



**Investor Presentation**  
August 2021

# Forward Looking and Cautionary Statement



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## Sustainability

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Key Investment Highlights

Appendix

# Comprehensive Covid-19 Relief & Response



**2,800+** workforce vaccinated via drives conducted across locations



**24x7** Covid support helpdesk for employees and their families. Hospital beds and Covid Ambulance for village communities



**450+** beds provided in isolation centres created across locations



**40** Oxygen Concentrators, and numerous PPE kits donated to District Administration, Barmer



**700** households and migrant workers supported by food distribution drives at Barmer



**JSW WeCare** Workshops organised for Employee Mental Health Well Being during Covid-19 scenario

# Sustainability: Framework and Priorities

## 17 Focus Areas with 2030 Targets from 2020 as Base Year

<p><b>Climate Change:</b> Committed to being carbon neutral by 2050 Reduce our carbon emissions by more than 50%</p>	<p><b>Biodiversity:</b> No Net Loss for Biodiversity</p>
<p><b>Renewable Power:</b> Enhance the renewable power to 2/3rd of our Total Installed Capacity</p>	<p><b>Waste Water:</b> Zero Liquid Discharge</p>
<p><b>Waste:</b> 100% Ash (Waste) utilization</p>	<p><b>Water Resources:</b> Reduce our water consumption per unit of energy produced by 50%</p>

Resources	Employee Wellbeing	Social Sustainability	Local Considerations	Indigenous People	Human Rights
Supply Chain Sustainability	Sustainable Mining	Air Emissions	Business Ethics	Cultural Heritage	Energy

## Governance & Oversight by Sustainability Committee

2 Independent Directors	Mr. Sunil Goyal
	Ms. Rupa Devi Singh
1 Executive Director	Mr. Prashant Jain

## ESG Ratings

MSCI	BB
CDP	B (Management Level)
FTSE4Good	FTSE4Good Index constituent

## Carbon Neutrality by 2050

<p>SCIENCE BASED TARGETS DRIVING AMBITIOUS CORPORATE CLIMATE ACTION</p>	Committed to set science based targets to keep global warming to 1.5°C under SBTi
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## Integrated Reporting since FY19

**Aligned to National & International Frameworks**

International Finance Corporation WORLD BANK GROUP Creating Markets, Creating Opportunities	ISO	SUSTAINABLE DEVELOPMENT GOALS	NATIONAL GUIDELINES ON RESPONSIBLE BUSINESS CONDUCT
OECD	United Nations Global Compact	UNITED NATIONS GUIDING PRINCIPLES ON BUSINESS & HUMAN RIGHTS	

# Sustainability: Targets and Strategy

SD Targets		FY20 Actuals	FY30 Targets	Improvement	Strategic Approach
<b>Climate Change</b>	<ul style="list-style-type: none"> <li>GHG Emissions tCO<sub>2</sub>e/ MWh</li> </ul>	0.76	<b>0.304</b>	60%	<ul style="list-style-type: none"> <li>Increased share of renewable energy for deep decarbonization</li> <li>Process efficiency improvements</li> <li>Replacement of condenser tubes with graphene coatings</li> </ul>
<b>Water Security</b>	<ul style="list-style-type: none"> <li>Specific fresh water intake (m<sup>3</sup>/MWh)</li> </ul>	1.10	<b>0.591</b>	46%	<ul style="list-style-type: none"> <li>Maintaining zero liquid discharge across operations</li> <li>Optimising utilisation of rain water harvesting system</li> <li>Installation of technology for operating cooling towers with higher Cycles of Concentration with modified chemical regime</li> <li>Reuse of treated effluent of Sewage Treatment Plan for horticulture</li> </ul>
<b>Waste</b>	<ul style="list-style-type: none"> <li>Specific Waste (Ash) Generation (t/MWh)*</li> </ul>	0.070	<b>0.032</b>	54%	<ul style="list-style-type: none"> <li>Integrated Strategy towards efficient waste management</li> <li>Optimizing utilisation of low ash coal</li> </ul>
	<ul style="list-style-type: none"> <li>Waste Recycled - Ash (%)</li> </ul>	100	<b>100</b>	-	
<b>Air Emissions</b>	<ul style="list-style-type: none"> <li>Specific process emissions(Kg/MWh)</li> </ul>	0.16	<b>0.053</b>	67%	<ul style="list-style-type: none"> <li>Ensuring ESP (Electrostatic Precipitator) Fields availability</li> <li>Optimising Lime dosing system efficiency</li> <li>Process efficiency improvements</li> </ul>
	<ul style="list-style-type: none"> <li>PM</li> </ul>	1.78	<b>0.683</b>	61%	
	<ul style="list-style-type: none"> <li>SOx</li> <li>NOx</li> </ul>	1.01	<b>0.373</b>	63%	
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>Biodiversity at our operating sites</li> </ul>	-	Achieve 'no net loss' of biodiversity		<ul style="list-style-type: none"> <li>Continue to enhance Biodiversity at all our locations and operations to achieve 'no net loss'</li> <li>Increase green cover across operations</li> </ul>

