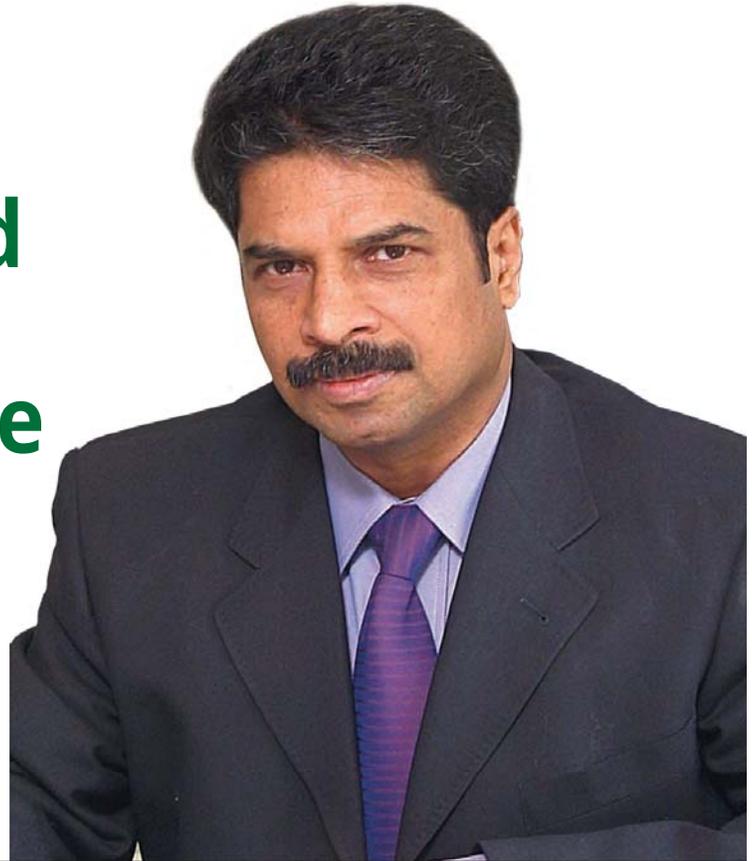


## “Concentrated efforts can certainly make India a major hub for renewable energy”



With enhanced target of achieving 175 gigawatts of clean energy by 2022, it is necessary to ensure policy stability, continuity and improve the financial health of electricity utilities. With only five years left to reach 2022, our achievement is 46 GW. That means in the remaining five years, we need average annual capacity addition of 25 GW. It is a herculean task, informs **G M Pillai, IAS, Founder Director General, World Institute of Sustainable Energy (WISE)** in an interaction with **Electrical India...**

### **What kind of role does WISE play to achieve goals of sustainable energy in India?**

WISE is mainly engaged in facilitating development of sustainable energy in India through our contributions in four major areas: Policy and regulatory analysis and intervention, consultancy support to investors, developers and industry, training of professionals in the sector and outreach dissemination of knowledge and information. As a pioneering institution working in the sector since 2004, we have undertaken numerous initiatives and projects in all these areas.

### **Following climate commitments made at the Paris Summit, the Indian government gears up to achieve 175 gigawatts of clean energy by 2022. According to you what kind of potential will it generate for Indian renewable energy sector?**

Certainly, it is a massive leap forward in terms of objectives and targets. Aiming very high is a good thing to keep everybody on their toes. This target will result in huge market expansion which in turn could result in increased investments in all areas from R&D, manufacturing and capacity installation. Besides,

since renewable sector is employment intensive and will hence generate sizeable job opportunities. Along with this enhanced target, it is necessary to ensure policy stability, continuity and improve the financial health of electricity utilities. With only five years left to reach 2022, our achievement is 46 GW. That means in the remaining five years, we need average annual capacity addition of 25 GW. It is a herculean task.

**What are the initiatives taken by the government for generating the momentum in the sector?**

First and foremost, the decision to go in for competitive bidding will help in discovering the real cost and advancing the achievement of grid parity by wind and solar power. From the latest round of competitive bidding, one can say that these two technologies have already achieved grid parity. The flipside to the bidding process could be unhealthy competition, which I believe will even out in the medium-term. Another important step is to encourage SECI and major PSUs to invest in the sector. Investment by the public sector is a standard practice in many countries to promote new technologies. A third major initiative has been the UDAY scheme to revitalize the financial health of the public sector electric utilities in the country. That scheme needs to be taken to its logical conclusion with the support and cooperation of the state governments. When financial health of the utilities is restored, it will ensure payment security to investors.

