also one of the things we are going to work on at Suzlon because as you put wind turbines together, downstream effects in the wake that is something that we also need to make perfect each and every day, again over 100 million operating hours, every half a percent or every 10% counts for our customers. So we are going to optimize the whole part not just one wind turbine and you can see a relatively unique leading edge device here that would improve the lift in-board, we just structurally got to figure out how to do that cost effectively. Then we are going to have structural analysts up here as well in our new innovation center in Vejle. I appreciate your time very much.

I would like to now turn it over to Vinubhai and I will let him talk about supply chain. These guys made the promises, now we need to engineer it and build it. So I am going to engineer it and he is going to build it. right? Thank you.

Vinod R. Tanti: Good Afternoon, Friends, and my various colleagues, you have now understood what opportunity the Wind industry is having now and in the future. To tap such opportunity, one needs to have a very good internal operation mechanism. I will share with you some of the operations methods which we at Suzlon deploy to harvest such opportunity. We are having very good installed capacity which enables us to harvest the anticipated opportunities which are there and which are going to come in the coming time. We have fully integrated supply chain wherein we manufacture not only the various components of the wind turbine but also manufacture many of the critical sub-components also. Sub-components like generator, control panels, forging item, foundry item. This type of sub-component manufacturing has enabled us to understand the product in much depth and in turn helped us to produce much reliable product. Along with manufacturing component for the wind industry, for the sub-components we get opportunity to manufacture components for the various other industries. Wind industry is still a young industry which has got lot to learn from the other industries which are established



since centuries, which in turn helps us to be ahead of the curve in developing a reliable and a quality product for the Wind much faster.

Here you can see that we are having a manufacturing base almost on all the windy states of India. Having such geographically spreaded manufacturing unit is enabling us to deliver the equipment in a shortest time to the wind park, along with an additional benefit of logistic cost control. Such geographically spreaded manufacturing unit also helps us in managing the geographical uncertainties, the geographical uprest also managing the IR issues in much better way.

We have a world-class manufacturing unit ranging from fully automated robotic forging unit to highly manual work rotor blade manufacturing unit, which gives us an opportunity of having an experience of a very wide range of manufacturing technology, which has given us an opportunity to really develop any component in a shortest period

We have very good suppliers who always remain as a good partner with us in good and bad time. We have a wider spread of vendor having a very high technical and financial strength. Such vendor partner has helped us in bringing up a new product much faster, most economical and on top of that a most reliable product. We have established a very strong vendor development and vendor qualification methodology, clubbed with value engineering initiative is helping us to improve our product much faster both in terms of cost improvement and technology improvement. Our vendors are spreaded in a various geography helping us to remain competitive in whichever market we get a business, we get an opportunity, we are able to tap.

At the core of any operation is how well, how efficient you are able to manage the operation. Our manufacturing plant has been built on a lean principle. We have been fortunate enough in getting so many manufacturing awards for delivering and innovating manufacturing processes. This lean manufacturing has helped us in moving faster, reducing the time of delivering a product and commercializing any product. With our presence quite near to the wind sites, we have simplified our logistics methodology, we have developed a good contract manufacturing partner which in turn has helped us to remain quite asset-light. We have developed such methodology which has helped us in ramping up and ramping down depending upon what opportunities we are able to get it, in turn helping us to control our fixed cost. With all these things in place, we are able to deliver a very efficient product. We have a well experienced human resource with having a very high efficiency which in turn is helping us to tap up any opportunity which comes in the market much faster. Because of that we have remained a first mover in many areas. With the change of time, there are always allies in need of upgrading the knowledge and know-how. At Suzlon, we are lucky enough to have a world-class learning and development institute which is developing our human resource to have the latest know-how which is required for them to be efficient. With all these things in place, we deliver a most reliable product in the safest way. Thank you very much.

I will now request Kirti Vagadia to take it forward.



Kirti Vagadia:

Good Evening, each one of you. Thank you for taking time this evening to come here and listen entire management team of Suzlon. I am privileged to represent the finance function of this great organization for last two decades. Ten years pre-listing and ten-years after listing. Just wanted to highlight that we had, within last 20-years, 15-years of consistent growth where we have been growing in times not in percentage and last 5-years has been extremely challenging. During that period, we were managing less business and more liabilities. You can see that last financial year we have taken some strategic initiatives in the beginning of the year. Those initiatives helped us to turn around the organization and this turnaround is on a strong foundation...what I mean by strong foundation that in entire journey we maintain our ethical value with all the stakeholders. If you check with any of the stakeholders, probably you will find the same answer that despite the challenges Suzlon has been transparent in their communication and never tried to give haircut to any of the stakeholders. That has remained the foundation of our strong turnaround.