## Key Highlights



### Climate Change

- Steam turbine modernization in 300MW units at Vijayanagar
- Replacement of Condenser tubes with graphene coating at Vijayanagar
- Commissioned 1.06 MWp Solar Plant at Sherpa Camp at Hydro plant
- Sustainability Committee formed for low carbon strategy



### Water Security

- Operate Cooling tower with higher Cycles Of Concentration with modified chemical regime
- Operate Existing Effluent recycle plant with 100% utilization
- Efficient Utilization of rainwater for plant & township use



### Waste

- Effective utilisation of 100% of fly ash generated
- Fly ash supplied to Cement & Brick industries



### Air Emissions

- Calibration of Low NOx burners at Vijayanagar
- Use of low Sulphur coal at Ratnagiri
- Modification of ESP resulting in reduction of Dust at Barmer

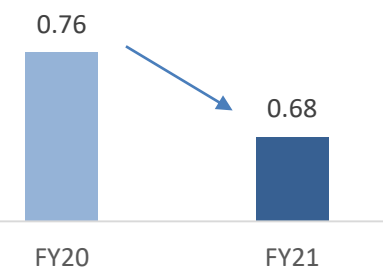


### Biodiversity

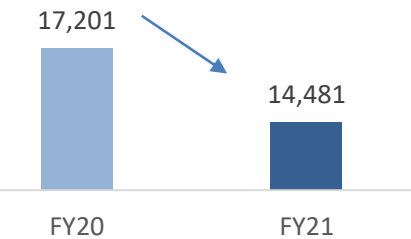
- Plantation of local species by cultivating in own nursery at Ratnagiri
- Two local NGOs engaged for restoration and protection of habitats at Barmer
- Watershed area taken under development of Silvi-pasture plantation at Barmer

## Performance

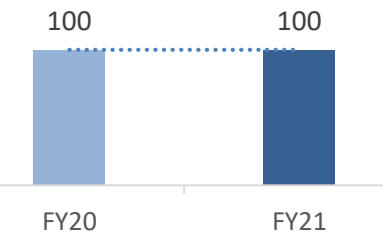
CO<sub>2</sub> intensity (tCO<sub>2</sub>e/MWh)



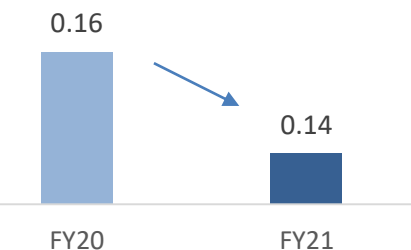
Scope 1 emissions ('000 tCO<sub>2</sub>e)



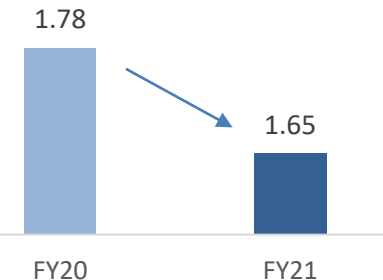
Ash Utilisation (%)



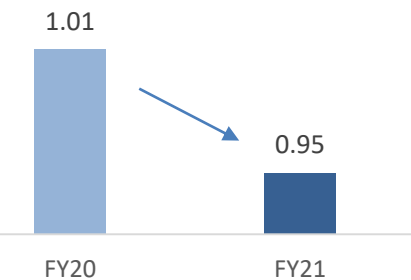
PM Emissions (kg/MWh)



SO<sub>x</sub> Emissions (kg/MWh)



NO<sub>x</sub> Emissions (kg/MWh)



JSW Energy has a majority Independent Board (4/6 Directors are Independent)

	Name of Director	Nature
	<b>Mr. Sajjan Jindal</b>	<i>Chairman &amp; Managing Director</i>
	<b>Mr. Prashant Jain</b>	<i>Joint Managing Director &amp; CEO</i>
	<b>Mr. Chandan Bhattacharya</b>	<i>Independent Director</i>

