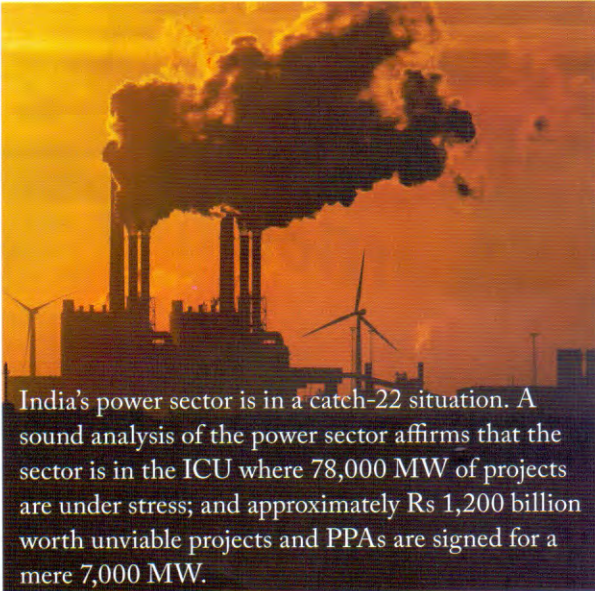


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# “Coal is still the mainstay of the power sector”

In an interaction, **Neeraj Sharma, President and Managing Director, Wärtsilä India** opines India is importing low sulphur, light heat content coal from countries like Australia because conventional coal power plant are here to stay. Edited excerpts:



## What are the challenges of providing solutions for energy markets, particularly power plants?

The government's thrust in the last couple of years has been on renewables, and India has done quite well in strengthening this portfolio, especially in solar power. The country has set an ambitious target of generating 175 GW by 2022. However, the main challenge is that as renewable energy gets into the system, conventional thermal power plants experience flexibility issues. With the addition or sudden rejection of renewable energy, the thermal plants need to scale down or ramp up power, because with renewables, there is no certainty given its dependence on natural factors like sun and wind.

## ...so that is where the solar with batteries come into play?

Yes, clean energy needs to have plants that can support its usage as efficiently as the traditional power plants. It is imperative to make them flexible because thermal power plants were not built to operate on low loads. They were meant to take loads of 70–80 GW, as that is when emission and efficiency are at their best. Therefore, we need to explore ways of integrating renewable energy with the traditional form of power. Further, batteries have an important role to play— so do the gas engines, as they can be started and stopped quickly— despite the fact that the energy cost generated from these sources is much higher than that from the traditional power plants. The idea is not to generate such high cost of power, but one needs to look at solutions to integrate renewable with thermal energy and that too with reduced emissions.

## What solutions can boost the output of power plants?

Conventional coal power plants are here to stay because coal is the mainstay of power and India is importing low sulphur, high heat content coal from countries like Australia. The government is also adding more coal capacity, as the uncertainty over renewable energy will always be there. It is imperative to keep working towards improving the existing coal power plants since a lot of power purchase agreement (PPAs) have been signed for them and these plants cannot work on low-load factor. Therefore, the government should consider using gas engines which are half the cost, to boost the load factor of the power plants.

We are working on a proposal with the government that will aim at reducing the overall cost of power, on the basis of coal–gas hybrid thermal power plants. We have done models on that and are in talks with the relevant officials. However, we are yet to get a clear direction on this.

There is still reluctance to consider natural gas, which could be because of gas prices and that exchanging gas entails spending money. However, there has to be a combination of technologies to ensure system-level efficiency.

**Comment on the technological health of equipment and manufacturing in the power sector.**

The challenge for gas turbines is that there are many stranded assets in India due to non-availability of gas. Numerous gas plants that were put up are not functional today due to inadequacy of gas. Gas plays a role in peaking, and the government did try to use these plants for that purpose. The stranded assets could not be effectively used as these machines take a longer time to start and coast down. These technologies are there in the system but the question is how to absorb more and more renewable energy, which is the future.

**How do you see the demand in the manufacturing space this year?**

The last few years have been volatile with the demand in areas of cement, steel, among others in the manufacturing industry not picking up, as it should have. While India's GDP is growing at more than 6 per cent year-on-year basis, the ground-level situation still needs to improve.

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**Earlier, we did not have adequate power, but now that we have achieved near-adequacy, there is a need to focus on its quality.**

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**Which energy storage technology solution can facilitate instant power while saving on fuel and maintenance costs?**

Batteries are certainly a very good solution to facilitate instant power while saving on fuel and maintenance costs. However, the challenge with batteries is that they cannot run, for say 20 hours, at a stretch. Another solution is gas engines, which have a higher efficiency compared to gas turbines. We are working with utilities on this, but there is a need to understand the usage of gas in terms of pricing, adequacy, etc.

**How can the efficiency of gas engines be enhanced?**

Wärtsilä has provided models for internal combustion (IC) engines and continues to get orders from across the globe. We are also providing hybrid models with a combination of solar, wind and batteries. Making engines spin with the renewable energy resources saves fuel and enhances the efficiency of the plant.

**Discuss the impact of goods and services tax (GST) on manufacturing and equipment players.**

The GST has proved to be a game changer in streamlining the Indian economy. However, apart from the initial implementation challenges, it did not have much impact on the manufacturing and equipment players.

**The government wants the industry to set up battery manufacturing units to meet the 100 GW target by 2020. How do you plan to contribute to this?**

The policy on batteries for renewable energy is still unclear, barring that for solar energy. More focus is required to enhance this. Earlier, we did not have adequate power, but now that we have achieved near-adequacy, there is a need to focus on its quality. Batteries can be used in transmitters for efficient distribution in order to achieve grid stability. They can be used in another scenario where, say, there is no way to absorb power. Hence, battery manufacturing will definitely play a crucial role going ahead.

**Why are the battery costs falling?**

The main driver of falling battery costs is the automotive sector. The government's urge in bringing electric vehicles on road mainly contributes to the fall in battery costs. Use of renewable energy has increased with the clean energy push in the power sector, which has also contributed to the reduction in costs. Additionally, with advances in technology, there are many efficient and smaller batteries available.

**How have you procured the modules?**

We do not have any particular sourcing tie-up; however, we focus on whoever gives us value for the project requirements. Sometimes, the sourcing is from countries like Korea, Japan, China, etc. Wärtsilä has recently acquired Greensmith Energy Management Systems Inc., a market leader in grid scale energy storage software and integrated solutions. This acquisition enables us to rapidly expand our footprint in the energy storage market globally and position us as a premier energy system integrator.

**Any expansion plans?**

We are always looking towards expanding and are committed to India's growth story, especially in the power sector. We have the facility and the work force necessary to expand and are ready to explore various options.

**How do you plan to finance the projects?**

We have our own sources of funding; as of now, we do not plan to use any of the funds offered by the government. If a project makes commercial sense, we are willing to invest in it and support it, like one of our projects in Haryana where Wärtsilä has a 20 per cent stake.