



Annual Report  
2019-20

**Innovative**  
Technology

**Seamless**  
Execution

**Trusted**  
Service



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#### Forward-looking statement

This report contains forward-looking statements, which may be identified by their use of words like 'plans', 'expects', 'will', 'anticipates', 'believes', 'intends', 'projects', 'estimates' or other words of similar meaning. All statements that address expectations or projections about the future, including but not limited to statements about the Company's strategy for growth, product development, market position, expenditures and financial results, are forward-looking statements. Forward-looking statements are based on certain assumptions and expectations of future events. The Company cannot guarantee that these assumptions and expectations are accurate or will be realised. The Company's actual results, performance or achievements could thus differ materially from those projected in any such forward-looking statements.



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# At Triveni Turbines, we believe that success is achieved as much by our deep-rooted internal strengths as by our ability to leverage opportunities.

This belief has powered our sustained growth charter over the years. At the same time, it has empowered us with the capability to ensure business sustenance for our customers and partners, even amid challenging market conditions.

## It is a capability led by:

Our exceptional **INNOVATION** edge that enables us to create unique products to meet the ever evolving needs of diverse sectors and segments at competitive prices.

Our seamless **EXECUTION** model that helps deliver these products to the market in record time, in a cost-effective manner.

Our strong **SERVICE** centric approach that continues steadfastly to amplify our aftermarket business proposition.

As businesses worldwide hit an unprecedented tribulation in the face of the COVID-19 challenge towards the end of FY 20, we, at Triveni Turbines, decided judiciously to look inwards at these capabilities to prepare ourselves for the times ahead using new technology tools and IT solutions. This gave us the confidence that we shall not only persevere through these difficult times but shall sustain the trust we have built over the years. And the assurance that we shall continue to deliver high-end solutions and service to our customers, as well as exceptional value to all our stakeholders even in the future.

