

# “Revival is already under way”

Interview with Wärtsilä India’s Neeraj Sharma

Investing in both renewables and flexible solutions will be the way forward for transitioning to a green future, believes Neeraj Sharma, president and managing director at equipment and technology major Wärtsilä India Private Limited. With a presence in the Indian market since the 1980s, Wärtsilä has delivered around 250 power plants in the country, with a total output of over 4,000 MW. In a recent interview with *Power Line*, Sharma spoke about Wärtsilä India’s energy business, future plans, new and emerging technologies such as green hydrogen, and the outlook for the sector. Excerpts...

## What are some of the new and emerging challenges for power utilities given the greater uptake of renewables and their grid integration?

At this point in time, the Covid-19 pandemic has turned the world upside down within a very short time. Business processes have undergone a paradigm shift from their traditional mould to a digital landscape. Several sectors have shifted to work-from-home options in order to create a safe environment. However, the power sector will continue to be significantly different from other industries. It cannot afford such operational changes and needs to continue to run power plants safely and smoothly even during the toughest of times.

The two main challenges facing the Indian power sector are fuel supply uncertainty and deteriorating discom finances. We have seen our customers’ businesses getting impacted during the pandemic. However, the recent economic indicators of the country suggest that a revival is already under way. As an organisation, we have a very robust strategy and vision that will prevail even after the pandemic is over. We will continue to lead the way towards a 100 per cent renewable energy future. We see that the energy transition gives us an enormous opportunity, and with our flexible technologies comprising gas-based engine power plants, energy storage and energy management systems, we see a great potential for growth. We will continue to work closely with our customers every step of the way, helping them find their optimal path towards renewable



energy systems.

In fact, the pandemic has actually speeded up the transition towards green energy. What we have seen is that when Covid-19 hit developed countries, the overall generation of electricity went down and the share of renewables increased. We created the Wärtsilä Energy Transition Lab, where we showcase facts and figures, explaining how the electricity markets have been functioning with renewable energy over the past six months.

A crucial function of power utilities when integrating more renewables is to ensure that there is enough flexibility in the grid to cover demand even when renewable energy generation fluctuates. As the sun does not always shine and the wind does not always blow, the impor-

tance of having flexible solutions such as fast-starting engine power plants and batteries in the power system increases.

## What are some of the new and promising technologies for power generation utilities?

We believe both energy storage and flexible gas-based engine power plants will play a key role in transitioning power systems towards a 100 per cent renewable future. While energy storage solutions will provide daily balancing, gas-based engine technology can ramp up and down fast to accommodate the fluctuating renewables, especially during longer periods. Wärtsilä is a global leader in smart technologies, and both energy storage and engine power plants are part of our offering. In addition, we can offer cutting-edge energy management system software and life cycle services that support the transition.

In order to reach a power system running on 100 per cent renewable energy, there is a need to develop new solutions. Wärtsilä is investing and developing power-to-x solutions and exploring opportunities with green hydrogen. Power-to-x allows the creation of carbon-neutral synthetic fuels by capturing carbon dioxide and combining it with hydrogen extracted from water. Hydrogen will be a key building block in future power systems and can be used as is or further processed into other synthetic fuels, such as methane and methanol.

Wärtsilä is developing the combustion process in its gas engines to enable them

to burn 100 per cent hydrogen fuel in the future. It has researched hydrogen as a fuel for 20 years and has tested its engines with blends of up to 60 per cent hydrogen and 40 per cent natural gas. This development is part of the company's strategy to future-proof its engine technology in line with the global trend towards decarbonisation of the energy and marine markets. In addition to hydrogen, other potential renewable synthetic fuels are being studied for future application, and Wärtsilä engines are already capable of combusting 100 per cent synthetic carbon-neutral methane and methanol.

**What have been the major business highlights of Wärtsilä India's energy business in the past one year? What has been the impact of Covid-19 on the company's operations?**

There is no shying away from the fact that the pandemic has and will continue to have a business impact for a while to come. That stated, the recovery in India seems to be well under way. Business decision-making and operations, which were stalled in the initial phase of the pandemic, have now started to gain momentum. We are also experiencing increased customer requests for operations and maintenance services for power plants and sites. As a true partner, Wärtsilä is able to cater to these service requests in compliance with all the safety aspects.

In fact, during the pandemic, Wärtsilä Expertise Centres in the Middle East and Asia expanded to 24x7 manned operations in order to continue offering unparalleled support to its customers. These centres provide operational support and maintenance planning for our customers in energy industries under a life cycle solution agreement with Wärtsilä. Our project teams in India have continued to execute construction and commissioning projects for our global customers, even during the challenging pandemic period.

**What are some of the notable projects currently being executed by the company in the**

**energy domain?**

Wärtsilä India has been in operation in India since the early 1980s. Our offerings comprise flexible power plants, energy management systems, and storage and life cycle services that ensure increased efficiency and guaranteed performance. Wärtsilä has delivered 73 GW of power plant capacity and over 80 energy storage systems in 180 countries around the world. In India, we have delivered around 250 power plants with a total output of over 4,000 MW. Wärtsilä also provides operations and management services to its customers at over 35 power plants.

**What are the company's future growth plans and strategy?**

Incorporating renewables is no longer just a discussion about sustainability, it is also about economic feasibility. The falling costs of renewables are driving their growth in the power system. In many countries, it is already cheaper to build new renewables than to build new fossil fuel-based power.

Wärtsilä Energy is enabling the transition towards a 100 per cent renewable energy future. It is important to actively invest in flexible capacity in order to utilise all the power generated from wind and solar power sources and avoid curtailment. So, my message is: Investing in renewables as stand-alone resources is not the right way to go, rather, investing in both renewables and flexible solutions will be the way forward. There is a need to take a holistic view of decarbonising the power systems and create an optimal path to make it happen. Wärtsilä will continue investing in solutions that are future-proof, taking us closer to a renewable energy future.

Our state-of-the-art factory at Khopoli, Maharashtra, manufactures auxiliaries/pipe modules and reconditions and upgrades engines, ship propellers and components. It also integrates high speed diesel generator sets to meet marine requirements. We will be looking at how to utilise the factory for enhanc-

ing our business in line with Make in India and make Wärtsilä more competitive. We are looking at how we can indigenise more, with high quality products. That is a part of the strategy.

**What is the company's long-term outlook for the power sector globally and in India?**

Back in the mid-2000s, we started to see the potential of renewables and developed our solutions towards that. We have been talking about the use of flexible gas-based engine power plants to help integrate renewables in the power system for the past 15 years, and now the engine power plants are an important element in providing flexibility and reliability to power systems with renewables. We have seen different power systems in various markets for a long time.

It is important for a company like ours to go to our customers with fact-based solutions. That is where the Wärtsilä Energy Transition Lab or the Atlas of 100 per cent Renewable Energy come into play. The Atlas of 100 per cent Renewable Energy has been modelled on 145 countries and regions to find the optimal way to produce electricity from 100 per cent renewable energy sources. The map illustrates how the power system of each of these regions would look like if they were to be optimally built from scratch, not considering the burden of existing power plants. Each region has unique solar and wind conditions, which make the optimal energy mix for each region unique.

We have been promoting our vision of moving towards a 100 per cent renewable future for many years. It is a transition with different paths for different countries, cities and companies. We are working with our partners to create fact-based proposals that utilities and customers can benefit from and use in their own planning. In India too, we are directly engaging with stakeholders, be it states or utilities, to educate them and give them clarity on their planning processes and decision-making. We want to help them make the right decisions and prepare them for the future. ■