	Name of Director	Nature
	<b>Mr. Munesh Khanna</b>	<i>Independent Director</i>
	<b>Ms. Rupa Devi Singh</b>	<i>Independent Director</i>
	<b>Mr. Sunil Goyal</b>	<i>Independent Director</i>

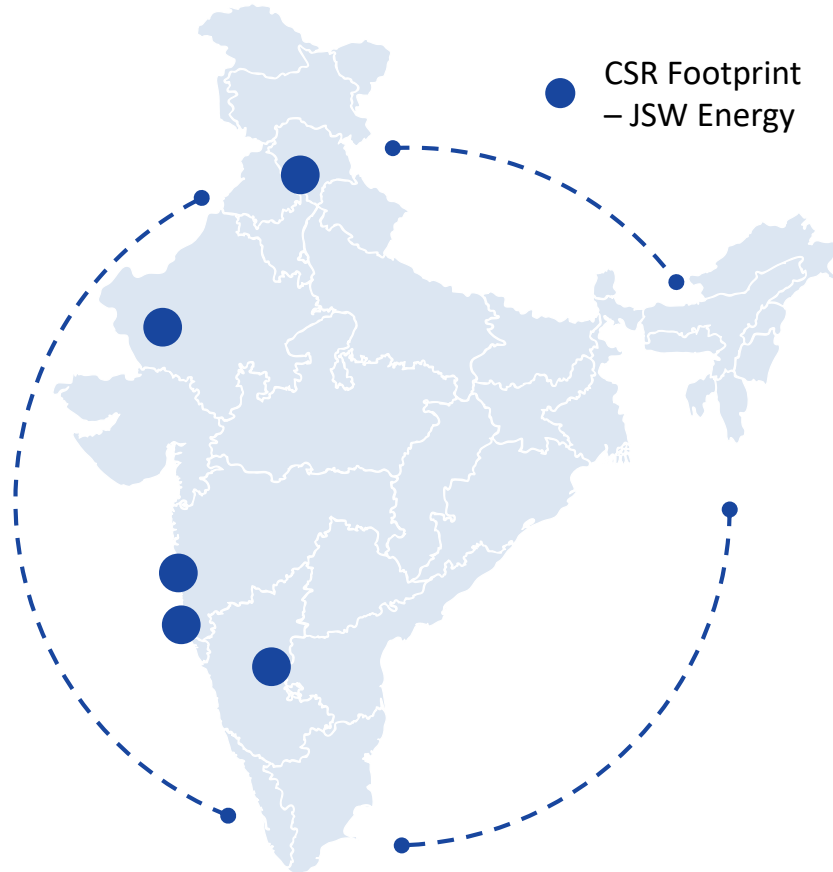
Committee	# Directors	Of which Independent directors
Audit	3	3 (100%)
Nomination & Remuneration	3	3 (100%)
Risk Management	3	2 (67%)
Stakeholders Relationship	3	2 (67%)
CSR	3	2 (67%)
Sustainability	3	2 (67%)

Core Principles of JSW Energy	
<b>Accountability</b>	<b>Social Responsibility</b>
<b>Transparency</b>	<b>Environment</b>
<b>Integrity</b>	<b>Regulatory Compliance</b>



# Empowering Our Communities

## Empowering communities with sustainable livelihoods



Focus on **Women Empowerment** through Handloom Initiative (CHARKHA)



**Swachh Bharat Mission:** Construction of ~150 individual, community & school sanitation facilities



Piped Drinking Water supply to **440+ household** near Barmer



**Installation of 371 solar street lights** in 4 Gram Panchayats



10 IIS athletes qualified for **Tokyo Olympics 2021**



**National Youth Boxing Championship** : 13 boxers selected: 3 from SHIKHAR Initiative (Hydro plants), and 10 from IIS, Vijayanagar 2 SHIKHARites won Gold and Bronze medals

Health & Nutrition	Water & Environment	Waste Management	Agri-business	Education	Women's BPO & Livelihoods	Skill Enhancement	Art, Culture & Heritage	Sports
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# Continuing our Health & Safety Excellence Journey