**Can India become a renewable energy hub with these initiatives? Please elaborate.**

For India to become a renewable energy hub, we perhaps need to do much more. Low tariffs in competitive bids have prompted the electricity regulatory commissions to re-visit the Feed-In-Tariffs set by them. The capacity realized through bidding is only a portion of the annual needed capacity additions. The remaining will have to come from investors in the open market. If and when the regulators downsize the FIT, which will be soon, it could erode the return on investments and in turn dampen investments. Already, except for those IPP investors sourcing low-cost finance from abroad, the returns are poor compared to many other sectors. One major step which can kick start investments is an interest subsidy

to domestic debt for the RE sector. Agreed that the prognosis in the country for interest rates is a trajectory of gradual lowering, but it doesn't always get reflected adequately for loans. I have been proposing for many years that the clean energy cess collected from coal should be utilized for subsidizing RE debt. Unfortunately, that cess money is being diverted for other purposes. High recurring annual O&M costs in the wind sector – currently about 25% of annual revenues - is another big dampener for investors. This exorbitant O&M cost is unheard of in any other sector. It is in the interest of the industry to rationalize this cost, to avoid flight of capital from the sector. If the current O&M costs continue, returns to investors will be further eroded as tariff rates go down which is already happening. India also needs to invest more in R&D, build up a strong solar manufacturing base-

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covering the entire value chain- and focus on exports. Concentrated efforts on all these areas can certainly make India a major hub for renewable energy development.

**What are the stumbling blocks in achievement of targets by 2022? According to you, what are the solutions for tackling of these hurdles?**

In my answer to the previous question, I have given answers to many points which need to be covered here – both hurdles and solutions. In addition, I would think that while the Central government is on the right path, many state governments don't share the same enthusiasm. This has been a perpetual problem arising from a lack of vision about the future at the state level. Many among the provincial leadership still believe that business-as-usual will continue forever. This mind set has been the main stumbling block and it is the most difficult barrier to overcome. Even though mandated by law, open access connectivity for RE power is still a problem in many states. The regulators need to step in to solve this problem by enforcing RPO. The MNRE could take on a more proactive role in identifying grass roots level and local issues and then focus on solving them. Such a nut and

bolt approach can go a long way in really mainstreaming renewables in the next five years. Talking about a post-oil world, another ambitious initiative of the government of India is the target for electric mobility. Again a full conversion by 2030 may be too ambitious, but as I said earlier, aiming high is very good. For electric vehicles to be really 'green', the power will have to come from renewable sources. So it would be

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great if we can evolve strategies to link growth in electric mobility to enhanced renewable power generation. There are many ways of doing this, which I do not wish to elaborate here. Another important area is innovation in the area of renewable regulation. With renewables racing to grid parity, the role of regulators in determining FIT will be reduced. They should then discover new areas needing regulatory attention to spur growth in the sector and not to constrain it. Open access is a critical area where regulatory attention would help. Mainstreaming of renewables may also necessitate suitable rationalization of provisions relating to RE in the Electricity Act 2003. So a comprehensive approach to identifying and solving impediments in the sector would help propel the sector as a major energy and employment provider in our country.

### **Which is the best source of energy considering the economics and cost of electricity?**

All renewable sources are essential in a post-fossil fuel world. Many technologies are already mature, and a few are evolving. Currently the mature and viable technologies with universal resource availability are wind and solar power. There is no point in grading any one technology as good or bad. As far as the economics goes, we should leave it to the market to determine who will survive or whether all will survive in a multiverse of renewables.

### **Where does India stand on the global scale in terms of generation of renewable energy?**

As per the REN 21's "Renewables 2017 Global Status

Report" the global installed renewable power capacity (excluding hydro) stood at 921GW and that of India is of 46 GW by the end of 2016. If we add hydro capacity then these figures will stand at 2017 GW and 94GW respectively for the world and India. Globally the estimated renewable energy share of global electricity production is of 24.5% of which hydro amounts to 16.6%; which means that, the global renewable energy (excluding hydro) contributes 7.9% of the total electricity production. Similarly, in India the renewable power generation accounts to 7.6% of the total electricity generation. So it is comparable to the global average. In terms of installed

capacity Indian ranks fifth in the world, behind China, USA, Germany and Japan. However, China has an installed capacity of 258 GW and India's total installed capacity is less than one fifth of that.

### **How can India learn from the experience of other countries and rapidly scale up renewables?**

India has enough learning experience in the sector, since we were an early entrant in the sector and one of the first countries to set up a separate department and ministry for development of renewables. All we need to do is stitch together our act into a coherent framework covering policy, regulation, R&D, manufacturing low-cost financing, open access, health of electricity utilities etc. It is doable. A comprehensive approach, beyond a target orientation, is all that is required.

### **What is your outlook for the renewable energy sector for 2017-18 fiscal?**

The year 2016-2017 saw the peak in capacity installation with 11320 MW of total RE power generation capacity installed in India. The process of tariff discovery through competitive bidding may temporarily slow down the sector in 2017-18, judging from the capacities installed till October 2017. But this may be a mid-course hurdle in a process of cost discovery. The sector had, in the past, overcome much bigger hurdles. I am sure they will emerge stronger out of this one also. I don't want to put out any numbers at this point. It is enough to say that the performance of last year may not be repeated this year; though it may be a temporary slowdown. 