Our strong turnaround has been primarily on many-many factors. We are back to profitability in last financial year. If you see that what are the major steps we have taken, one is on debt reduction which you all are aware, we brought business efficiency on almost each and every activity what we are undertaking, volume ramp up which is the key of our profitability, in volume also we have focused strongly on our execution and risk management. In Technology, Duncan has already explained that our key focus has always remained reducing the LCOE.

On debt, you can see that we have halved our debt in last financial year, from roughly about Rs.18,000 crores debt we have brought down to Rs.11,000 crores, of which Rs.1700 crores is FCCB, so if you take out the FCCB, we have roughly reduced the debt by 50%. Another beauty is that if you see the way we have structured our repayment that while negotiating with our lender, we have structured our repayment in such a manner that next five years we have a schedule repayment of hardly about Rs.1800 crores and that also is stepping up, meaning, whatever business is generating as a cash profit, the same is invested in funding the growth. That is the first factor I just wanted to highlight. It does not mean that we will not prepay the debt. Based on our availability and growth of the business profitability we will prepay the debt. The major portion of a term debt which is Rs.4,000 crores is having a bullet payment in 2023. So you can see that business is having no pressure of liability or a repayment. That is the best part of what we have achieved while restructuring the debt.

As you are aware that working capital is the key for our business and last five years we have been struggling for providing adequate working capital facility to the business. Our working capital is primarily non-fund based which is letter of credit and bank guarantees which we are providing to our suppliers and customers. As you know that in India the banking sector generally give you facilities on the basis of certain percentage growth. Now, when we are embarking on a higher growth, we need lot of LCs and bank guarantees for our business. So, while doing the strategic initiative we have tied up with our lenders as well as with equity shareholders for additional working capital. So from Rs.5,000 crores available working capital



before our restructuring, we are having almost Rs.11,000 crores working capital facility available to the business which is more than sufficient to grow our business.

As you are aware that in last five challenging years, we got a wisdom on various areas and that has given us why not to strengthen our risk management policies. So in each and every area we have strengthened our risk management policies. We have brought in a disciplined approach in the business processes. We have tried to become more predictable as an organization. I just give you few examples on sales, our priority is margin and cash flow, not the volume. Same way when we look at any of the opportunity from market or any customer, we have a strong order evaluation process which is popularly known as OVP in our organization where we analyze each and every order from 360 deg. perspective that as an organization are we committing anything extra or taking any risk and if we are taking risk, how to manage that risk. Same way on execution also, we are extremely careful in committing delivery date, committing COD or commissioning. So strictly we are following the principle that commit whatever we can execute. So we are not committing anything extra which we cannot execute and that is clearly reflected in our lower liquidated damages and penalties. So, we are planning on a zero LDs and penalties in our business.

In a cash flow, we are strictly controlling our capital outlay. So CAPEX is something which is minimal required in our business. Whatever cash we generate from the business is strictly utilized for working capital and debt reduction. That is the prime objective for which we are using it.

On a supply chain development also, the risk management policies are no single source dependability. Even our in-house manufacturing, there also we try to see that we do not depend on our in-house manufacturing also more than 70-80%. So that is the motive.

On new product development, the product development does not start only with the technical idea, it is always on the basis of a techno-commercial analysis of any new product development. Duncan has very well explained the robust stage gate process which we are adopting in our business new product development and we have a strong focus on quality controls and checks and balances. This makes us a more predictable organization.

Just to give you perspective on what are our priorities. We have defined our priorities in two segments – One is Operational and Second is Strategic. On operational part, the first priority is to drive the margin. Margin is driven by two critical factors – One is our selling price and secondly, the cost of goods sold. The second factor which we are controlling and which is reflected in our numbers also is fixed cost and interest cost optimization. We continue to monitor it very-very tightly. At the same time, we need to support the volume growth which is key for the profitability of the organization. By doing these three things, we are improving our profitability on one hand, on other hand, we are rationalizing our CAPEX and thirdly, working capital efficiency is driven strongly by us. These three factors is delivering a healthy free cash flow to the business.



