

A photograph of several offshore wind turbines in a body of water during sunset. The sun is a bright, glowing orb on the right side of the horizon, casting a warm, golden light across the sky and water. The sky is filled with soft, wispy clouds. The water is calm, reflecting the light from the sun. The wind turbines are silhouetted against the bright sky and water. One turbine is prominently featured in the foreground on the right, while several others are visible in the distance to the left and further out on the horizon.

# **Suzlon Energy Limited**

CORPORATE PRESENTATION

OCTOBER 2016

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# Agenda

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**Introduction**

Wind Business

Solar Business

SE Forge

Finance

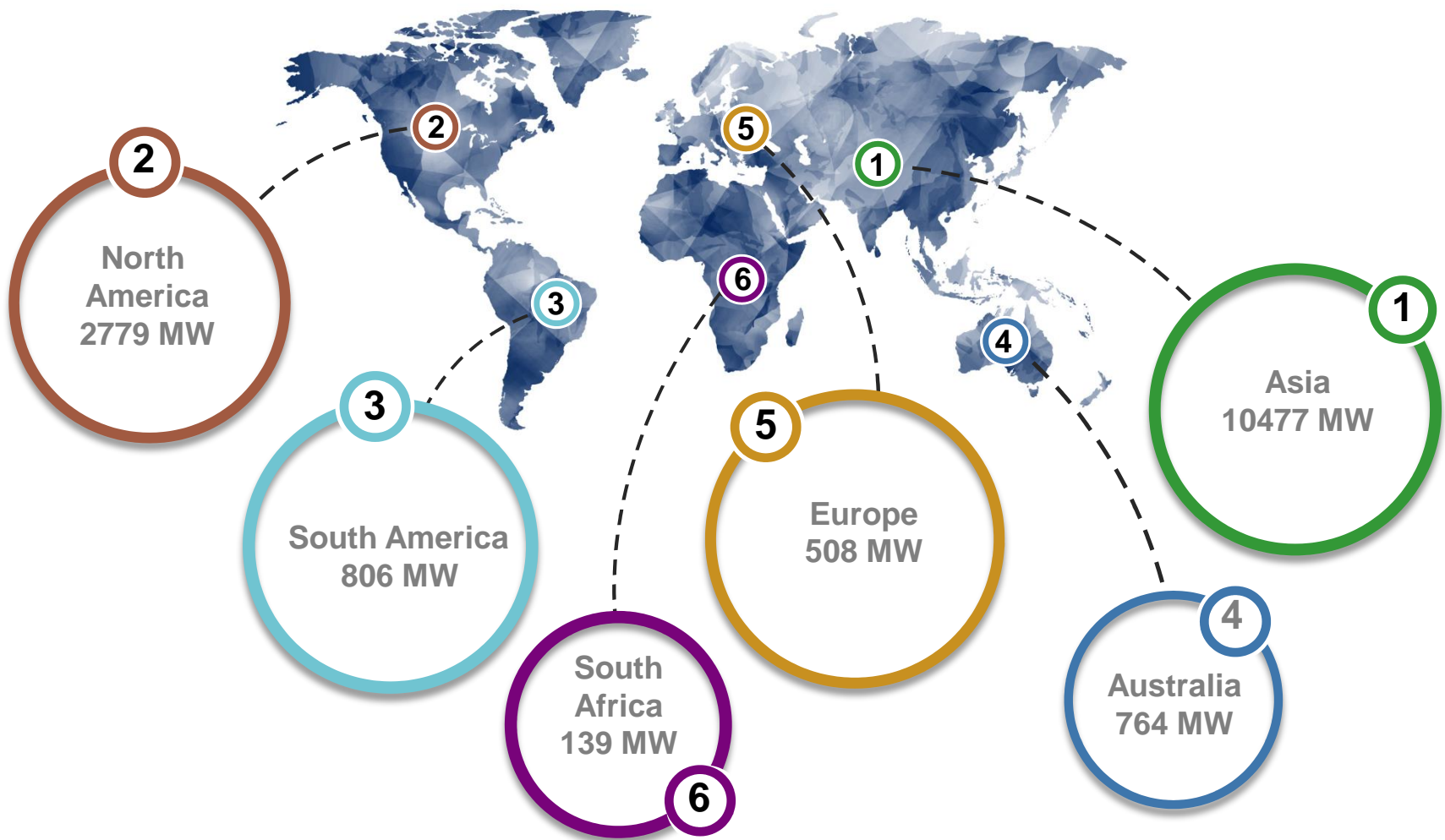
Vision 2022

# Suzlon Overview

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- **>15 GW** cumulative worldwide installations
- **~4,200 MW** manufacturing capacity (Wind)
- **>7,500** Workforce
- In house **Global R&D centers** in USA, Germany, Netherlands, Denmark, India
- **Largest renewable company in India**
- **Recent foray in Solar Space**

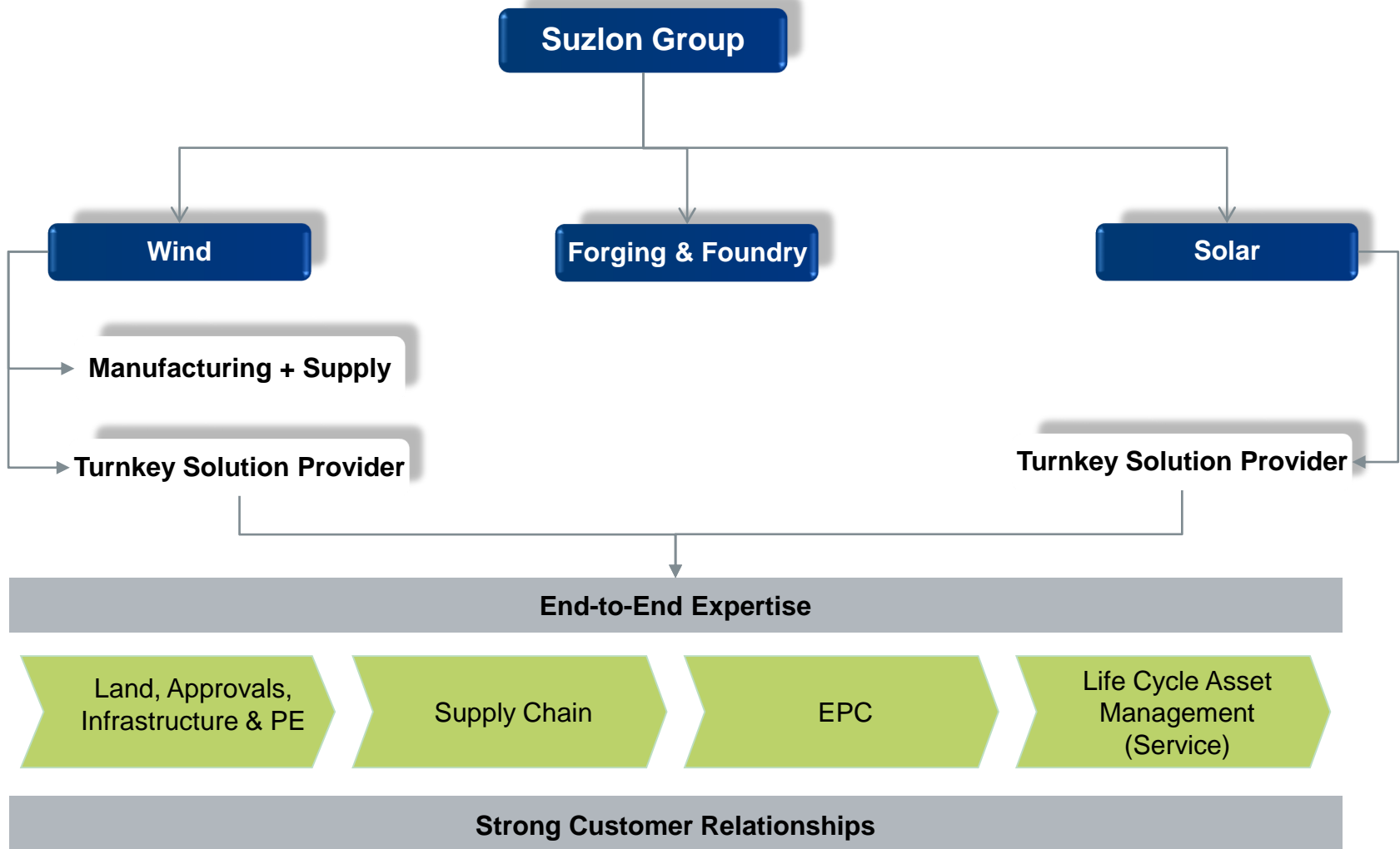
## ~15.5 GW of Cumulative Worldwide Wind Installations till date



*Note: Does not include Servion Installations*

**Presence in 19 countries across 6 continents**

# Business Overview



## Executive Board



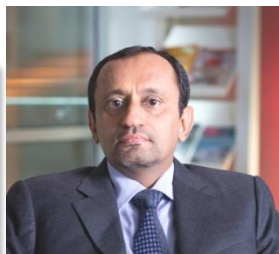
**Tulsi Tanti, CMD**

- Group Strategy and Vision
- Product Strategy and Marketing
- Stakeholder Relationship



**J.P. Chalasani, Group CEO**

- Group Business Management
- India Business (Wind and Solar)
- Corporate Communication
- Human Resource



**Kirti Vagadia, Group CFO**

- Group Finance
- Investor Relations
- Group Legal
- Management Audit

## Executive Board



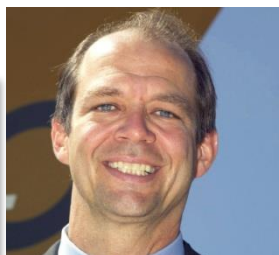
**Vinod R. Tanti, Whole Time Director & COO**

- Supply Chain Management
- Project Execution
- Global QHSE



**Rakesh Sarin, CEO - International Business and Global Service**

- International Business
- Global Services
- SE Forge



**Duncan Koerbel, CTO**

- Innovation
- New Product Development
- Global R&D and Engineering



# Our Vision, Mission and Values - 2022

## Vision

*To be the Best Renewable Energy Company in the world*

*Work towards Social, Economic and Sustainable development  
to create better life for future generations*

