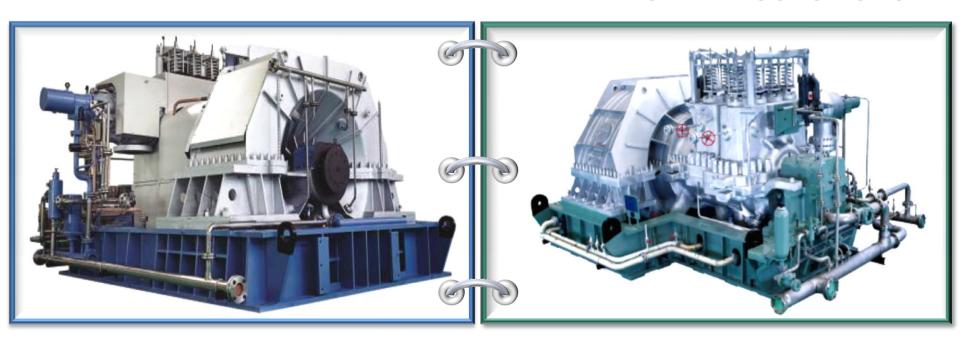


# CLEAN ENERGY TURBINE SOLUTIONS

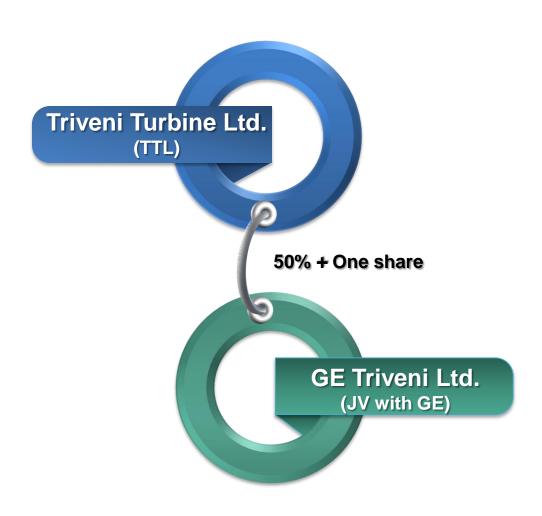


CORPORATE PRESENTATION

### Fact sheet



#### Fact sheet



Key global player in steam turbines industry with market leadership position in India, having over 60% market share in the range upto 30 MW

Annual Consolidated Revenues for FY 15 at ₹ 6.51 billion (~ USD 102 million)

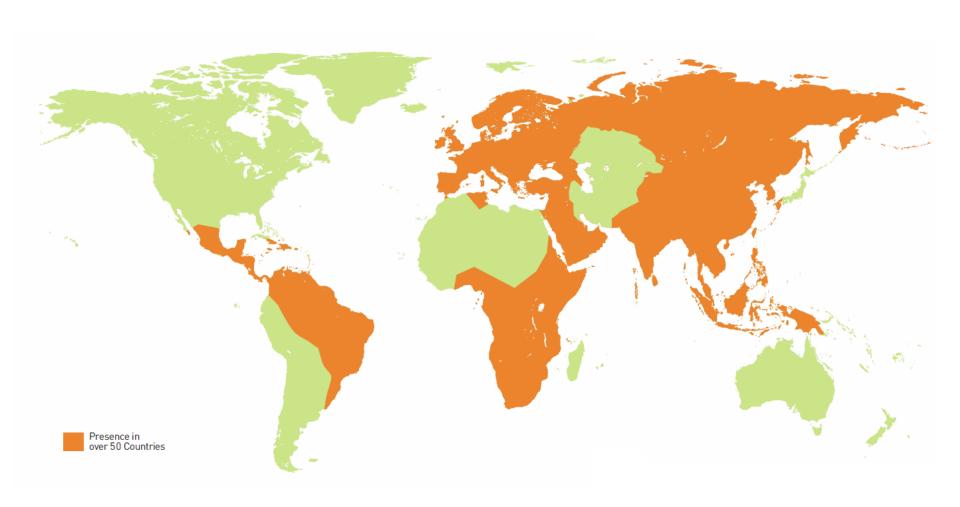
Significant presence in South East Asia, Europe, South America, Middle East & Africa, with installations in over 50 countries

Location: A 50,000 sq.mt factory area in the beautiful city of Bengaluru. 13 service centres across India