On a strategic side, the business is going to deliver a strong free cash flow on one hand, secondly, we will be monetizing few independent business verticals from time-to-time at the right opportunity, third thing is convertible bonds where you are aware that we have a mandatory conversion feature in our FCCBs. These three things will strengthen our capital base on one hand and we have a target to bring our net term debt at a zero level by 2022.

That is all from my side. I request Tulsi bhai to give the vision for 2022.

Tulsi R. Tanti:So for us vision is very clear for 2022. As you know, the government has also set the target of
175 GW by 2022. So we have also aligned with the target but we are not just Indian company,
we have to go beyond India and the global target also is there. So very clear is that Indian
market will continue to grow, India will deliver 60 GW by 2022. We do not have any doubt.
Enormous complexity, enormous challenge, and huge uncertainty is there, but within that we
have to achieve that and that is the Suzlon jobs to unlock this market and to increase the market
size and grab the market. I think that is the very clear strategy. Wind will remain for the next
decade very-very competitive compared to solar, so it is not wind versus solar, but wind solar
hybrid solution will create a more value for us. The third is very clear, Indian market will grow.
But within the market we will grow faster and faster so that we can enhance our volume and
our market share with reasonably excellent profitability, that is the priority.

So the size of the additional installation we are targeting is 20 to 22 GW by 2022. Very clear target for LCOE reductions, 20%. So whatever the cost of energy is today is there, 20% further will reduce, it will translate minimum Re.1 reduction will come in the next 5-6-years, so that we can able to remain in the marketplace to unlock the market. Working capital is the key is there, very clear. Today, we are running at somewhere 15% level and year-on-year we want to reduce at least by 1%, despite growth also, and that will bring down below 10% in single digit. That is the very clear target we want to achieve. Also, very clearly irrespective of 2023 date when we have to pay the debt, I am not waiting for the date. Whatever the cash generation will be generated from the system will be utilizing for two applications - one is the need of the working capital will be given the priority and balance cash flow will be utilized to reduce the debt faster and we have to come out with purely all the term debt should be zero by 2022. That is a very clear target. I have strong leadership and management team under the leadership of J P Chalasani. I am quite confident Suzlon is well equipped to harness this growth and we are extremely well positioned in the domestic market and from the next year our growth and journey will again start for international market, but we are not going to acquire any new asset. Thank you very much.

 Samir Shah:
 Friends, we can take question and answer session. Request you to tell your name and the name of your organization.

 Mayur:
 This is Mayur and I represent Ohm Portfolio. A couple of questions: Sir, DSA Group has invested Rs.1800 crores in the company, their equity is more or less similar to the promoters. They do not have a board seat, they are not in the management. They continue to give you credit lines. So can you explain why are they not in the board seat?



Tulsi R. Tanti:	They have one board seat as per our shareholder agreement and it is under the process on some
	of the compliance part and very soon the member will join in the board.
Mayur:	What are the assets that you can monetize over the next three to four years time?
Kirti Vagadia:	As I mentioned that the business verticals which are independent would be monetized and the two obvious businesses are one is the service business and second is our SE Forge both will be monetized from time-to-time by partial disinvestment.
Mayur:	If the Indian government fails to maintain the 2022 target of their's, will we still see the numbers that you put up here?

J.P. Chalasani: The answer to your question is let us look back for three decades in the conventional power sector. We always thought that we are failing in the policy front. But we still had the capacity addition, we have reached a stage where we have a good capacity today. This doubt about the government failing on the policy is it is like God only knows sort of things. But what you can see is that we made in the presentation. Today, they are walking the talk. You can see a stepby-step government getting involved on this. So you need to get confidence based on that. Otherwise, you cannot predict any other manner on this. Really coming out and saying that every single megawatt you install on fossil fuel also need to have renewable energy on this, coming up RPO with trajectory. Various aspects are there. I really do not see that why should you have those doubts on this. Second is as the tariff are becoming more and more competitive in terms of what Duncan has explained to you technology wise moving ahead, going up to 128 metre rotor blade and things like that, it is becoming competitive. On top of it, getting into the hybrid, it is getting away with those issues of the intermittent power, the evacuation, grid stability on this. It is not just the government policy. I think this sector, as I personally see, is getting out of external oxygen support called the government support. It is already there; 60-70% is out of the policy support. It is not like few years back when the sector would only and only survive if there is an oxygen life support called the government policy. I do not think that is the case today. If the government completely decides not to do anything on this, there would be some impact. It is not right to say that there would not be any impact but it is not like it is shutting down, because today you are not on life support, you have your own strength, sector has own strength on this. So there maybe some impact of this, but I do not believe that government will not do it because if you look at globally there is a huge-huge change in terms of what you want to do on this, there are countries run purely on renewable energy for a day or two. So the constitution is completely different and we made commitments globally.