## Mission

*Deliver utility scale, best in class, end to end integrated renewable energy solutions to our customers*

Focus on High Volume & Profitable markets

Focus on Wind-Solar Hybrid utility scale  
solutions

Deliver Best in Class Value Added  
Service Globally

Continuously reduce Levelized Cost of Energy (LCOE)

Regional Manufacturing with global sourcing

End to End Integrated Renewable Energy Solutions provider

Asset Light, Debt Light Business Model

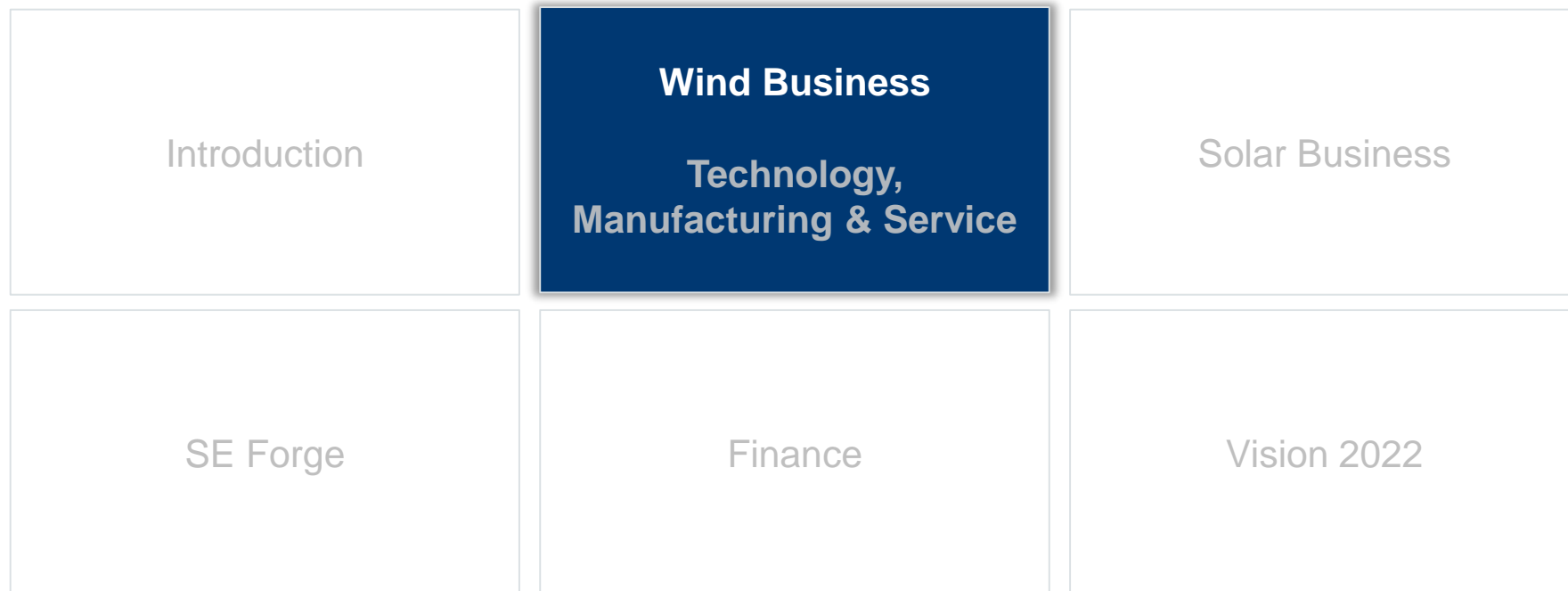
Create customer centric and performance oriented organization

## Values

*Integrity | Agility | Creativity | Adding Value | Commitment*

# Agenda

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# Globally Proven In-House R&D Capabilities

Suzlon Technology Locations:		
Germany	Hamburg	<ul style="list-style-type: none"> <li>- Development &amp; Integration</li> <li>- Certification</li> </ul>
	Rostock	<ul style="list-style-type: none"> <li>- Development &amp; Integration</li> <li>- Design &amp; Product Engineering</li> <li>- Innovation &amp; Strategic Research</li> </ul>
The Netherlands	Hengelo	<ul style="list-style-type: none"> <li>- Blade Design and Integration</li> </ul>
India	Pune	<ul style="list-style-type: none"> <li>- Design &amp; Product Engineering</li> <li>- Turbine Testing &amp; Measurement</li> <li>- Technical Field Support</li> <li>- Blade Engineering</li> </ul>
	Vadodara	<ul style="list-style-type: none"> <li>- Blade Testing Center</li> </ul>
	Hyderabad	<ul style="list-style-type: none"> <li>- Design &amp; Product Engineering (BOP team)</li> </ul>
	Chennai	<ul style="list-style-type: none"> <li>- Design &amp; Product Engineering (Gear Box Team)</li> </ul>
Denmark	Aarhus Vejle	<ul style="list-style-type: none"> <li>- SCADA</li> <li>- Blade Science Center</li> </ul>



Hamburg



Rostock



Hengelo



Pune

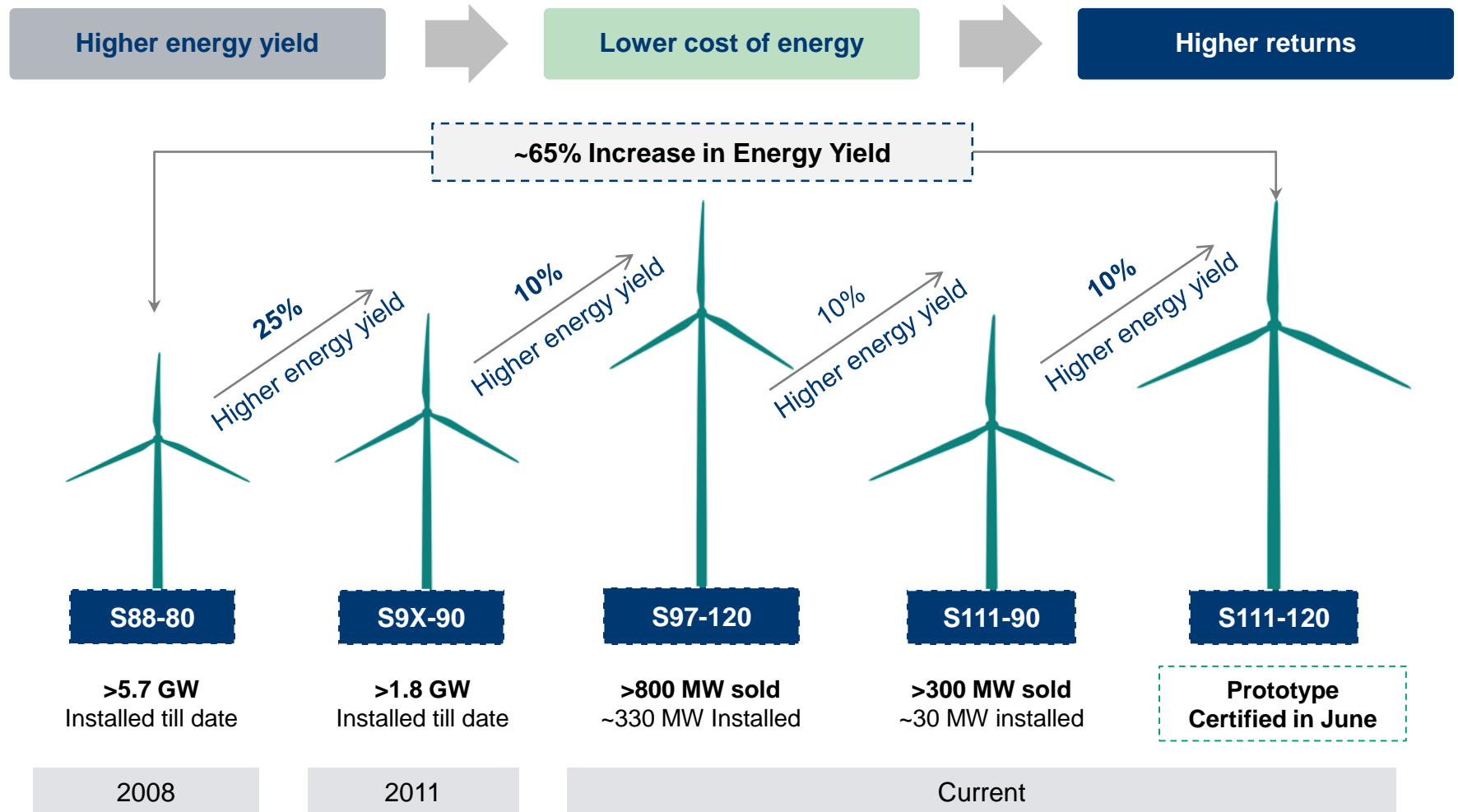


Aarhus



Vejle

## 2.1 MW Series: Proven Platform with 100,000,000 Operating Hours



# Hybrid Towers – Innovation at Work

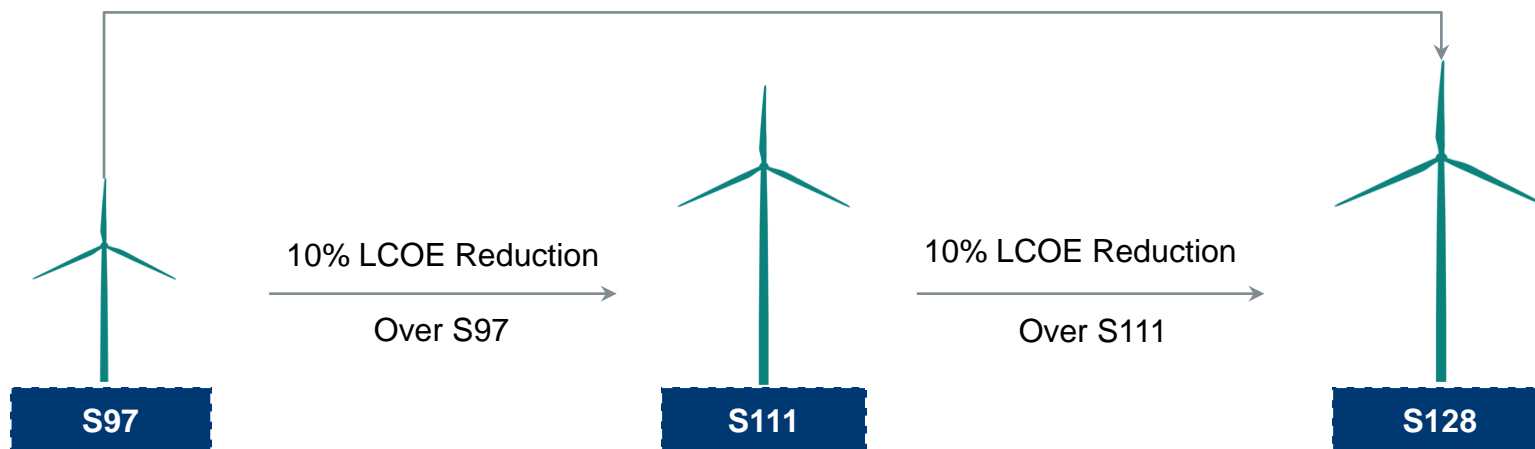
## Hybrid Tower - Combination of lattice and tubular