Figures are for Q1 FY22



**JSW CARES** assessment completed for 34 of 77 contractors at various locations



**Safety Meetings (Monthly)** with contractors



**18,000+** Safety Observations

INFLUENCING POSITIVE SAFETY BEHAVIOR OF OUR WORKFORCE



**MySetu Software** implemented at Kutehr Project location for Safety Observations



**66 e-Learning modules** completed  
**6 employees** enrolled for Safety Champions Program





Sustainability

**Overview**

Key Investment Highlights

Appendix

# JSW Group – Overview

- ✓ India's leading integrated steel producer
- ✓ Installed crude steel capacity of 18 mtpa, growing to 30.5 mtpa
- ✓ Market Cap: ~USD 24.7 Bn



- ✓ Amongst Top 5 Indian port companies
- ✓ Operates environment-friendly seaports & terminals
- ✓ Targeting 200mtpa cargo handling capacity in next few years



- ✓ India's new age Paints company offering a path-breaking Any Colour at One Price
- ✓ State-of-the-art Facilities in Maharashtra and Karnataka
- ✓ Ranks Number 1 in Industrial Coil Coatings



- ✓ Supporting Indian sports ecosystem
- ✓ Teams Owned: Bengaluru FC, Delhi Capitals, Haryana Steelers



**USD 13 Bn<sup>1</sup> Group Amongst India's leading conglomerates**



- ✓ **Power producer with 7 GW generation portfolio (Hydro, Renewable and Thermal)**
- ✓ **20 GW Target by FY32, driven by renewables**
- ✓ **Market Cap: ~USD 5.5 Bn**



- ✓ India's leading Green cement company
- ✓ Current capacity of 14mtpa, with a medium term target of 25mtpa
- ✓ Product range includes PSC, GGBS, Concrete & Construction Chemicals



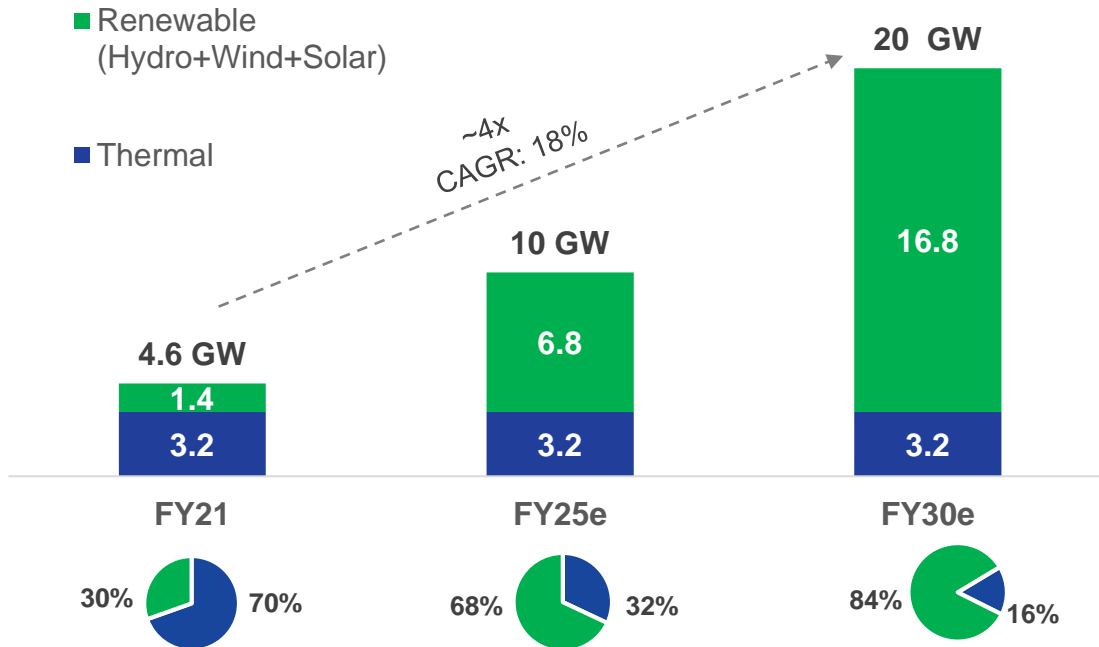
- ✓ Early-stage, tech-focused, VC fund
- ✓ Portfolio: Purple, IndusOS, LimeTray, Homelane



- ✓ Social development arm of JSW Group
- ✓ Footprint across 11 states
- ✓ Positively impacts more than a million lives across India