Mayur: Incrementally from today till 2022, how much will be the global contribution sir?

 Rakesh Sarin:
 As I mentioned, we are looking at the reentry into the global market. Today also if you see one-third of the total installed base of Suzlon is in the global market and global market on the very strong wave of COP21 like Paris Convention what happened, many-many countries are on the upbeat path of renewable energy. As I mentioned that we have our presence there. So starting



next year onwards you will see the order intake announcements coming from Suzlon and it will definitely be a strong partner to the local market.

J.P. Chalasani: I think more important thing there is, it is on the number. Like for example, we are talking about pan India presence, someone asked me how much you are going to do in AP and how much in Maharashtra. It is not the issue. Issue is that you have a portfolio of projects which you are going to do throughout India. Similarly, we will have a portfolio projects in India, globally in different places. So, if there is a risk somewhere else we are mitigating and there is overall portfolio, you cannot put a number to saying that how much will come globally, how much will come domestically. But you are present there, you are trying to exploit the potential all over.

Jaisheel Garg: I am Jaisheel Garg from Way2Wealth Securities. What is your view on the REC market size now for the next four years?

J.P. Chalasani: If you look at the trends on the REC market, it is changing. The non-solar REC numbers wise... not the price wise, significantly was almost doubled on this. I was just seeing the trend of June this year was again significantly going. What is likely to happen REC is that if the RPO trajectory becomes mandatory for various states on this, the states which do not have a wind, either they will buy power from interstate sales or they will buy REC, either way it is going to actually get into a create capacity situation. So from both point of it, today we do have customers were saying that we just want the normal tariff and going to the REC specifically. So you are seeing the segment coming up saying that we really do not need an FIT, just get the normal PPA and then we will do the REC. So, though growth in our last few years has not been significant, but you are seeing it is now picking up.

 Jaisheel Garg:
 Just wanted to understand because last few years the price was not good of the solar and wind also. So what is your view about the wind pricing particularly in the coming years?

- J.P. Chalasani: Any pricing is supply/demand scenario. If we move ahead, as we meeting the RPO obligation more and more stringent on this, obviously the demand will keep growing and the pricing will change. It is a simple philosophy of the supply and demand. Slowly you are seeing that happening on this. There are certifications in APTEL and other places asking the states to enforce RPO obligations. You are seeing the Supreme Court judgment which came up very clearly saying that all customers who are not even customers of DISCOM have to invariably follow the RPO obligations. There are different things happening. So there is a possibility of that what we saw here, the demand going up on this. If demand goes up, automatically price will go up. But today it is the supply scenario, it is not a demand scenario, therefore you are not seeing the price going up.
- Tarun Kumar:I am Tarun Kumar. Coming from Tamil Nadu. Company name is KK Agrobase Limited. What
is your comment on interstate green corridor sir?
- J.P. Chalasani: Step #1 is like solar you made interstate transmission, the charge is zero, including your losses. Therefore, you create an enabling environment for interstate transfer of wind power. Solar was



already there. So, the question #2 comes is "Okay, fine, you have an enabling framework. Do you have the actual hardware in terms of the capacity being available on this?" I think today you do have a capacity in certain routes, and some routes you do not have it, even for the conventional power. But if you see that there is a significant strengthening happening in terms of the transmission as we move ahead and even though sectors where you do not have one reason to other reason is growing. So therefore, my personal view is having worked in the sector for three decades, the true sense of a national grid and one single electricity region is a reality. If you have seen five years back to today, nobody would have imagined that the type of grid what we have today is the transfer is happening from one region to another region, no one would have believed but it is happening today, and the demand is going to increase now with zero transmission charges. So those corridors would happen. As we move ahead, we might even see some exclusive green corridors for interstate.