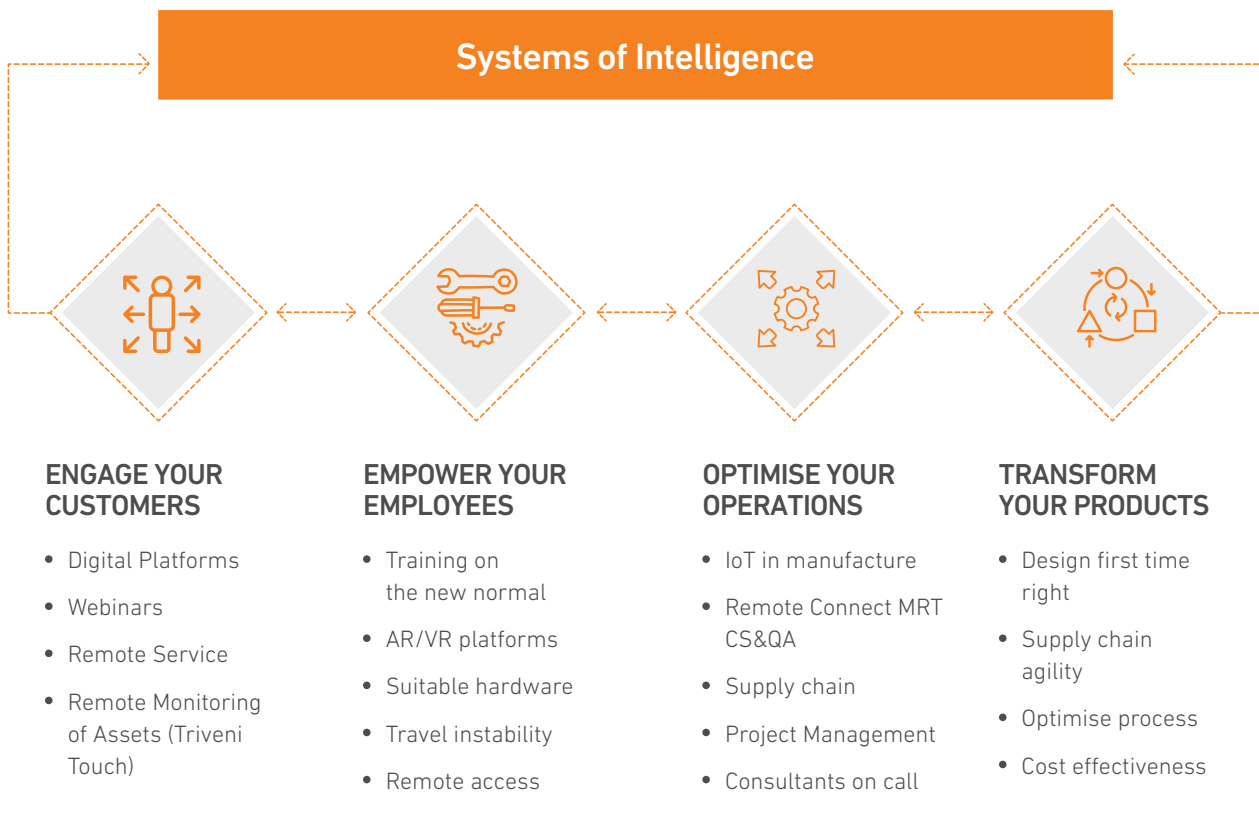
# Responding to the New Normal

As the new, more vulnerable post-COVID world gets ready to witness drastic changes in business strategies, we, at Triveni Turbines, have also embarked aggressively on a transformational journey to embrace the new ecosphere.

Leveraging our deep-rooted understanding of the industry, we have identified several innovative ways to strengthen our intrinsic capabilities and systems. It is a transformation that will enable us to engage even more deeply with our stakeholders, despite the acute constraints on travel and personal connect.

At the core of this odyssey of change lies an overarching digital transformation, rooted in systems of intelligence, and encompassing all the key facets of our business.

## DIGITAL TRANSFORMATION





## MAKING STRUCTURED STRATEGIC SHIFTS

Cognisant of the importance of realigning our internal business systems with the changing macro environment, we have restructured our strategy towards a more safe, secure and smooth business experience.



### From Basic to Enhanced Security

#### In the new 'Work from Home' normal:

- We have pushed the frontiers of our digital capabilities to integrate a higher level of security in critical operations, such as design, engineering, product and aftermarket offerings.
- We have scaled our interface to more enhanced data security protocols through launch of the highly encrypted Fortinet VPN (Client & Web VPN), in addition to Nexus Web VPN.



### From Excellence to Empowerment

#### Multi-tasking and multi-skilling becoming the new imperative:

- We have initiated special training programmes to quickly empower our engineering and other teams with multiple skills to address the new challenges.
- In-house cross-product knowledge and cross-functional training is being provided across departments.



### Customer Connect

#### Augmenting our remote customer connect at every level:

- We have taken a slew of initiatives to upgrade our digital marketing platform to facilitate faster & cost-effective social media and Internet connect for customers.
- These include Webinars and social media to showcase the company, E&C and Service to resolve the issues at site. A number of advanced processes have been introduced to support the best business practices for troubleshooting assistance, technical discussions & finalisations of orders, interactive discussions, presentations etc.

Each of these measures is designed to facilitate greater customer comfort, taking our innovation, execution & delivery edge towards increased customer confidence.

The thrust, going forward, will remain on more digitalisation, more automation and more integration, as we move towards a more virtually connected business environment.

# Modelled to Deliver

## CORPORATE SNAPSHOT

# World's second largest

manufacturer of steam turbines  
(5 to 30 MW)

# ~4,000

steam turbines installed globally

# 13GW+

power generation capacity

# 70+

countries of presence

# Market leader

in Indian market for a decade

We provide robust industrial and renewable power solutions to a global clientele, across a wide expanse of diverse sectors. Our business proposition is centred on unmatched quality focus that translates into a dependable product and service portfolio.

Custom-made. Customer-centric.

## PRODUCT SHOWCASE

Our product portfolio comprises a large range of back-pressure and condensing steam turbines that are easily customised to suit sector-specific and customer-specific needs. Equipped with a choice of Impulse and Reaction technology, these turbines can work across a wide range of pressure and flow applications.

### Up to 30 MW

#### Condensing Steam Turbines

- Straight Condensing Type
- Extraction Condensing Type
- Bleed Condensing Type
- Injection Condensing Type
- Double Extraction Condensing

#### Back Pressure Steam Turbines

- Straight Back Pressure Type
- Extraction Back Pressure Type
- Bleed Back Pressure Type

We also provide Condensing and Back Pressure steam turbines in the above 30 MW to 100 MW range through GE Triveni Ltd - our majority stake Joint Venture with GE.