TTL is listed in NSE & BSE, two major stock exchanges in India



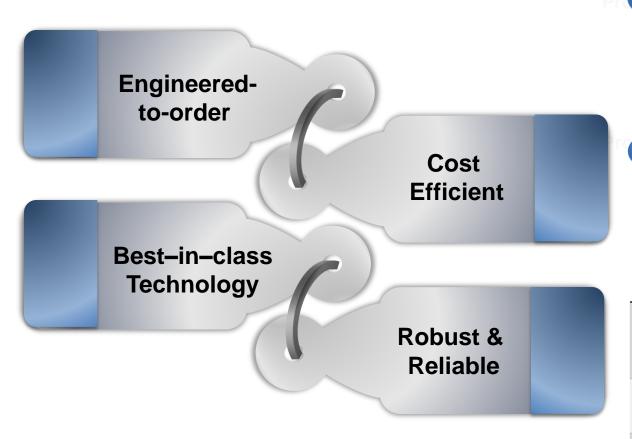
# Global Presence







#### Efficient Products



#### **Back Pressure Steam Turbines**

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

#### **Condensing Steam Turbines**

- Straight Condensing Type
- **Extraction Condensing Type**
- Bleed Condensing Type
- Injection Condensing Type

Power Generation Capacity	Up to 30 MW
Steam Inlet Temperature	Up to 545°C
Steam Inlet Pressure	Up to 120 Bar (a)
For GETL range	Above 30 MW to 100 MW





#### Efficient Products

#### **Standard scope includes**

- Steam turbine and its control system
- Control oil system
- Lubricating oil system
- Condensing system (as applicable)

- Gear box
- **#** Alternator
- Electrical metering/control/ protection system
- Instrument control system







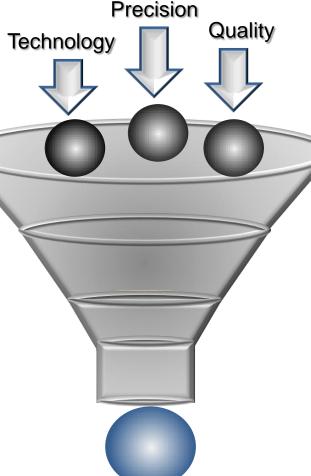
### Manufacturing Excellence

# State-of-the-art manufacturing facility

# ISO 9001 QMS ISO 14001 EMS certified

Manufacturing facility is equipped with:

- An array of 4 axis and 5 axis Vertical Machining Centres and Horizontal Machining Centres for machining of blades
- Mill-turn centre for machining of rotors
- CNC gantry and CNC VTL for casing machining to high accuracies
- Latest software applications like Integrated CAD/CAM for seamless manufacturing of turbine parts, Zeiss Co-ordinate Measuring Machines (CMM) for precision measurements of critical components
- Assembly-cum-test beds for assembling steam turbines from start to finish and recording the test results on a wireless Data Acquisition and Display System
- High Speed Vacuum Balancing Machine for balancing rotors
- **CNC Coordinate Measurement Machine**
- Turbine no load steam test facility
- GHTM Goratu Turn Milling Machine for Rotors above 30 MW for the GETL range of products.









## Quality First

- **An ISO 9001 14001 company**
- Products meet International standards such as API, ASME, AGMA, IEC, NEMA etc.
- A network of approved suppliers and dedicated sub-contractors complying with stringent quality norms.
- Quality Checks performed before dispatch
  - ✓ Ultrasonic Test
  - ✓ Radiography
  - ✓ Hydro Test
  - ✓ Profile Measurement
  - ✓ ZygloTest

- ✓ Dynamic Balancing
- ✓ Alignment Check
- ✓ Full Speed Mechanical Steam Run Test
- ✓ Sound Level Measurement
- ✓ Vibration Measurement
- ✓ Governor Response







### Research & Development

Strong design team supported by consultants and domain experts

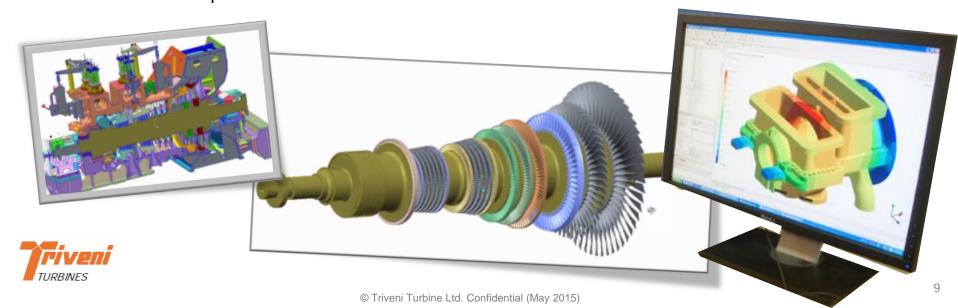
Association with globally acclaimed turbo-machinery design houses

The R & D advanced product program has commercialized over 50 models thus achieving a robust fleet experience base.