- Tarun Kumar:Like the conventional power, we are purchasing power through IEX like power exchanges, in
future will it be possible for renewable energy to be traded in the exchanges?
- **J.P. Chalasani:** Today, REC is nothing but power trading, it is not a physical trading, it is a paper trading. But otherwise, you do have an exchange for renewable power.
- Tarun Kumar:
 What I am asking is like Tamil Nadu S1, S2 you can consider, it is rich in wind, so almost their grid availability is not 70%, the main reason is like power it is surplus there, but could not be transmitted to some state?
- J.P. Chalasani: What is to happen is that if you see even right today as we speak the MNRE had come up with 1,000 MW CTU connected projects for competitive bidding, they come up with guidelines, they put it on the website for comments and comments are common, I understand, they will have a public discussion and then finalize that. This 1,000 MW obviously would come from wind rich states like Tamil Nadu for example where if you do not have a local support so much, these are the states where people are going to bid and connect to the CTU and then go out. That is what is going to happen. The whole concept of this 1,000 MW CTU connected power coming is to unlock this capacity in the wind-rich states and take it to the states where you do not have wind. So every single step what they are doing in my opinion personally and surprisingly for me for the first time the government is working in a very coordinated manner in renewable sector at least.
- Aman Jain:My name is Aman Jain. I am an individual investor. Just wanted to understand, I am probably
confused, what exactly is the hybrid solar plus wind product and just talk about a bit?
- J.P. Chalasani: Hybrid anything is hybrid, two things together is hybrid. that is a simple thing. There is no great rocket science in that. What we are saying why the hybrid is going to be the future for this country is that the renewable energy the PLFs are low. The power evacuation capacity what you are creating is underutilized, unlike a conventional power. Conventional power you are running flat out and then you are fully utilizing the grid capacity on this. At the same time you do have a constraint of power evacuation capacity not being there to create the new capacity. In



that scenario, if you already have a pipe let us say where some water is flowing, but there is huge amount of capacity left out still on this, can you create one more source there which can pump more water into the same pipe. So therefore you do not need to put another new pipe on this. So here it is possible because the wind peak when it generates versus solar peak generation are the different times on the day on this. So therefore there is a probability that because when the wind dip, solar picks up, you can use the same pipeline, the same grid for this purpose.

- Aman Jain: I wanted to understand what products do we have to harness this opportunity, do you have any products for that?
- J.P. Chalasani: Yes, there is a Hybrid Power Policy already came up in the draft. Yes, we are looking at, we have already signed a MoU with Rajasthan for setting up hybrid capacity there and then few of the states with we are working, you will see us announcing shortly the hybrid.
- Aman Jain: What would be the typical set up cost per megawatt basis?
- J.P. Chalasani: Let us say we are setting up 100 MW wind and 50 MW solar. More important what is creating is that it is creating a grid capacity unlocking the potential. As I said sometime back, we have 9,000 MW of grid capacity today because we are operating them. So that unlocks about 4,000-4,500 MW to create solar capacity without any approval additional capacity required for evacuation. That is the most important aspect of it, it is not the cost. That is what is going to unlock the potential for this. The second is the cost advantage is to the extent of the same substation, same transmission system. So to that extent, that cost comes down. To some extent there is a saving in some common facilities for the land. I do not want to put a number to at this stage, because you will hold me to that number later. So we are now working on that. But right now I just want to say that there is cost savings. But more important is unlocking the potential.
- Charanjeet: This is Charanjeet here from B&K. You have highlighted about the policy initiatives from the government front in terms of RGO and Renewable Portfolio Obligations becoming more strict. So when do you think exactly these policy initiatives can actually become a reality, because we have been hearing for the last 1-1.5-years both RGO and other initiatives that these initiatives do not come through, so we could see the market actually taking a dip in FY'18 as AD is also getting halved from 80% to 40%.
- J.P. Chalasani: But I think you are seeing the progress. First, they came up with National Tariff Policy. First time we saw in a concrete way for saying that you will have RGO is in the NTP which came in January 2016 which clearly talks about from a specified date, so anybody setting up a megawatt of coal or lignite-based capacity would need to create X capacity which they did not mention the percentage on this. That is the step #1. Similar way they talked about repowering there. So you are seeing one-by-one the policy is coming out; you have a Hybrid Policy now, Repowering policy now, Offshore Policy has come up. I am assuming that this would also come now, because currently if you really look at it nothing much action is happening on fossil fuel-based power capacity addition. So, therefore there is an urgency in other areas of coming



in. Those policies are coming up already. So I am assuming it also will come up. It is after all in January 2016 is the first time they came up with NTP in which this is there. Many areas they already have come up with policies, this also will come.