- **Higher hub height (120 M) at optimized cost**
  - Reduced LOCE due to higher AEP
  - Reduced steel requirement
  - Lower foundation cost
  - Logistic friendly – access to sites that were earlier logistically challenging
- **Available in S97 and S111 product suite**
- **S97 – 120 Prototype achieved 35% PLF**
  - Installed in Jan'14; At Nani Ber District of Kutch, Gujarat
  - Generated 64.28 lacs units (kWh) over 12 months
- **S111-120: Prototype Certified**
  - Targets over 40% PLF

## Global Coverage - Next Generation Products

~20% reduction in Wind Levelized Cost Of Electricity (LCOE)



Product	S128 – 2.6 MW	S128 – 3.0 MW
MW Rating	2,600 kW	3,000 kW
Rotor Diameter	128 meters	128 meters
Tower Height	120 m - 140 m	120 m - 140 m
Wind Class	IEC III (Low Wind)	IEC II (Medium Wind)
Focus Markets	Domestic	International
Time to Market	2018	2018

# Vertically Integrated Low Cost Supply Chain

Installed Capacity (MW) - spread across 20 manufacturing & testing locations in India

## Manufacturing Capacity

India based	~3,600 MW
China JV*	~600 MW
Total	~4,200 MW

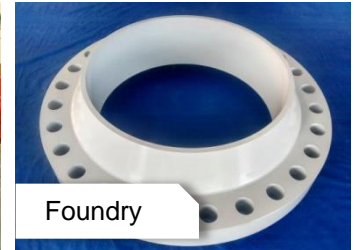
*\*Holds 25% stake in China JV  
Calculated based on Nacelle assembly capacity*



Nacelle and Hub



Generator



Foundry



Tubular Tower



Control Panel



Forging



Blade Testing



Rotor Blade



Transformer



Mould

# Pan India Manufacturing Footprint

	Blade	Tower	Nacelle
Andhra Pradesh	✓	✓ *	
Gujarat	✓	✓	✓ (Daman)
Karnataka	✓		✓
Madhya Pradesh	✓		
Maharashtra	✓	✓ *	
Rajasthan	✓		
Tamil Nadu	✓	✓ *	✓ (Puducherry)

\*Contract Manufacturing

Reduced Logistic Time



Lower Cost



Lower Working Capital Days

- Blade Logistics is most costly, complex and time consuming
- Only player to have blade capacity in every wind state
- To translate into huge savings in logistics costs



## Best In Class Service Capabilities

Custodian of  
**US\$ 13.5 bn**  
asset base  
worldwide

**~15 GW**  
Under Service fold

**~100%**  
Renewal Track  
Record

**19.8%**  
5 year Revenue  
CAGR  
(FY16 US\$ 225 M)

- **Large Operating Fleet under Service**
  - 20 years of operating history
  - ~15.5 GW of installations
  - 100% of turbine sold in India is under our service
  - 90+% turbine sold outside is under our service
- **Availability consistently above industry standards**
- **Near 100% renewal track record**
- **Provide solutions to improve turbine output**
- **24X7 SCADA Monitoring and online tracking systems**

# Agenda

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Introduction

**Wind Business  
Markets**

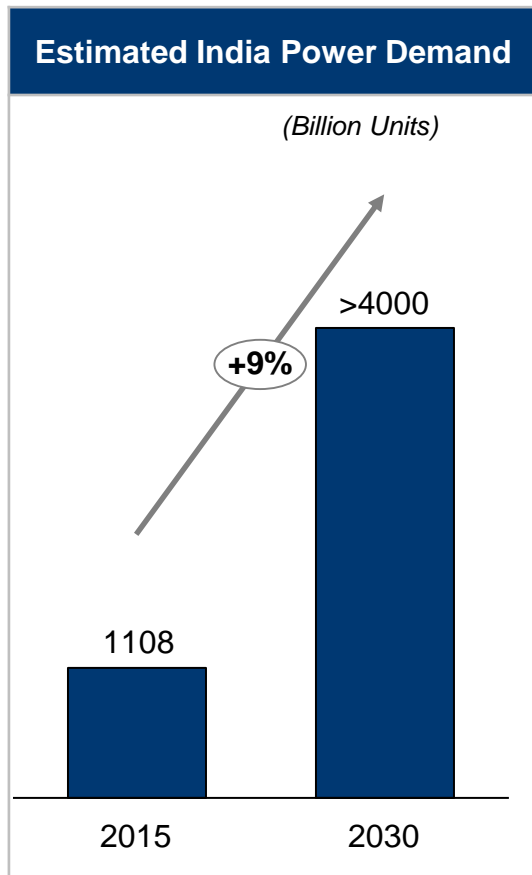
Solar Business

SE Forge

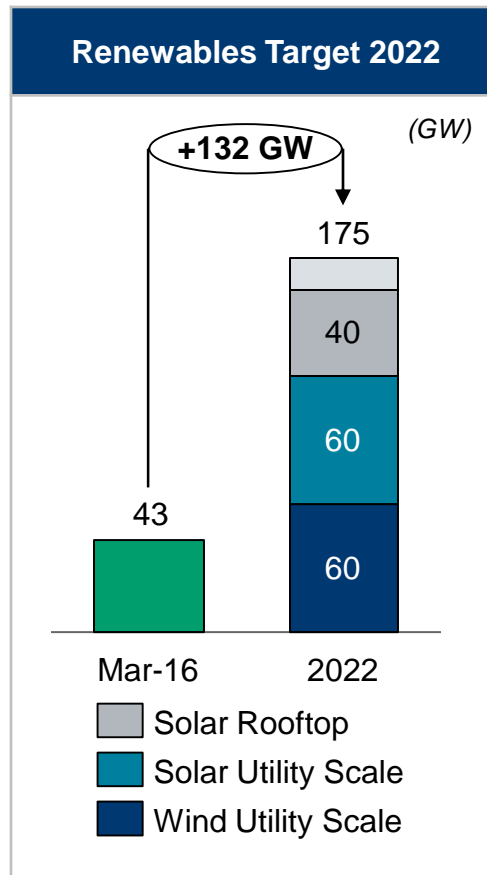
Finance

Vision 2022

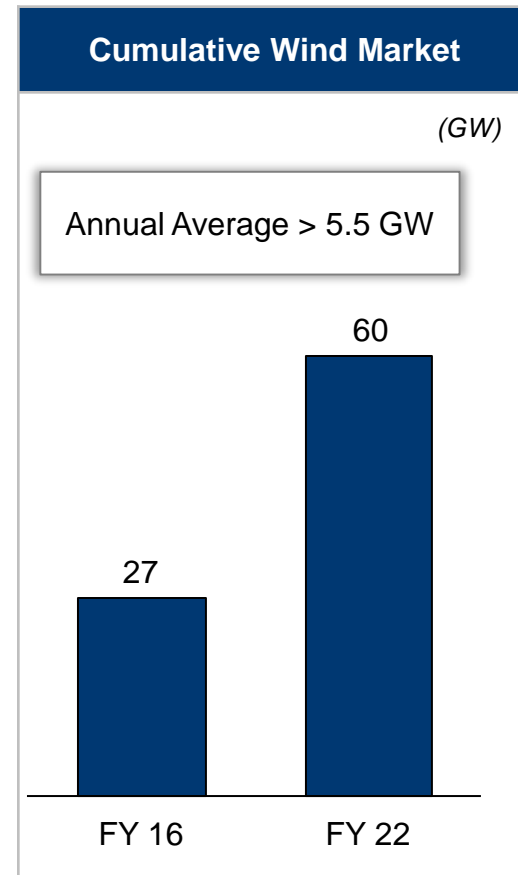
# India: Strong Growth Fundamentals for Renewables