# JSW Energy – Overview

Transforming to ~70% Renewable by FY25 and ~85% by FY30



- ✓ Capacity additions only via Renewables
- ✓ Carbon Neutral by 2050



**4.6 GW**  
Installed  
30% Renewable

**2.5 GW**  
Under-construction  
100% Renewable

## Diversified Asset Portfolio (7 GW)

Plant	Capacity (MW)	Segment
<b>Operational:</b>		
Ratnagiri	1,200	Thermal
Barmer	1,080	Thermal
Vijayanagar	860	Thermal
Nandyal	18	Thermal
Karcham Wangtoo	1,091 <sup>1</sup>	Hydro
Baspa II	300	Hydro
Solar	10	Solar
<b>Under-Construction:</b>		
Group Captive – JSW Steel	958	Wind & Solar
SECI – IX	810	Wind
SECI - X	450	Wind
Kutehr	240	Hydro

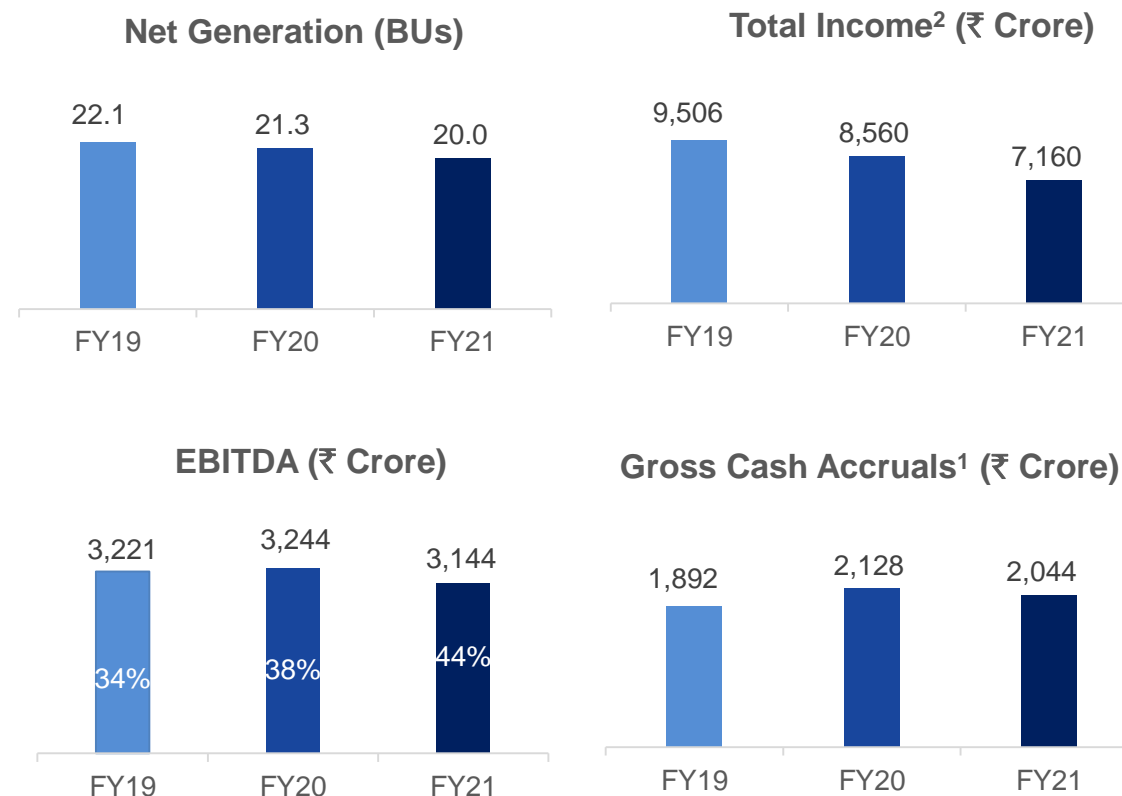
# Healthy Operations and Financials

<b>86%</b> Capacity under LT PPA	<b>~95%</b> EBITDA contribution from LT
<b>20 BUs</b> Net Generation	<b>₹ 2,004 Crore</b> Gross Cash Accruals <sup>1</sup>

Figures are for FY21

- ✓ Stable operations despite Covid-19 impact
- ✓ High LT PPA tie-up rendering high cash flow visibility
  - Almost all LT PPA under two-part tariff (fuel cost/forex pass through)
- ✓ Steady EBITDA and Cash Profit Generation
- ✓ Diversified off-takers
  - All plants placed favorably in Merit Order Despatch
  - Hydro projects under 'must-run' status