- Charanjeet: On the new products, Duncan had mentioned that we have developed various products with bigger rotor dia. So how do we compare these products with the other companies are in the developed markets where these products are installed and how has been the success rate of these larger rotor dia products, if you can give us some track record of this in the other markets we would have seen?
- Duncan Koerbel:
 If I understand the question, I think I hear what you said is what is our opinion of the competitiveness of our new products versus the competition.
- Charanjeet: Yes, how has been the track record of these the larger rotor dia products in the developed markets, have we seen these products getting installed over there and how has been the operational performance of these products because we are talking about increasing the rotor diameter significantly over the next product platforms which you are launching?
- **Duncan Koerbel:** The first thing answer to your question is we do not launch a new product by definition unless we think it is very competitive. So to go from the S111 to S128, to get a one-time step of a 10% improvement in levelized cost of energy, we think it is very competitive. To get into the details, we are going to engineer the 2.6 MW machine specifically for India. So there is atmospheric conditions about our air density in India and our temperature that we are going to precisely define. So we make that machines the lightest weight, lowest cost possible. So from the levalized cost of energy side, extract every piece of value and every rupee we can from that. So, I think it will be very competitive. If I understood your second question is operating history of the larger diameter rotors. Suzlon has had a great track record. We obviously had a small problem on the S88 eight years ago. But since then our blades have been perfect. As an engineer is like a father and a husband. We learn most things in life from our failures instead of our successes. So, I think Suzlon has got a great track record of our Rotor Blades and as I said we are doing test and development, I will be in Baroda tomorrow because we are going to make sure everything we do is robust and proven before we put into service. So, I think S128 simply said it is going to be a killer machine, it is going to be very successful in India and very successful outside of India.
- J.P. Chalasani: I think you have the proof for that; if you remember our presentation on this, the orders what we got in the FY'16, we clearly said 70% of that capacity was for the new machines, S97, S111, that clearly shows that new products because of which higher efficiencies, the demand is much higher, we have seen order book. That is a proof.
- Charanjeet: What we are trying to understand is from maybe how other competitors like Gamesa and Vestas what is the rotor diameter products they would be having to the maximum size, how does it compare to the competitors?



Tulsi R Tanti:

I think the industry is quite mature and reliability is very high. Once we got bigger and bigger rotor dia it is a good success story. Suzlon has a great experience, running the German company where we have produced 162 metre rotor dia and we have manufactured in that product and we have sold in the market 6.2 MW machines, 146 metre tower height. Those turbines I am talking 4-5-years before. So the knowledge and expertise we have on that. Those are the very highly reliable and best performing product and technology. So experience we have and reliability and industry trend is very-very successful is there. Now, the competition versus us, what is the differentiator? If you can work out in a detail, because it is a more complex mathematic is there. The cost per kWh when we calculate any our turbine we are the lowest cost producer in the world till now. So there is no harm to go for the next level. Again, we remain very-very competitive because we have a two added value is there; a) we are using the global technology, but our supply chain is low cost countries. That is the biggest competitive edge. Third, we are fully vertical integrated company compared to the competition. Each and every component, design, engineered, manufactured by us. So that is giving us a huge opportunity to bring down the cost, but same time when we are investing in a best-in-class aerodynamic technology which is our biggest USP is there, which is giving the highest energy output for swept area calculation. So lot of things are there. The tower masts based on what is the weight is there, so lot of technical mathematics are there. By that way we are establishing. The PLF that whatever the new turbine is coming 128 2.6, that will deliver 45% PLF in Indian market. If I take this turbine into the Brazil market, 70% will give. So, this is the way the measurement of that. Ultimately, it is the cost per kWh, what is my landed cost to my site. That is the competitive edge we have in the domestic market. We have to also understand the worldwide the lowest installation cost; \$1 million 1 MW installed cost is only in the India is there, we were working in 32-countries, nowhere this price is there, even China is \$1.25 million per MW is there. US is 1.5 million is there. Brazil is 1.8. Australia is 2.2 million and Europe is 1.8 million. So there is nowhere in the world is \$1 million 1 MW installed cost is there. So we have grown in Indian market and now we are going in a global market and that is why the last 10-years we have done the good business in global competitive market. Only we need a big and strong balance sheet. Technology wise we are best in the world.

- Charanjeet: Last question from my side on the hybrid model. So, what are the kind of volumes in MW terms we are expecting to do in the solar space? How do we see that ramping up within our business model?
- J.P. Chalasani: Solar capacity utility scale is 60 GW is what is the target. Out of 100, 60 this and 40 GW is supposed to a rooftop on this. So, my assumption is lot of the 60 GW will move in the next 4-5-years would be in terms of the hybrid because of the evacuation facility on this. I really do not know to put a number; is it going to be a 50%, of that is going to be part of hybrid or what it is. But significant capacity of this would be in hybrid.
- Jagdish Bhanushali: This is Jagdish Bhanushali from Florintree Advisors. Now, coming back to the technology question what I have is we are in process of 128m diameter. Looking at the infrastructure, wanted to understand how much megawatt is actually logistically possible to install in India?