Source: Ministry of Power

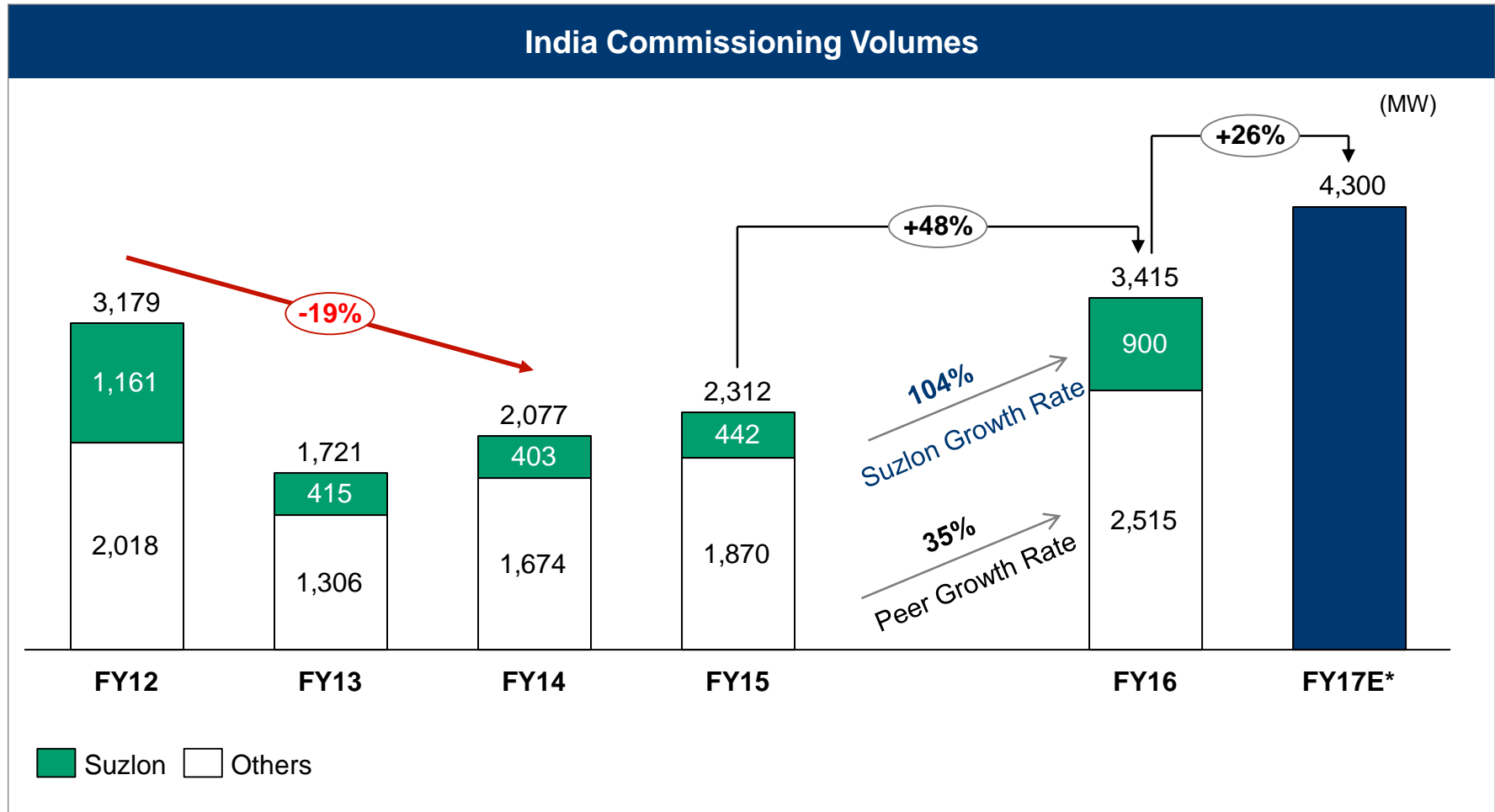


Source: MNRE



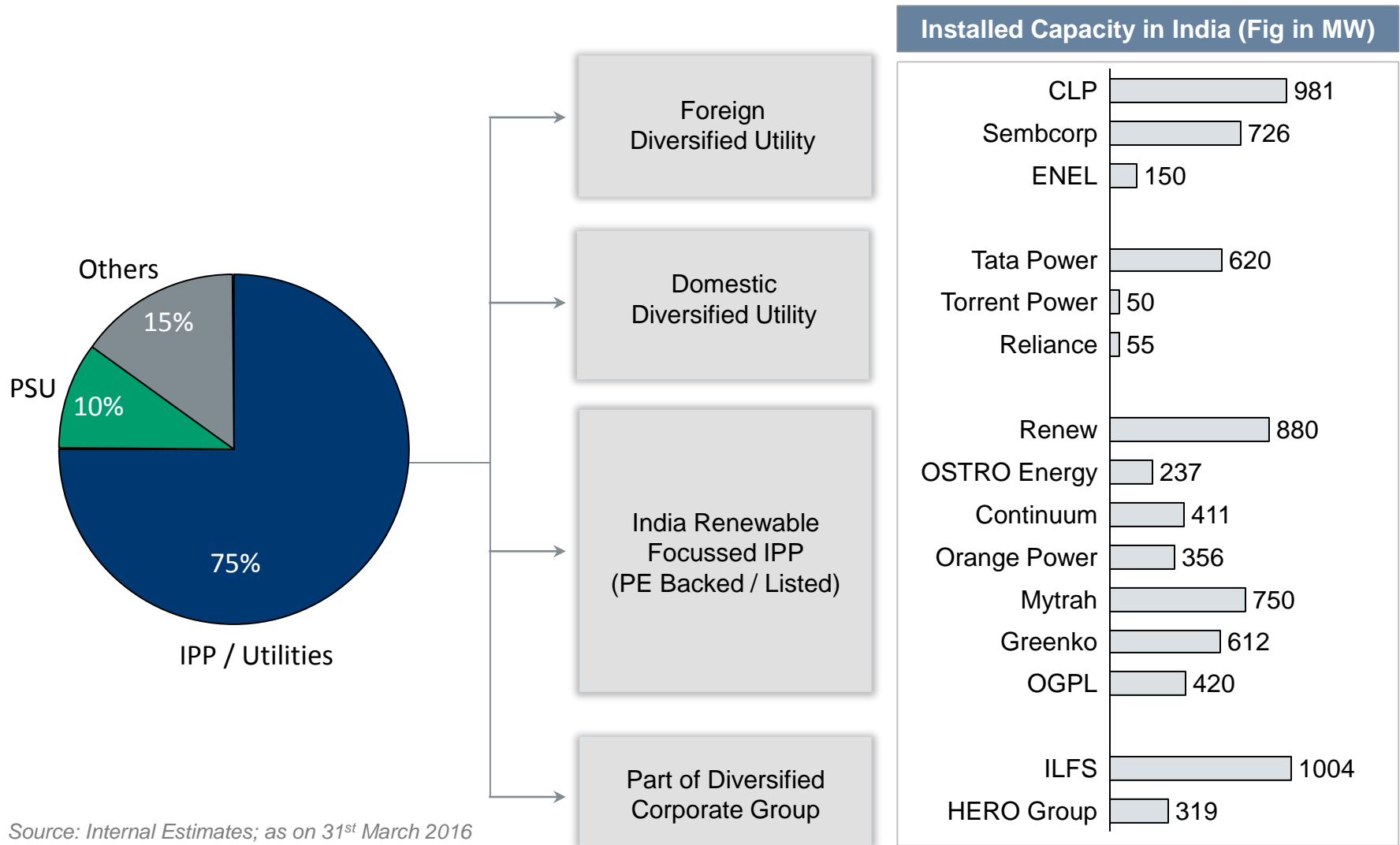
Source: MNRE

## FY16 Saw Highest Annual Wind Capacity Addition in Two Decades



\*FY17 E – Source: Internal Estimates

# Increasing Comfort of Global Institutional Customers in India Wind



Source: Internal Estimates; as on 31<sup>st</sup> March 2016

# Key Government Initiatives: Demand Drivers

## Strengthening Demand Environment

- Introducing Renewable Generation Obligation (RGO)
- Enforcing Renewable Purchase Obligation (RPO)
- Creation of demand from non renewable rich states
- Waiver of Inter State transmission charges & losses
- UDAY scheme to improve DISCOM financial health

## Strengthening Grid and transmission systems

- Green Corridor
- Scheduling and Forecasting
- Inter State Transmission

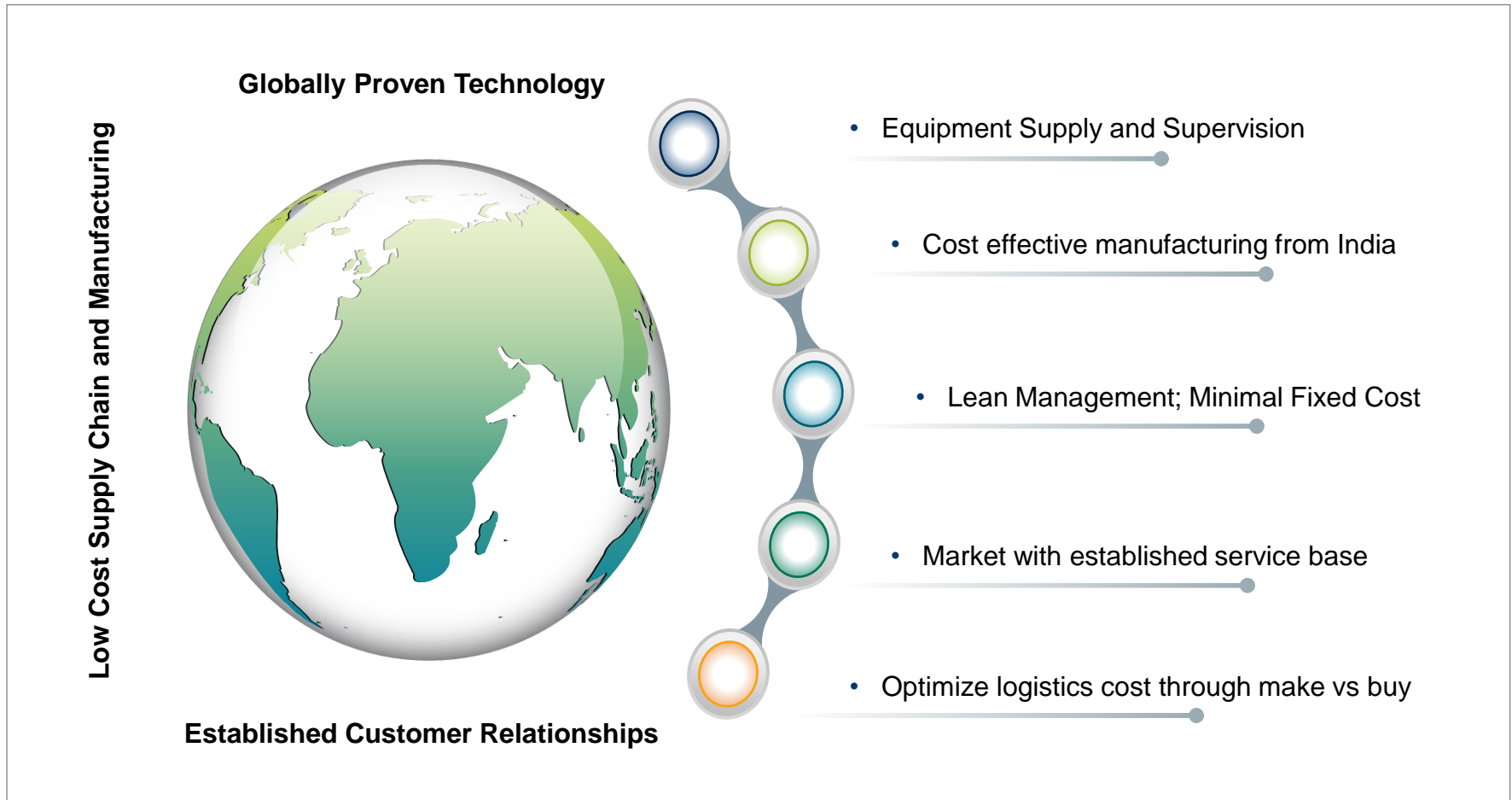
## Future Growth Drivers (Policy Under Draft)