**Business model resilient with steady cashflow generation despite several sectoral headwinds**



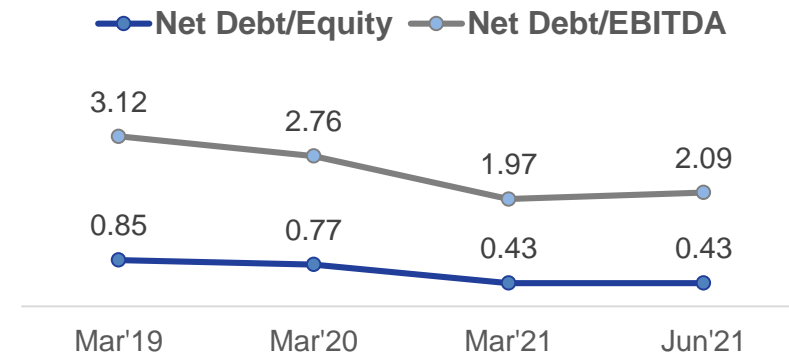
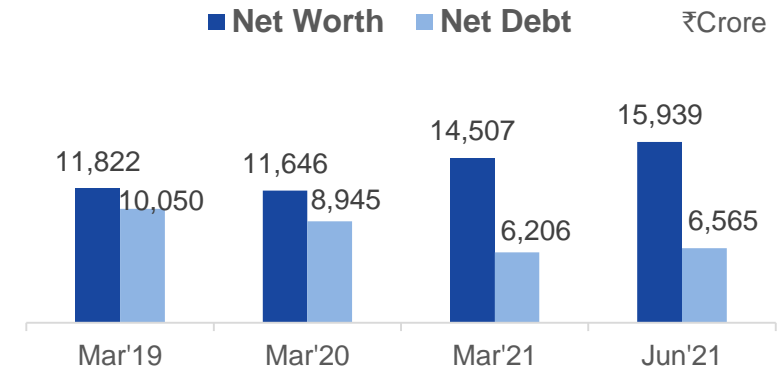
# Robust Balance Sheet

<b>2.09x</b> Net Debt/EBITDA	<b>0.41x</b> Net Debt/Equity
<b>8.05 %</b> Wt. average cost of debt	<b>↓ 30% YoY</b> Decline in Receivables Outstanding

Figures as of June 30, 2021

- ✓ Strong Liquidity with healthy cash balances: ₹1,648 Crore
- ✓ Financial flexibility enhanced by equity investments:
  - Holding 7Cr JSW Steel shares (Value<sup>1</sup>: ₹~5,290 Crore)
  - Monetised entire JPVL equity holdings for ~₹167 Crore in Q1FY22
- ✓ Healthy Credit Ratings:
  - India Rating & Research: AA- (Stable outlook)
  - Brickwork Ratings: AA- (Positive outlook)
- ✓ Access to diverse pools of liquidity

**Large balance sheet headroom & strong cashflow available to pursue growth**





Sustainability

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**Key Investment Highlights**

Appendix





## Proven Execution Excellence

- Superior project execution skills: projects set-up in lowest cost & time
- Sound operating efficiency: one of the lowest O&M costs per MW amongst IPPs



## De-risked Operating Portfolio

- 86% of portfolio has LT PPAs with two-part tariff structure and almost full fuel cost/forex pass through
- ~95% current EBITDA derived from LT sales, providing visibility on earnings
- Placed favorably in Merit Order Despatch; diversified off-takers



## Robust Renewables Growth Pipeline

- Pivoting from ~30% renewable to ~70% renewable energy by FY25 and to 85% by FY30
- Target to reach 10 GW by FY25 and 20GW by FY30, driven by renewables
- Committed to delivering sustainable growth that generates strong returns for stakeholders
- No new thermal capacity to be added going forward



## Strong Balance Sheet

- Balance Sheet amongst the strongest in the sector: 2.09x Net Debt/EBITDA, 0.43x Net Debt/Equity
- Healthy Credit Rating: 'AA-'Stable' – India Ratings & Research
- Strong B/S and Internal Accruals (GCA ~₹2,000 Crore), sufficient for growth, without any equity dilution



## Solid ESG Focus

- To be Carbon Neutral by 2050
- Spearheading development of Green Hydrogen in India
- Committed to set science based emission reduction targets (SBTi) to keep global warming to 1.5°C