- Vinod R. Tanti: I would say that the infrastructure in India is developing quite fast. By the time the product will be available, ready for going to the market, more than 50% of the sites will have a logistic facility to carry the 128 metre blade. On top of that, as we have our factories quite near to the site, the logistics challenges will be possible to be managed quite well.
- Jagdish Bhanushali: Other question is we are coming up with the hybrid model. What do we know is that wind PPAs still getting signed at the state levels, while solar is at the national level, So wanted to have a comment on that, how the hybrid model will work?
- J.P. Chalasani: Even lot of solar is also at state level, the entire capacity 280 MW what we sign is on the state level bidding. You are seeing what is called that JNNSM Scheme and things like that. So therefore initially the solar was started by the central government. But slowly if you see now it has got tapered down; lot of capacities getting added by different states, like you see, Punjab, most of the capacities in Punjab is its own bidding. So most states are doing solar capacity now on their own, not depending upon central government initiative at all. It was Telangana as I said our entire capacity on this. That is going away. Initially, to encourage the solar capacity because the tariffs were very-very high at that point of time, no state was coming forward. So therefore government came and gave that fillip of saying that "Okay, we will have this Jawaharlal Nehru Solar Mission" and various things and gave that initial thrust. But now it is all states are doing on their own. It is exactly like wind. In fact, we are moving in the reverse direction; now we are seeing the centre coming up with wind in terms of 1,000 MW competitive bidding for grid connectivity and all when centre was never involved in the wind, you are seeing the reverse.
- Jagdish Bhanushali:We saw that we had some problems with Maharashtra signing PPAs in wind and MP also. So
the commissioning was an issue. So are those bottlenecks getting resolved now?
- J.P. Chalasani: Hoping to get resolved shortly.

Shankar:My name is Shankar. I am a friend, well-wisher and long-term associate with Suzlon. I had one
simple question; what is the message I take home to my wife who is watching my investment
in Suzlon very closely in the last many years, Tulsi bhai for you?

J.P. Chalasani: Simple message is sleep peacefully without any stress.

Dipesh Agarwal: Dipesh Agarwal from Ambit Capital. What is your breakeven level in terms of operational EBITDA?

Kirti Vagadia:There are different break-evens. So, if you talk about EBITDA breakeven we are at 400-450MW on annual basis and if you are talking about cash breakeven at about 900 MW and if you
are talking about net profit breakeven we are at about 1100 MW which you have seen in last
financial year.



- Dipesh Agarwal:
 Sir, your installed capacity is 3,600 MW. So at what capacity you are paying fixed cost is that entire 3,600 MW is operational?
- Vinod R. Tanti:
 3,600 MW is the manufacturing capacity, yes. So, whatever breakeven you heard it from our CFO, holds good for that also.
- Dipesh Agarwal: So, entire 3600 MW is currently operational, it is nothing like 1200 or 1300 is now lock down stage?
- Vinod R. Tanti: No, currently we have an active installed capacity to produce and deliver 3,600 MW.
- **Dipesh Agarwal**: Secondly, on competitive bidding, what we understand government may come up with land and the power evacuation. If that happens, do you see a situation where competitive intensity in the industry will rise as many of the foreign players such as Vestas, Nordex, I am not interested in EPC, so those guys maybe really interested in supplying the equipment bit?
- J.P. Chalasani: We have seen enough of competitive bidding in this country in infrastructure sector. My personal view is that till now we have not really been successful in competitive bidding in any sector in infrastructure piece. We have huge amount of set of issues. Having said that, we are still moving ahead. You talked about government providing the land and evacuation system. You have seen the great UMPP concept. It came, it stopped. You have two examples out there, that is it, period. You did not have a one single UMPP thereafter coming up on this and you are seeing how many years have passed before they actually announce one more UMPP. It is not easier, I had done an UMPP. It is not easy for government to actually provide land and those things. Even if you look at the current competitive bidding guidelines what came in, they are not committing at all anything. Even to this extent, they are saying that it has to be at the interconnection point of the CTU but the CTU connection and CTU corridor is also responsibility of the bidder. What government is providing is zero for the competitive bidding support at this stage. So therefore unless you have a site, unless you have a site which is closer to the CTU connecting point, unless you understand the power flow system, there is a corridor capacity or not, unless you know that you are going to get the long-term open access system, you would not be able to bid. The competitive bidding for solar and wind is completely different. In case of wind, you need to have a site, wind data and various aspects of it. So it is not going to be so-so easy for doing competitive bid for wind on this. Let us see how we move ahead. It is going to take long time in my opinion to mature a competitive bidding for wind. Having said that, if at all that happens like what they are doing in 1,000 MW, we would be most benefited because we will have a site which we can tie up with any developer who wants to bid on this, they can give that opportunity to 5 or 6 developers, whosoever wins, they can sell our equipment and the site to them on this. So actually in a competitive bidding route we will also get benefited much bigger.