Innovative designs delivering maximum performance and higher efficiency

Innovative product development concepts such as design to cost, QFD, FMEA techniques, DOE

Deploy Latest computer aided design and engineering software for continuous product development





### **Intellectual Property Rights**



- TTL has filed 142 unique IP filings till March 2015.
- Involvement of IP team is right from product conceptualisation stage to the final design stage thus establishing a comprehensive security system to safeguard the valuable IPRs.
- The Company won the prestigious National Intellectual
  Property Award 2013 in the category of "Top Organisation in
  Design" for its outstanding contribution to intellectual
  property in the country.
- TTL has been awarded certificate of "Commendation for Significant Achievement" in the CII-EXIM Bank Award for Business Excellence 2014. This recognition has been achieved by TTL for the four time in the consecutive years.



#### Unparallel Service

Aftermarket Services are integrated under Customer Care Cell (CCC) which provides a comprehensive range of customized service solutions and complete life cycle support for industrial steam turbines

- Full speed vacuum balancing tunnel for balancing turbines, compressors/alternators can undertake balancing for turbo machines up to 300 MW depending on specifications.
- Offers all after-sales requirements from erection and commissioning (E&C) to maintenance and
   spare parts to efficiency improvement.

Overhauling & troubleshooting.

Refurbishment & Residual Life Assessment of all makes of turbines, compressors etc.

Customization & upgradation of old turbines for both industrial and utility segments in India and global markets.

Currently offering refurbishment solutions for higher MW turbines for all makes.







### Diverse Applications & Industry Segments

### Inc

#### **Industry Segments**

- Sugar
- Palm Oil
- Distillery
- Pulp & Paper
- Food Processing
- Textiles
- Steel & Metal
- Carbon Black
- Cement
- Chemicals & Fertilisers
- Oil & Gas and Petrochemical
- District Heating & Cooling
- Municipal Solid waste

#### Applications

- Co-generation
- Captive Power Plant
- Combined Heat & Power
- CCP / Waste Heat Recovery
- Incineration
- Biomass







### Power Generation Market Segments



#### **Market Characteristics**

- Purchase decision based on robust designs, high level of technology, efficiency & low life cycle cost
- Price sensitive market
- Premium on shorter deliveries
- Strong servicing capabilities and lifetime relationship with the customer is expected.





Three principal

segments that generate

as well as the export

demand in both domestic

#### Power Generation Market Potential

The industrial power generation market represents the decentralised and captive power generating industry.

> Industrial capital expenditure – Both greenfield and brownfield co-generation based captive

power plants

Opportunity based sale of power to the grid by captive units

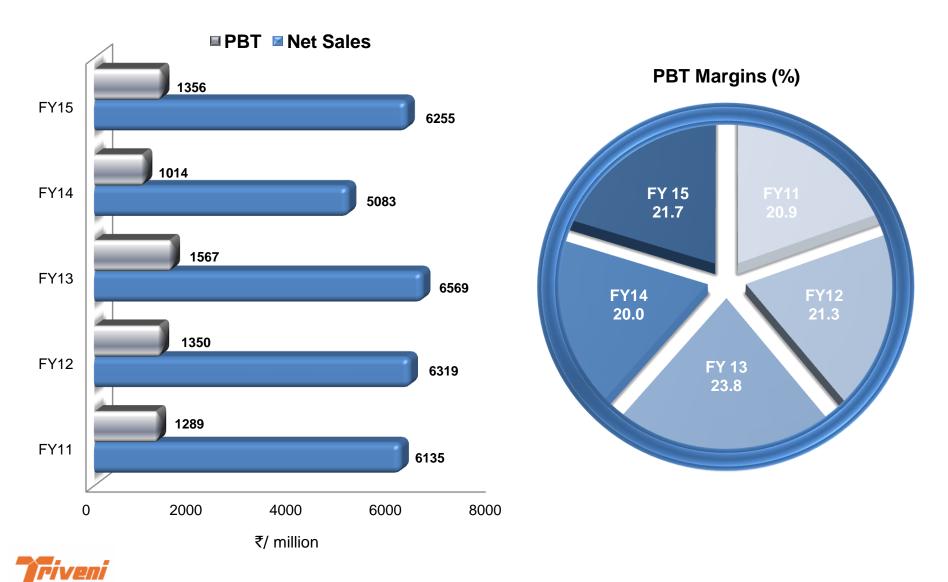
Renewable Energy -Small-scale renewable-based Independent Power Producers, agro-based co-generation and renewable waste-heat



market



### Financial Performance





## Financial Performance

(Figures in ₹ million)