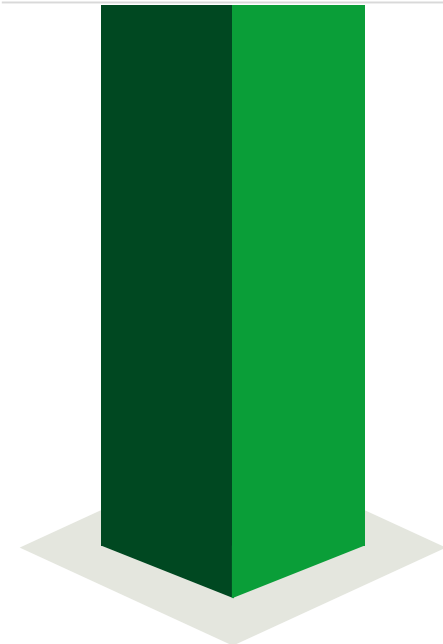
## Attractive Power Market

- Power demand expected to grow at CAGR of 5% to 2030
- India has renewables target of 450 GW by 2030 from 94GW currently
- Govt. committed to power sector reforms

# Growth Strategy Pillars

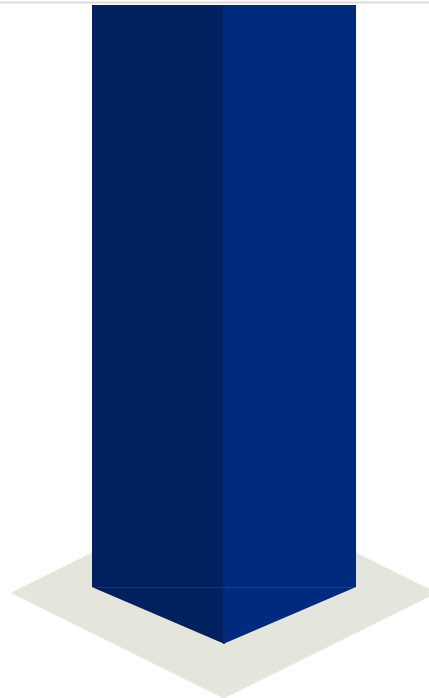
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**Significant Market Opportunity  
& Growth Roadmap**



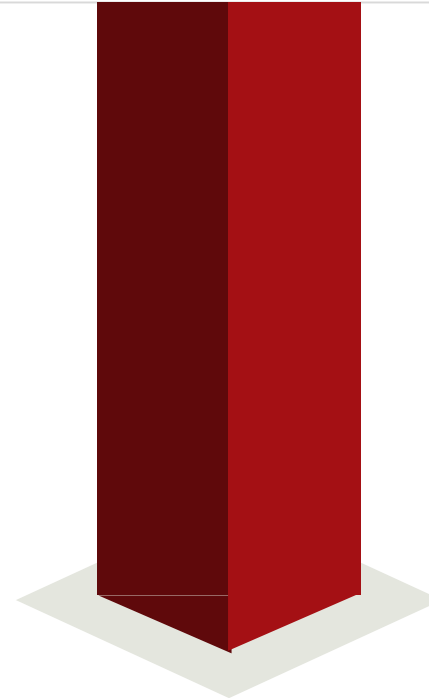
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**Proven Project Execution  
& Operational Excellence**



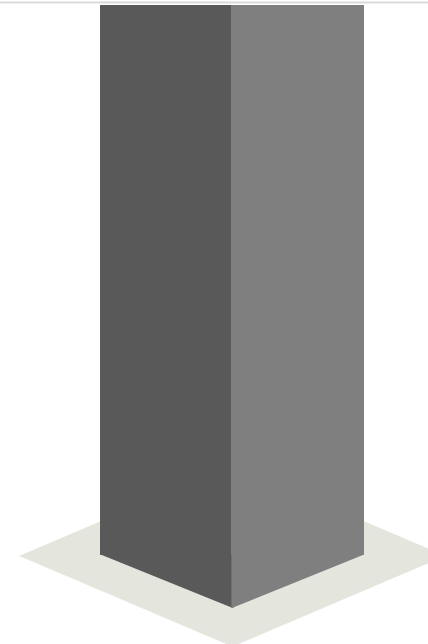
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**Locked-in  
Resources**