- Wind Solar Hybrid Farms
- Repowering
- Offshore
- National Renewable Energy, Act

# Suzlon Strengths in India



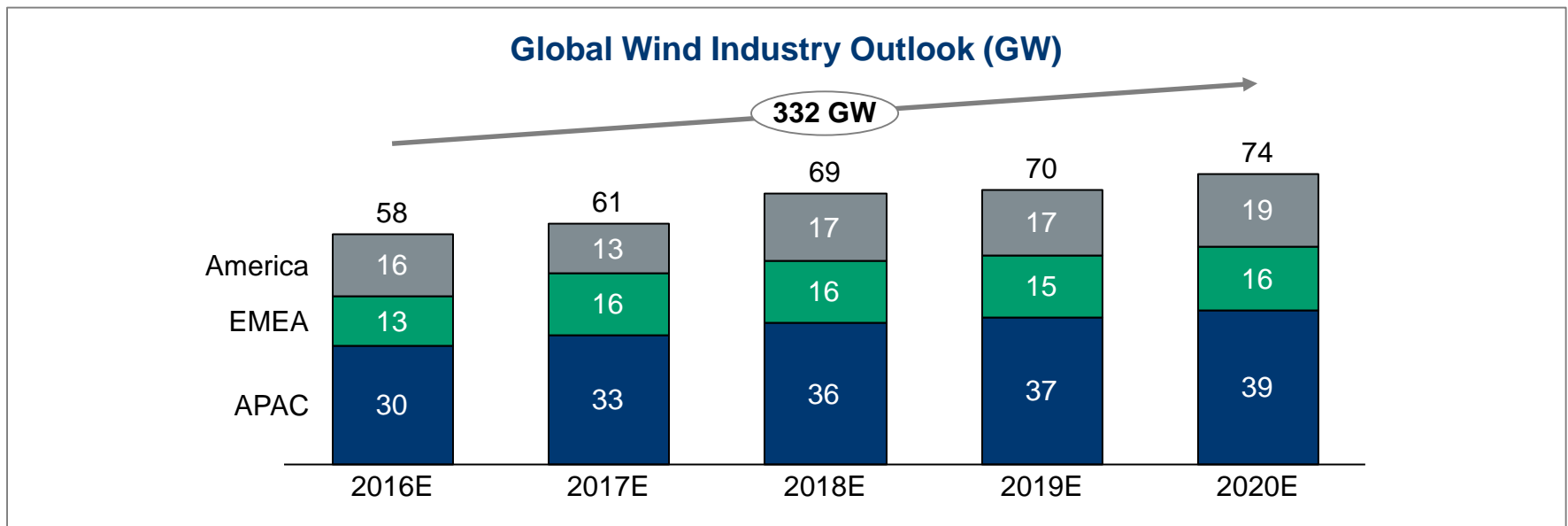
# International Business Strength & Strategy



Map not to scale. All data, information, and map are provided "as is" without warranty or any representation of accuracy, timeliness or completeness.



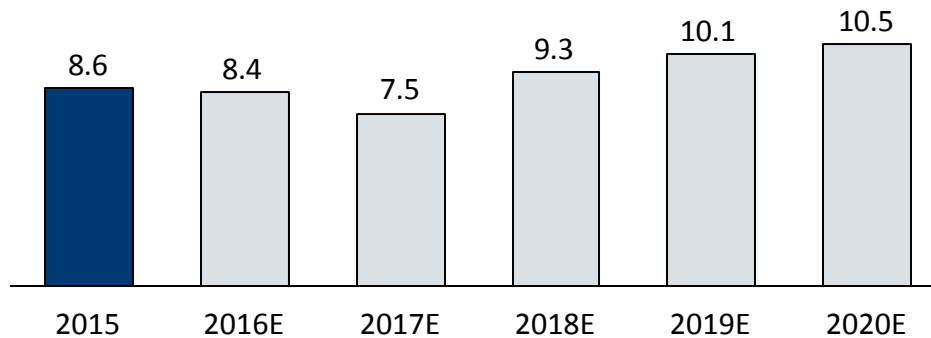
# International Market Roadmap



Source: BENF Q2 2016 Wind Market Outlook

# US market Offers Substantial Opportunity

**US Market Outlook (Annual Installations in GW)**



Source: MAKE

## PTC Qualification

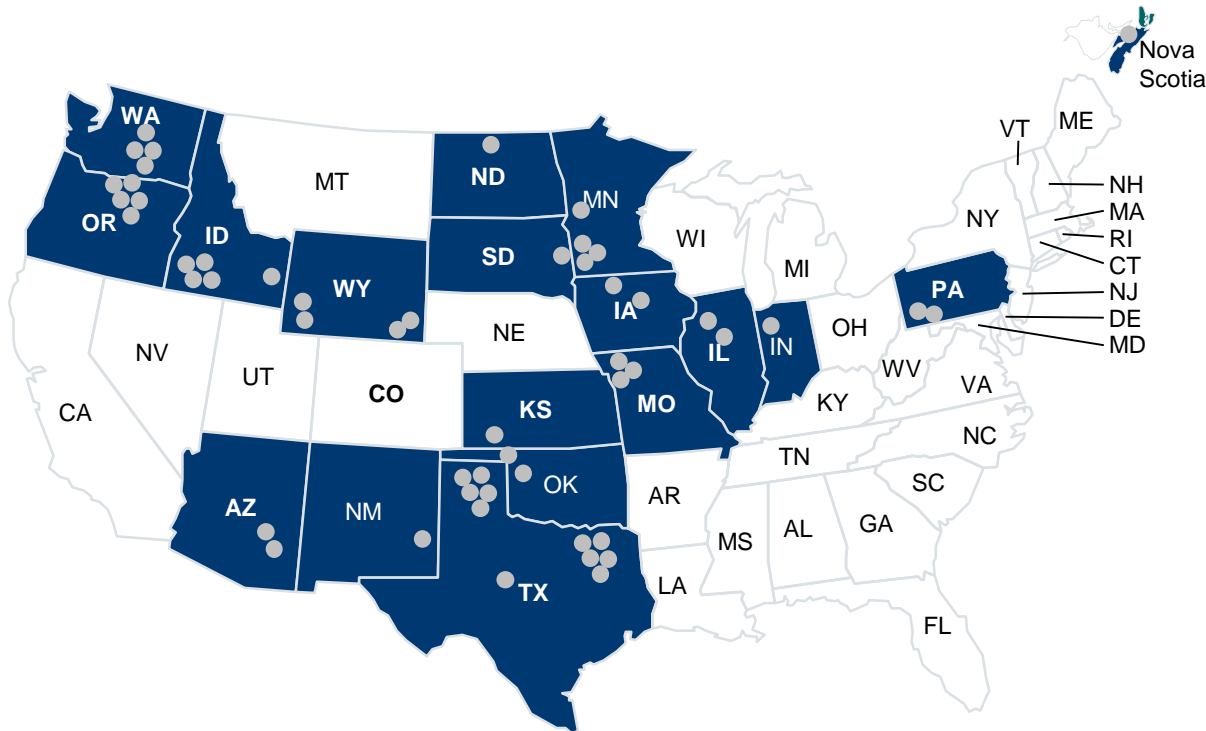
Construction Starting in:	PTC (%)
2016	100%
2017	80%
2018	60%
2019	40%

## Suzlon Strengths in USA

- ✓ ~15 Years of Strong Presence
- ✓ ~2.7 GW of Cumulative Installations
- ✓ Proven Technology
- ✓ Strong customer relationships
- ✓ Proven execution and service track record
- ✓ Strong Brand Name
- ✓ Low cost manufacturing base

# Solid Presence in USA – Customer & Geographic

2.7 GW Installed – 1,024 WTGs Under Service Contract



Customer Name	MW
Exelon	599
Iberdrola	517
NRG	416
EDPR	399
Everpower	239
Atlantic Power	120
Capstone Infrastructure	32
Olympus	21
Others	44
<b>Total under Service contract</b>	<b>2,386</b>

# Agenda

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# Solar Foray: Turnkey Solution Provider

## Leveraging Common Strengths in Wind for Solar

### Technical Strength

- ✓ Site Development Process
- ✓ EPC – Wind more complex than Solar
- ✓ O&M – Wind more complex than solar
- ✓ System Integration

### Relationship Strength

- ✓ Regulatory Approvals
- ✓ Customers
- ✓ Project Financing assistance to customers

## Business Model: Turnkey Solution Provider

### Own Direct Bidding + Divestment

- ✓ To establish initial track record
- ✓ To be divested in full

### Third Party Order

- ✓ Focus going forward

## Business Strategy

### Minimal Capital Investment

- ✓ Zero Manufacturing
- ✓ Outsourcing Model
- ✓ Low Working Capital intensive

### Low Fixed Cost

- ✓ Lean management team
- ✓ Leveraging the existing EPC & O&M team

### Turnkey + O&M Margin

- ✓ High Volume potential

From “Wind Player” to “Renewable Player”