Dipesh Agarwal:

What is the potential of hybrid model? While the wind potential is 300 GW, what we understand where there is wind there is no solar radiation at many sites whether you see in



Maharashtra Solapur belt or in Tamil Nadu. So, is it that potentially significantly lower for hybrid model?

J.P. Chalasani: The potential wise the hybrid is as I said is 2:1 ratio, you can get the advantage of the power evacuation and various other such facilities. That is an ideal mix. But the question is that if you have 200 MW wind do you have the 100 MW, if you have 20 GW wind, do you have 10 GW, it is completely different issue of the potential level. But today when we are talking about 300 GW, we are also equally talking about huge amount of capacity for solar as well. Second, what will happen is that because you are doing hybrid model, so you can afford to some extent to compromise on your PLF levels in terms of solar and other things. So, I think at the end of the day overall economics of how much can you generate. Like wind if you see the sites which were viable at that point of time let us say five years back to the sites which are viable today it is completely different with 120 metres hub coming in and things like that on this large rotor blades, so therefore the sites which we thought has no potential at all has become hugely potential today. Things will change.

- **Deepak**: This is Deepak from Elara Capital. I have two specific questions: One, through this joint venture with DSA where we have signed for initially 450 MW, so basically moving from in addition to an equipment manufacturing we are entering into a developer trajectory. What is the way forward over the next 3-5-years in terms of developing the joint venture? Second question is what is the biggest risk you see to your 2022 vision?
- Kirti Vagadia:On a joint venture, you will see the movement in end portion of this financial year on creation
of 450 MW, part of that will be created in last quarter of this financial year and it will be fully
completed in next financial year.
- Deepak: But in that joint venture, Suzlon is assuming a developer role also, right, because it will become effectively utility business also because you will have a separate company or a subsidiary?
- Kirti Vagadia: It will be a joint venture; Suzlon will be investing Rs.400 crores, Rs.400 crores will be invested by DSA. So that is the way it is structured. Yes, Suzlon, the way we are constructing it for other customers, we will construct the same project for our joint venture company also and it will be purely on arm's length basis.

Deepak: What is the plan for scaling up the joint venture over five years?

Kirti Vagadia: Initially, we start with these things and based on success the wind business always project is scalable. So we will see what is the next step we take on that direction, but initially we will be restricting to 450 MW.

Tulsi R. Tanti:For second question, the vision for 2022, we have enormous complexity in the industries,
uncertainty and volatility will be very high. I think for Suzlon that is the opportunity, how we
can manage this all uncertainty, volatility and complexity and we can unlock the business and



we can grab the business. The highest challenge will remain is the execution on the ground areas. That is the major challenge. But being a 20-years experience for acquisition of the sites, which is the main challenge, but we have a huge competency expertise is there. We are the largest land acquisition company in the country today. So we have to continue this. That is the major challenge of the time taking process to acquire the asset to build the power evacuation lines, some ROW related issues etc. Those are the routine type of the nature on execution challenge will remain as a bottleneck for the growth. But when we are targeting our business, we are considering those uncertainty, otherwise we can do much more.

Samir Shah: We would like Mr. Tulsi Tanti to give his closing remarks.

Tulsi R. Tanti:First of all, I thank all of you for taking time and we are running late by one hour. So we
appreciate your time and patience. We strongly believe Indian market will deliver 60 GW and
we will deliver Wind, Solar and international market 20 GW. So we are very confident and we
have a concrete plan behind that and enormous manpower and resource we are putting after the
huge global experience bringing back lot of expertise in India and at the same time we will
remain a global organization. Thank you very much, thanks for your time.