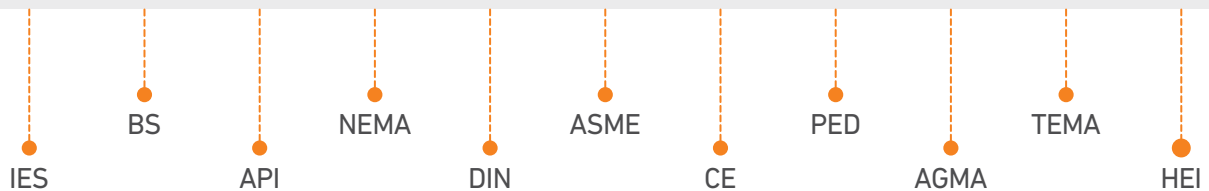


Our **SPARES, SERVICES and REFURBISHMENT** offerings complete our solutions proposition, and give us a competitive edge in the ever-evolving market landscape, where we are currently catering to more than 20 sectors/industries.

## CERTIFIED FOR EXCELLENCE

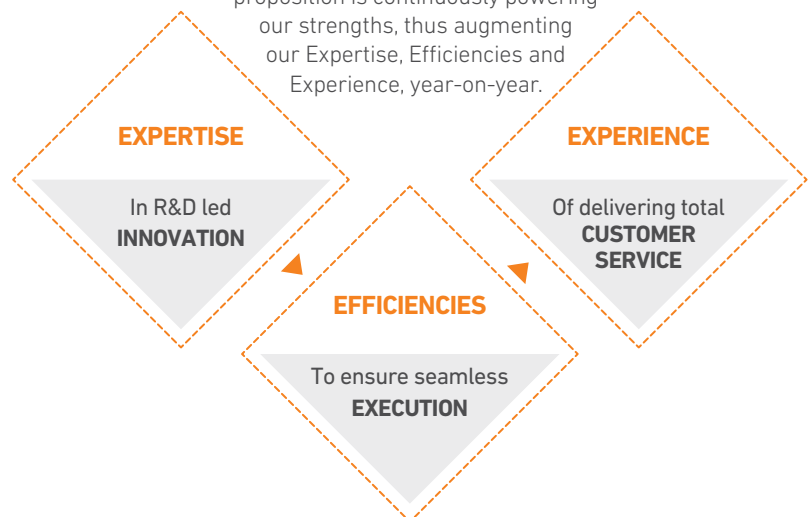
With industry-best practices leading the way, our products meet the most stringent international quality standards, as endorsed by the various certifications awarded to us.

### AS9100D, ISO 9001 OMS, ISO 14001 EMS Standards & ISO 45001 OHSAS



## OUR 3E VALUE PROPOSITION

Our **Innovation-Execution-Service** proposition is continuously powering our strengths, thus augmenting our Expertise, Efficiencies and Experience, year-on-year.



# Market Drivers

Tracking customer and market trends is a key to driving our customer-centric business strategy. Our internal teams regularly track these trends to assess and analyse their impact on the industry/business, and enable us to respond effectively and efficiently to the same.

Recent years have seen three key customer trends guiding the turbines industry and impacting our business, in the backdrop of the evolving market scenario.

## Environmental Awareness



### Scenario

With climate change emerging as a major global concern, there is an increasing awareness and demand for environment-friendly products among a growing expanse of customers. Today, customers are looking for ecologically sustainable solutions across industries and segments.

### Impact

The rising environmental awareness transformation is propelling a powerful change in the norms and specifications for turbines, which are becoming more and more stringent. Adherence to these strict norms require companies worldwide to shift towards renewable energy and lower carbon footprint solutions.

### Response

Aligning ourselves to this new and growing trend, we have geared our business towards more eco-friendly and green manufacturing systems/processes, designed to reduce wastage at every stage while boosting productivity and efficiencies. Our R&D is also focussed on innovating environment-friendly products, that meet international standards and help customers in reducing their carbon footprint.

## Energy Demand



### Scenario

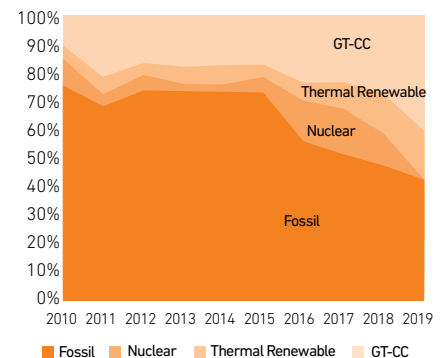
Around the world, the demand for energy is increasing year-on-year, leading to shortages, which nations and industries are trying to overcome through use of renewable energy sources. The Government of India has also been consistently promoting the Biomass Power and Bagasse co-generation programme and more recently waste heat recovery/municipal solid waste based power generating solutions.

industry, with its large manufacturing base, is also moving aggressively towards energy conservation, and use of renewable sources. In the global steam turbines market, fossil fuel based power generation declined from 69% in 2009 to 43% in 2019 whereas thermal renewable based power generation increased from 3% in 2009 to 17% in 2019, as per an International report.