# Solar Bidding Status Update

**515 MW**

Bids Won

**Rs. 5.36**

Per unit  
average tariff

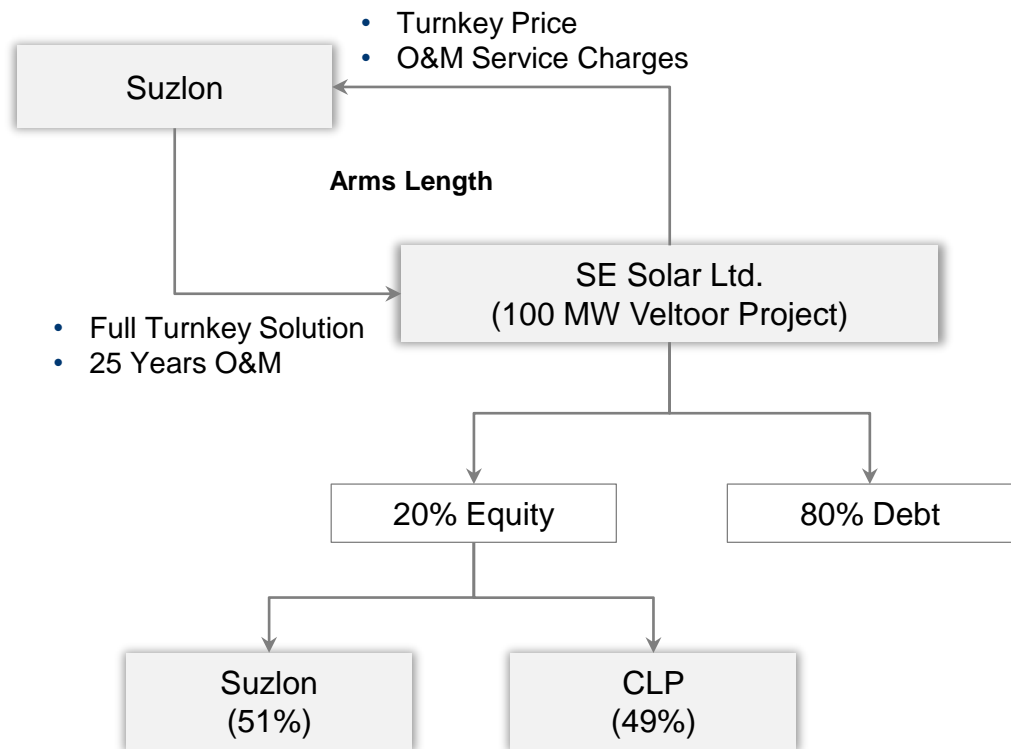
**340 MW**

PPA Signed

**100 MW**

Divestment  
achieved

## 100 MW CLP Deal Synopsis



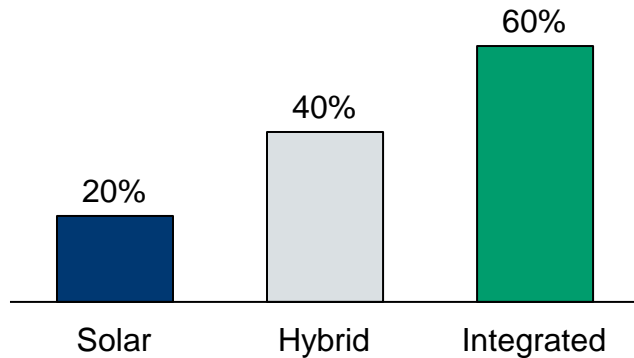
(Acquired for Rs. 73.5 crs from Suzlon)

**CLP to acquire balance 51% from Suzlon 1 year Post COD**

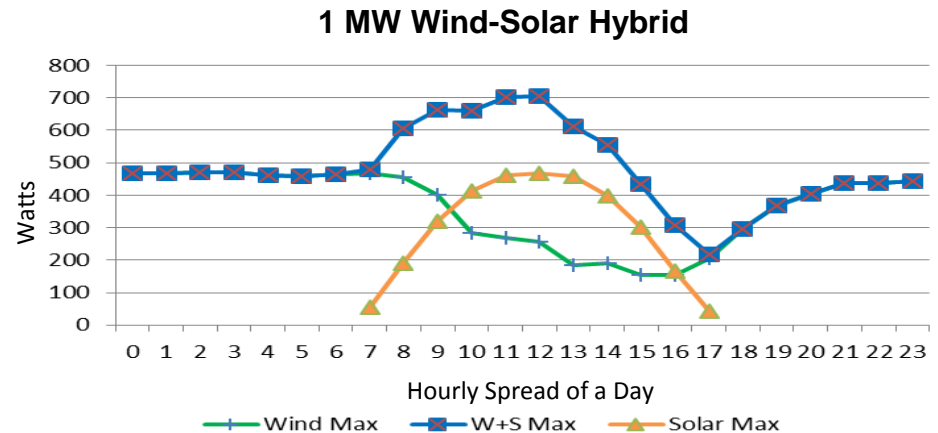
**Note: Investors identified for another 110 MW projects**

# Wind Solar Hybrid is the Future

## Improve Grid Utilization



## Complimentary Generation profile



## Key benefits of Hybrid Power (Wind and Solar)

### Better Grid Management

- Improved Grid Utilization
- Smoothing of intermittency
- Better accuracy in Combined forecasting / scheduling

### Limited Investments

- Reduced per MW land requirement
- 20% Capex reduction in pooling substations and EHV lines

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# Forging & Foundry Business

**42,000** Rings  
P.A. forging  
capacity

**1,20,000**  
MTPA  
Melting Capacity

**55,000** MTPA  
Machined Casting  
Capacity

## Wind Energy

**SUZLON**  
POWERING A GREENER TOMORROW

**Vestas**

**WIND WORLD**  
Clean Energy Forever



Leitner Shriram  
Manufacturing Limited

## Bearings



## Oil & Gas



GE Oil & Gas



## Power



**ALSTOM**



## Defence

## Transportation



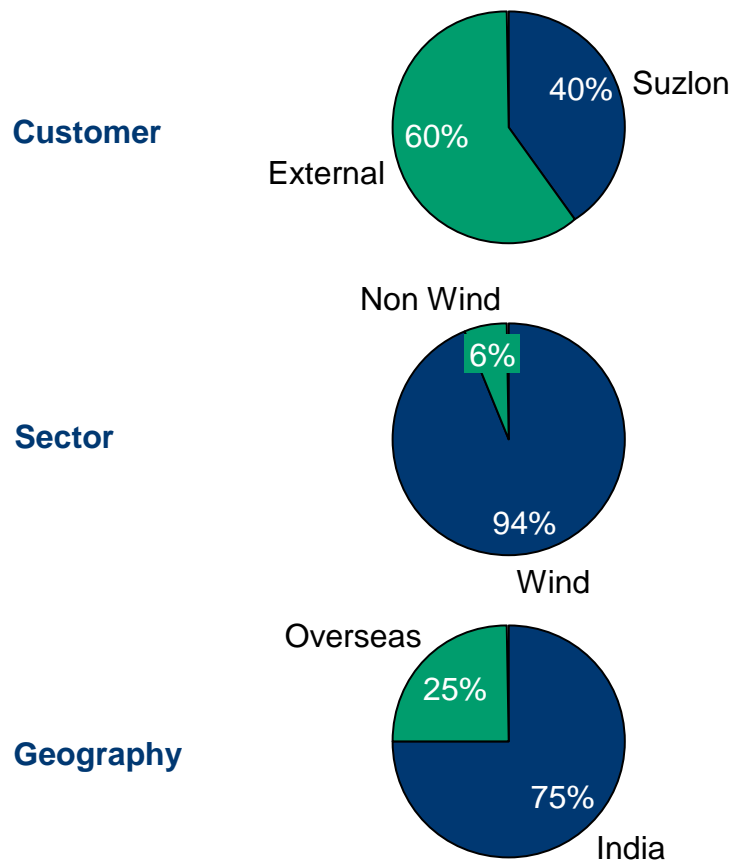
GE Transportation

## Others



# Growth Profile

## Revenue Diversification



## Future Performance

### Volume Growth Drivers

- Growing Wind Sector
- Growing share of Non Wind Sectors
- Imposition of Anti Dumping duty