	(rigares in Crimion)							
	Standalone					Consolidated		
	Q4 FY 15	Q4 FY 14	FY 15	FY 14	% change	FY 15	FY 14	% change
Total Income	1955.1	1316.2	6255.2	5082.7	23%	6507.7	5179.6	26%
EBITDA	502.8	325.3	1535.0	1148.2	34%	1566.3	1144.0	37%
EBITDA Margin	26%	25%	25%	23%		24%	22%	
Depreciation & Amortisation	25.2	32.5	145.0	128.6	13%	157.7	135.4	16%
PBIT	477.6	292.8	1390.0	1019.6	36%	1408.6	1008.6	40%
PBIT Margin	24%	22%	22%	20%		22%	19%	
Finance Cost	4.2	1.4	6.4	6.0	7%	17.5	11.8	48%
PBT (Before Exceptional Item)	473.4	291.4	1383.6	1013.6	37%	1391.1	996.8	40%
PBT Margin	24%	22%	22%	20%		21%	19%	
Exceptional Item	28.0		28.0			28.0		
PBT (After Exceptional Item)	445.4	291.4	1355.6	1013.6	34%	1363.1	996.8	37%
PAT	293.9	192.7	910.8	684.5	33%	905.3	679.5	33%
PAT Margin	15%	15%	15%	13%		14%	13%	





# Financial Performance – Ratio Analysis

Ratio	FY 14	FY 15
EBITDA / Sales	22.6%	24.5%
PBIT / Sales	20.1%	22.2%
PBT / Sales	20.0%	21.7%
PAT / Sales	13.4%	14.6%
Return on Equity (ROE)	42.4%	40.0%
Return on Capital Employed (ROCE)	62.0%	60.0%
Sales / Fixed assets	4.7	4.4
Current Ratio	1.1	1.6
Earnings per Share (₹)	2.07	2.76





#### Financial Performance

- The total income for the quarter and the year under review has been higher by 49% and 23% respectively.
- The after-market business grew by 32% during the year and the proportion of the after-market sales to total sales has improved from 21% in FY ■ 14 to 23% in FY 15 on an overall increased turnover.
- The export turnover has gone up by 75% in FY 15 to ₹ 2.64 billion and the proportion to the total sales have also gone up from 29.7% in FY 14 to 42.3% in FY 15.
- During FY 15, the total product order intake has been ₹ 5.03 billion, which is a growth of 10% in

- comparison to the corresponding period of last year.
- The export order booking for FY 15 stood at ₹ 2.93 billion, which is a growth of 100% over the corresponding period of last year.
- The overall order booking at ₹ 6.46 billion during FY 15, including aftermarket order booking of ₹ 1.44 billion has grown by 9.3% in comparison to the corresponding period of last year.
- The outstanding order book on a standalone basis, as on 31st Mar 2015 has been ₹ 6.03 billion including aftermarket orders, while on a consolidated basis, the order book is ₹ 7.47 billion.





## Joint Venture with General Electric (GE)

- Triveni Turbine Ltd. formed a 50:50 Joint Venture with GE on 15th April 2010. GE Triveni Ltd. (GETL) headquartered in Bengaluru, a subsidiary of TTL, will design, supply, sell and service advanced technology steam turbines in India in the range above 30-100 MW for power generation applications in India and globally.
- GETL to get technology and on-going R&D support from GE and TTL and will use TTL's Bengaluru facility for turbine manufacturing.
- During the year, the joint venture with GE, GE
  Triveni Limited (GETL), has received orders worth
  ₹ 0.7 billion. The outstanding order book as on

- 31st March 2015 for JV is ₹ 2.0 billion. GETL has achieved significantly higher turnover than the previous years. The turnover of the JV stood at ₹ 0.7 billion.
- The JV will be commissioning its first overseas order during the current year, which should enable it to establish references and help getting more orders in the future. Further, many of the supplies made during the previous years in the domestic market will also get commissioned during FY 16, which should help the Company to finalise many enquiries in the domestic market also.





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These statements are based on information currently available to us, and we assume no obligation to update these statements as circumstances change. There are risks and uncertainties that could cause actual events to differ materially from these forward-looking statements. These risks include, but are not limited to, the level of market demand for our services, the highly-competitive market for the types of services that we offer, market conditions that could cause our customers to reduce their spending for our services, our ability to create, acquire and build new businesses and to grow our existing businesses, our ability to attract and retain qualified personnel, currency fluctuations and market conditions in India and elsewhere around the world, and other risks not specifically mentioned herein but those that are common to industry.

Further, this presentation may make references to reports and publications available in the public domain. Triveni Turbine Ltd. makes no representation as to their accuracy or that the company subscribes to those views / findings.