### Response

We are one of the largest manufacturer of small steam turbines (5 MW - 30 MW) in the renewable sector globally specially in the Biomass IPP, Sugar co-generation, Process co-generation, Waste-to-energy sectors. Our turbines meet stringent international quality standards.

### Global Steam turbines market - (Fuel based in MW)



Source: An International Power Report

## Customisation



### Scenario

Across industries and businesses, customisation is fast becoming the norm rather than the exception. Mass production of universal products is giving way to specialised products and solutions crafted to the specific and unique needs of industries and applications.

### Impact

The specialised needs of customers in various segments today necessitate custom-specific products, applications and solutions in the turbine industry. The demand for bespoke products is steering a new level of customisation in this industry, especially among the new sectors of growth.

### Response

Our Business Development team is well trained and equipped to understand the distinctive customer needs and the transforming market requirements. They

assess and share these insights with our product design team, resulting in the development of differentiated, need-based products and solutions for our diverse customers across industries. Our strong focus on technology development through dedicated Design and Development team with the objectives of improving the efficiency of the products, making the product more cost competitive and also to meet the varying demands from both the domestic and international markets. In the 5-30MW range, we hold second position globally for the 2015-19 period with a 20% market share in 2019.



# Business Model

At the heart of our market and customer-driven business model is our unwavering focus on ensuring customer satisfaction through a streamlined and robust supply chain. Setting us apart from our competitors in the continuously transforming business environment is our unmatched ability to control and ensure quality across the value chain – from deepening our customer insights to delivering excellence in service.



## DELIVERING STAKEHOLDER VALUE

Our well-structured and efficient supply chain enables us to deliver sustained value to each of our stakeholders. Our business model is crafted to facilitate collective and long-term growth not just for our Investors and Partners but also our Customers, Suppliers and Employees, all of whom are integral to our strategic approach.

It is our constant endeavour to enhance our stakeholder engagement through regular constructive dialogue, which helps to gain valuable insights into their needs, thus guiding our future direction. These insights are also instrumental in leading our efforts towards the realisation of our long-term goals and targets, in the shared interest of all stakeholders.

## Powered by expertise in... Innovative Technology

We have created a powerful innovation edge that steers our growth trajectory to newer heights year after year. State-of-the-art design and testing facilities have empowered us with the capabilities to continuously enhance our product efficiencies. We are continually scaling up our design tools and software to deliver pioneering solutions to customers through cutting-edge designs. With our expert and dedicated team of design and development engineers leading the way, we are consistently coming out with more efficient and cost-effective products.

**Close collaborations with various international design houses and universities, both in India and overseas, is further augmenting our innovation thrust, resulting in more order and inquiry conversions and bookings, across geographies.**

### INNOVATION HIGHLIGHTS FOR FY 20

#### **Most Modern Test Bed Becomes Operational**

Our new test bed, which became operational during the year, is the most modern test bed for a turbine facility globally. It is designed to bring down time and cost in our development cycle.

#### **Order booking in New Segment**

A prestigious new order for a Geothermal turbine refurbishment marks our foray into the Geothermal sector. At the same time, it underlines our design and development capabilities. This vital breakthrough promises good prospect for us in the markets of Australasia and Africa.

#### **Supercritical CO<sub>2</sub> Cycle Turbines**

Led by close cooperation with technology institutes in India, we are making good progress in the development of supercritical CO<sub>2</sub> cycle turbines, which will scale up our frontline technology prowess manifold in the coming years.

#### **Advanced Drive Turbines for Oil & Gas**

We have developed new turbines for the Oil & Gas segment, where we see significant potential ahead for our competitive but advanced drive turbines, in which we achieved more breakthroughs during FY 20. This is a significant tool for us to expand into the lucrative new category and segment, and we have already made headway in the Middle East and South Asian markets, where we are registered as a pre-qualified vendor for several leading O&G companies. We see huge potential in this segment in the coming years, given the frequent replacement of turbines required in the Oil & Gas segment.