### Operating leverage

- Low EBITDA break-even at 20% capacity level

### Growth without major Capex requirement

- Current Utilization at ~40%

### Efficiency

- Unique axial profiling technology
- Improved process flow

# Agenda

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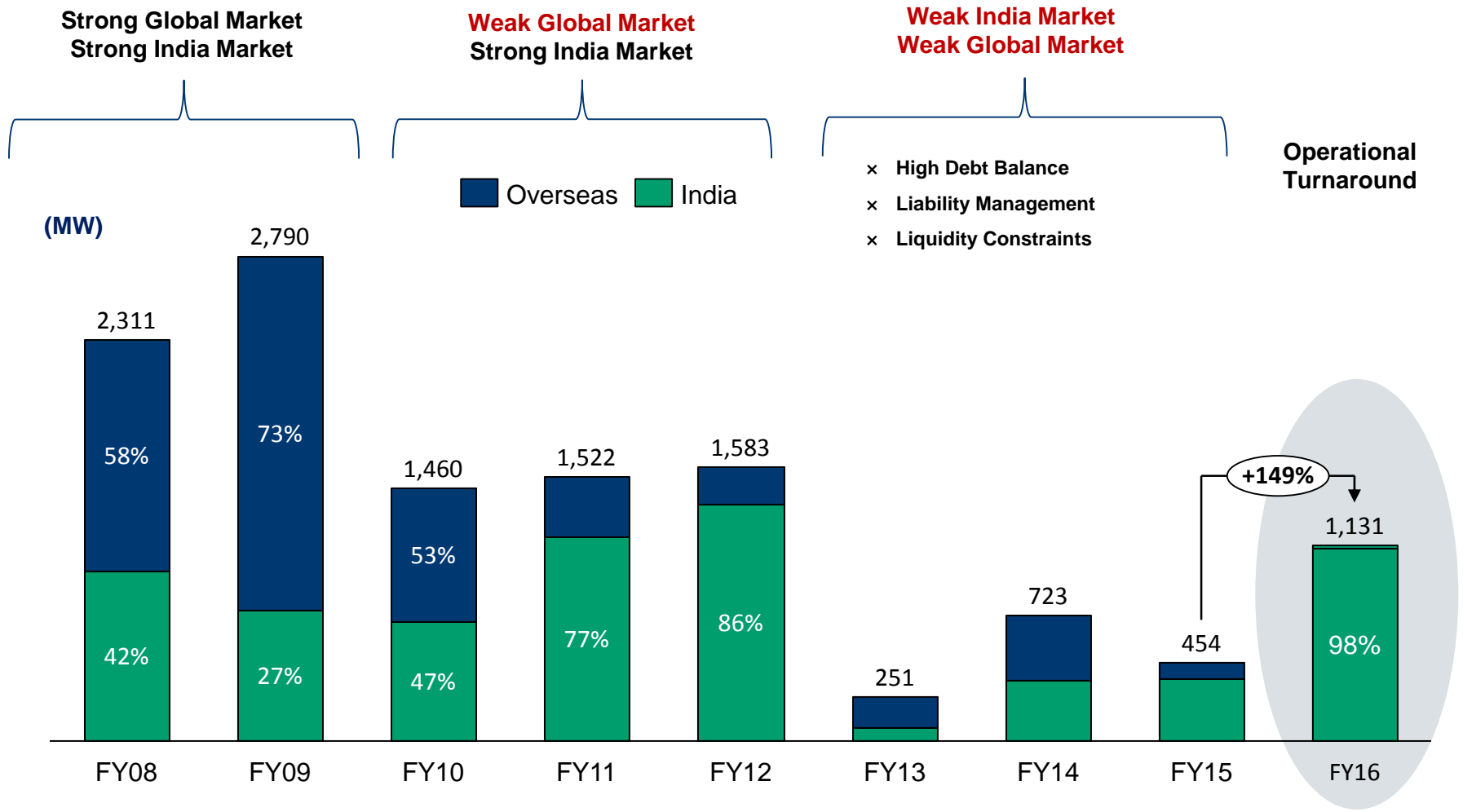
Solar Business

SE Forge

**Financial Snapshot**

Vision 2022

## 2 Decades of Strong Operating History



**Note:** Information pertains to Suzlon ex-Senvion;

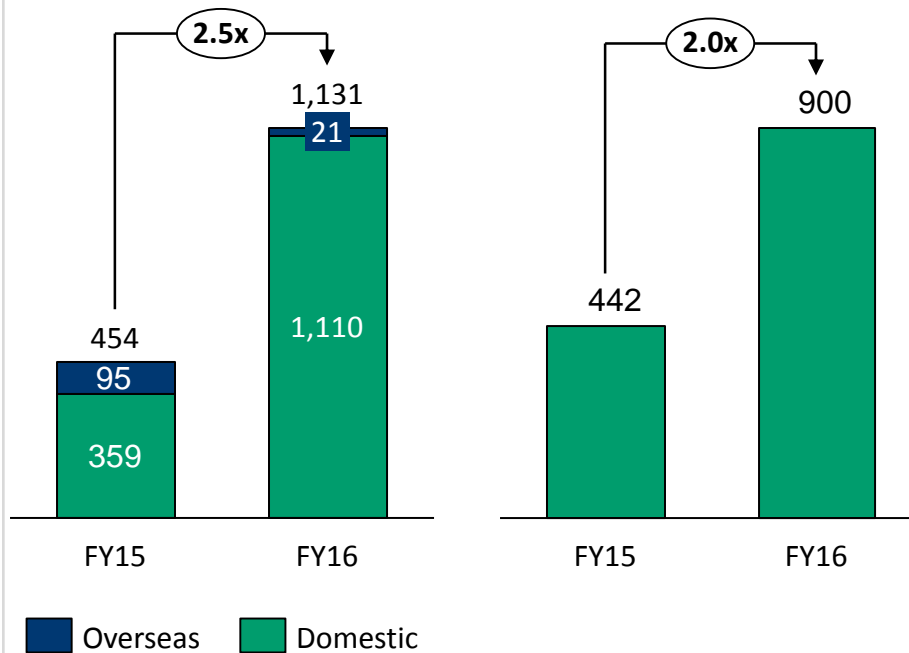
**Demonstrated sizeable volume in the past; only last couple of years impacted**

## FY16: A turnaround year

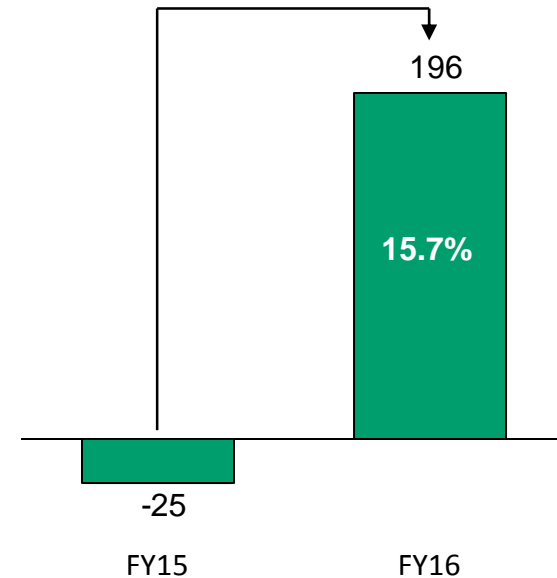
Fig. in MW

Deliveries

Commissioning (India)



EBITDA (US\$ Mn)



\*Exchange Rate \$1 = Rs. 66

## “An All-Round Performance” – Across Financial Metrics

**1,131 MW**

*149% y-o-y*

**Volume**



**\$ 1,251 M**

*69% y-o-y*

**Revenues**



**\$ 196 M**

*Margin 15.7%*

**EBITDA<sup>(2)</sup>**



**\$ 32 M**

*+\$330M y-o-y*

**Cash Profit<sup>(3)</sup>**



**\$ 166 M**

*(41%) y-o-y*

**Net Interest**



**\$ 1,025 M**

*31<sup>st</sup> March (y-o-y)*

**Net Debt Reduction**



\*Exchange Rate \$1 = Rs. 66

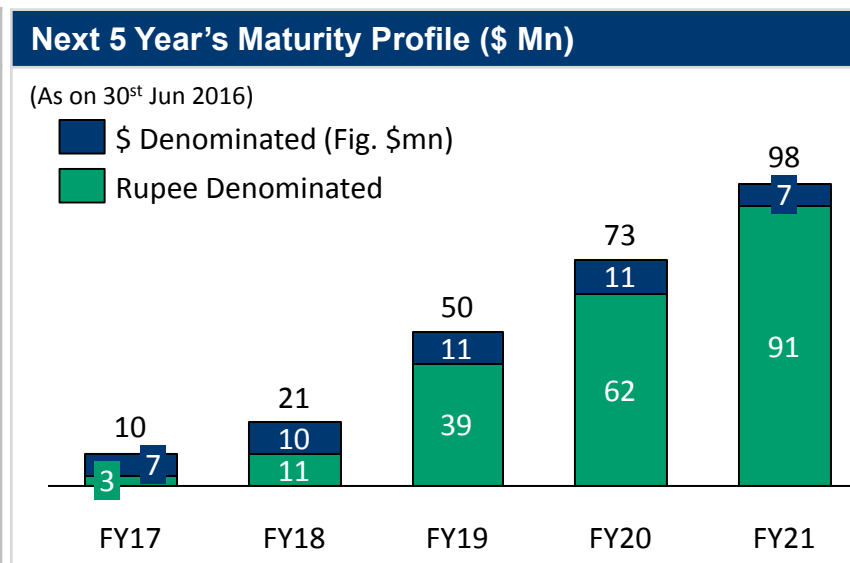
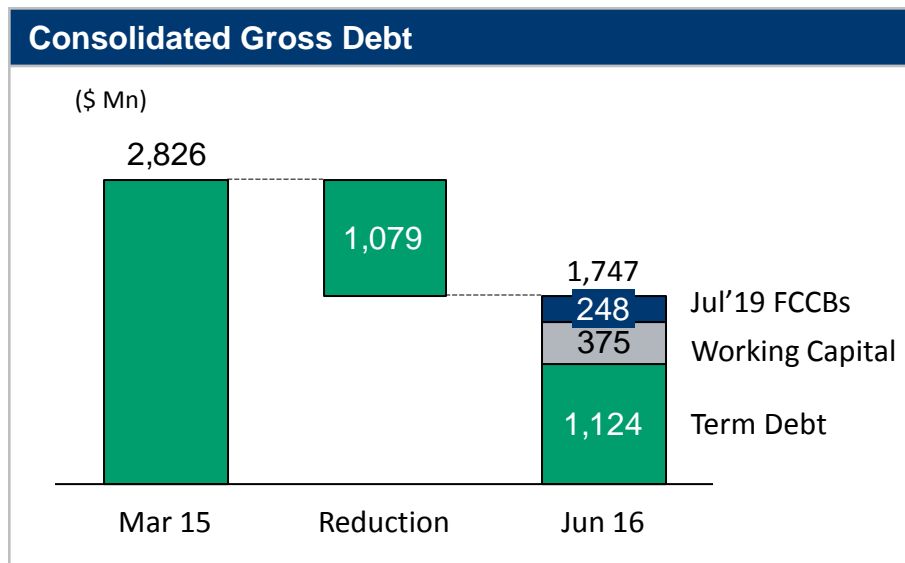
Note: (1) All Information pertains to Suzlon Wind; Net Debt reduction and Net Interest pertains to Suzlon Wind + SE Forge

(2) Normalised EBITDA is calculated adjusting for FX loss and Liquidated Damages

(3) Cash Profit is calculated as net profit adjusted for Exceptional Items, FX Loss and Depreciation

(4) Numbers are as per IGAAP

# Substantial debt reduction achieved in past year



\*\*SBLC Backed Debt of \$647M assumed to be refinanced till FY23 (already in progress)

\*\*\*Exchange Rate \$1 = Rs. 66

Investment Grade Rating Reinstated	
Suzlon & Domestic Subsidiaries (other than SE Forge)	CARE Rating
Long Term Facilities	BBB-
Short Term Facilities	A3

## Rationale for Investment Grade

- Reduced debt
- Improved liquidity position
- Turnaround in operations
- Robust industry outlook

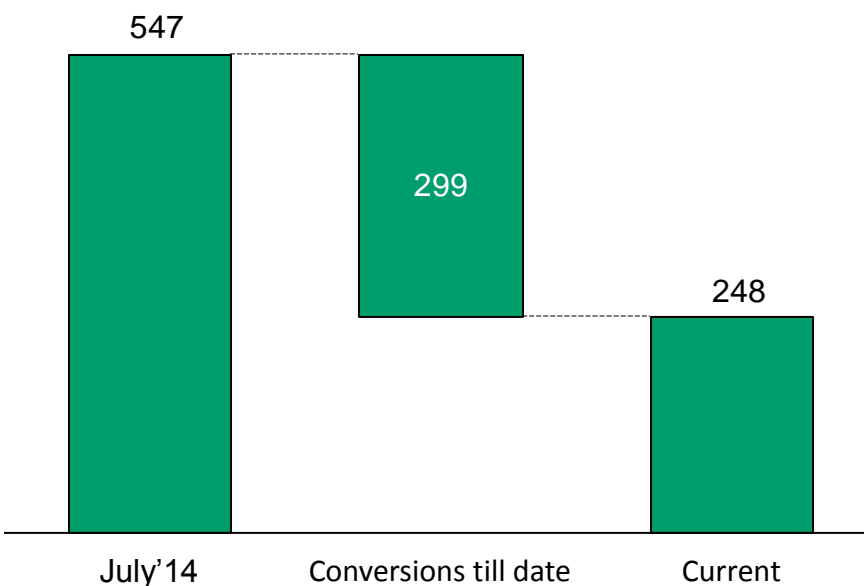
**Note:** Consolidated Gross Debt represents Suzlon Wind and SE Forge; Numbers as per IGAAP

**No significant repayments in next 5 years**

# July 2019 FCCB Series Overview

## FCCB Principal Value

(US\$ Mn)



## Current and Diluted No. of Shares (Crs.)

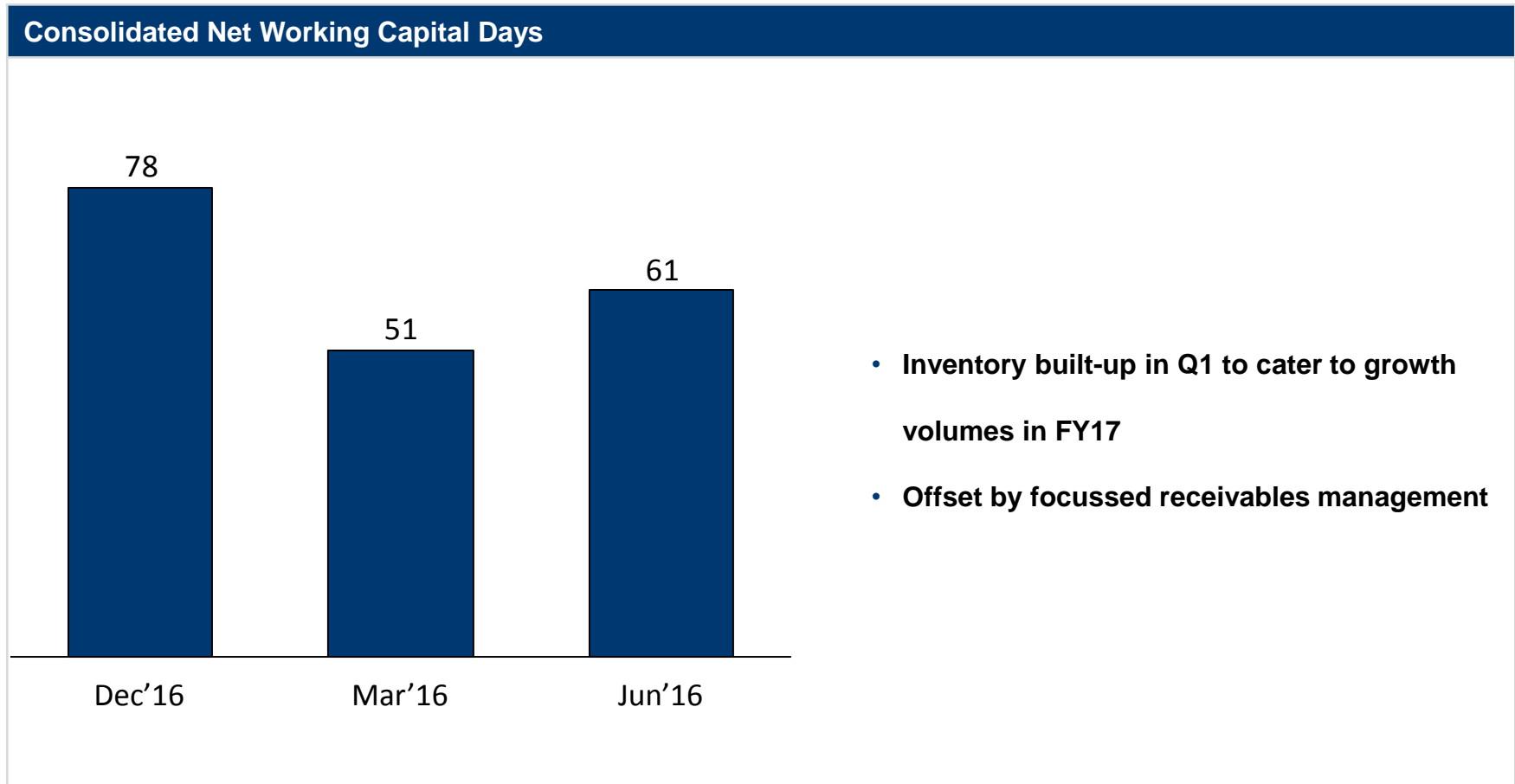
Current Outstanding	502
Pending Conversion	97
Post Full Conversion	599

## Conversion Details

Price (Per Share)	Rs. 15.46
Exchange Rate	Rs. 60.225



# Disciplined Working Capital Levels

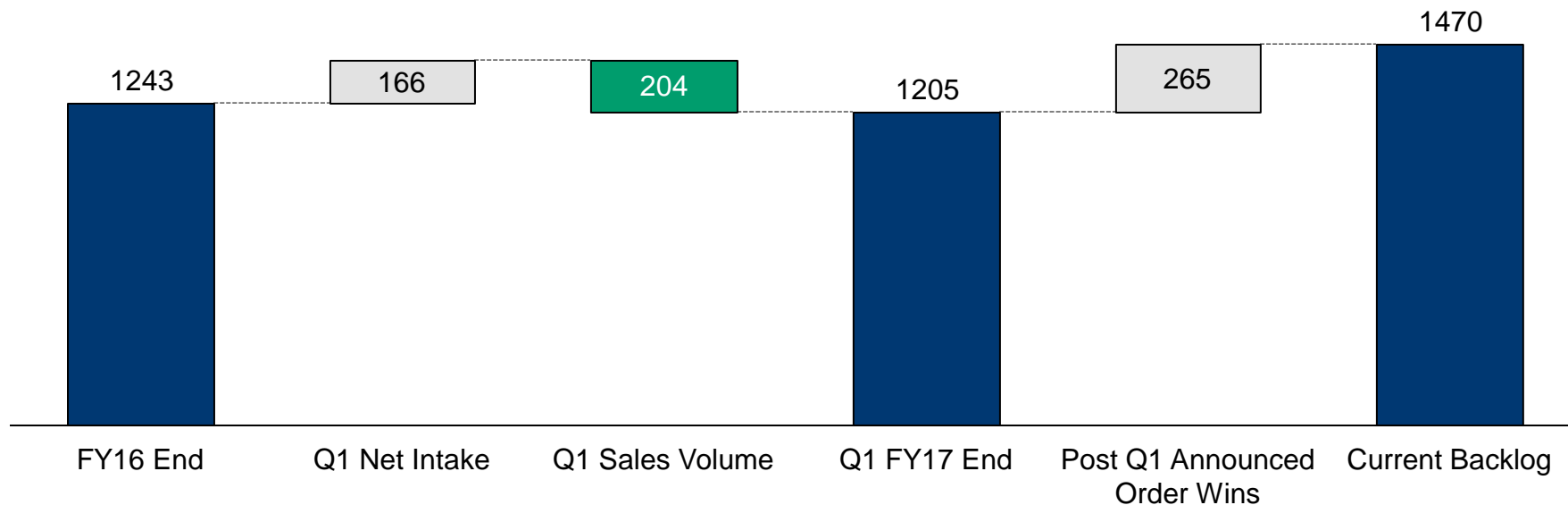


Note: Working capital days calculated on trailing 12 months revenue

## Strong Visibility for FY17

### Order Book

(Fig. in MW)



Backlog for Service, SE Forge and Solar is over and above

Strong pipeline discussions

# Agenda

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# Vision 2022

## Best Renewable Energy Company In the World

**20 - 22  
GW**

Renewable Installations

**20 - 22  
%**

LCOE Reduction

**10 %**

Working Capital

**ZERO**

Net Term Debt

- India Market CAGR: 14%+
- Wind to remain competitive Vs Solar
- Suzlon to exceed market growth



# Suzlon Campus - One Earth, Pune



# THANK YOU

Suzlon One Earth is **LEED** Platinum and **GRIHA** certified campus  
This campus has received the prestigious **Asia Pacific Property Award** in 2011