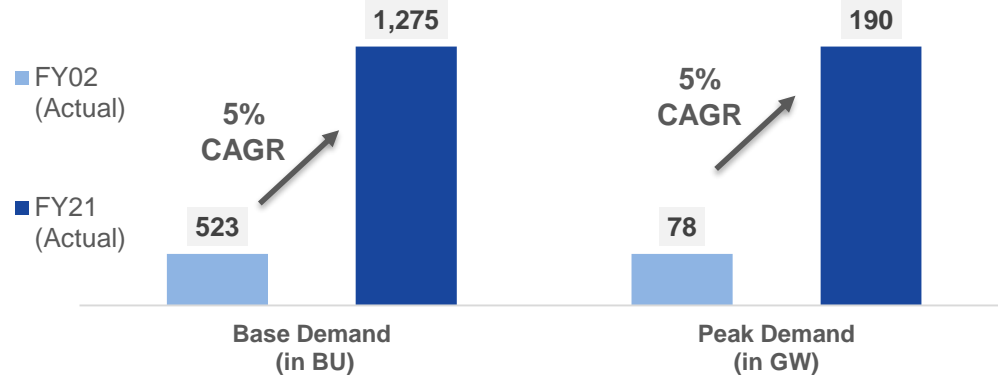


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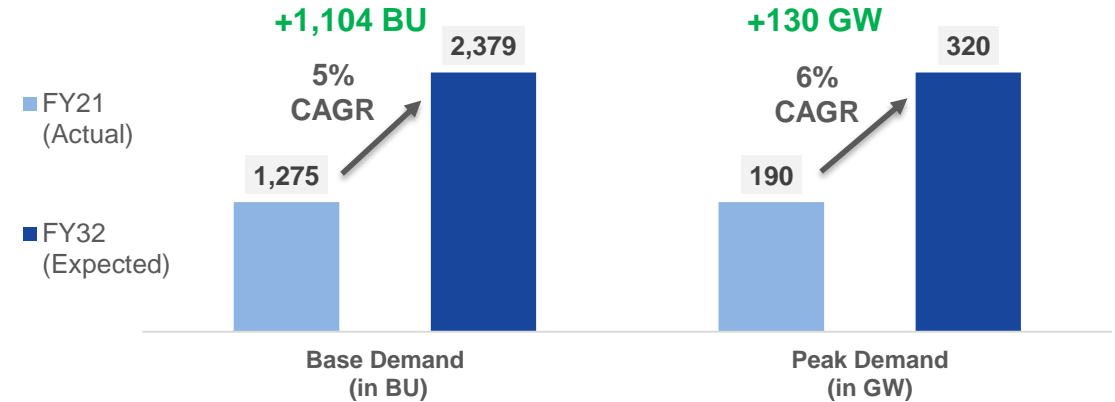
**Growth Capital  
Available**



**Historically, Power demand has grown at a CAGR of ~5%**

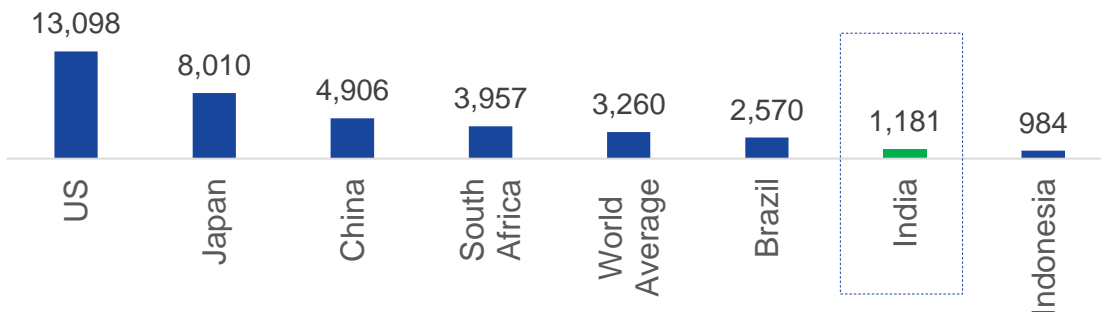


**Similar growth expected over next decade**



**India is world's 3rd largest power producer, however has a low per capita consumption (~1/3<sup>rd</sup> of world average)**

**Per Capita Power Consumption (kWh)**



**Rapid urbanisation and universal electrification to drive power demand**

- Sustained economic growth has driven power demand in India: Correlation between Power Demand to GDP growth ~0.7x<sup>1</sup> between FY03-20
- Going forward, unlocking of demand from increased rural electrification and rapid urbanisation to drive demand for power

## As a signatory to the Paris Accord, India plans to achieve a low-carbon future

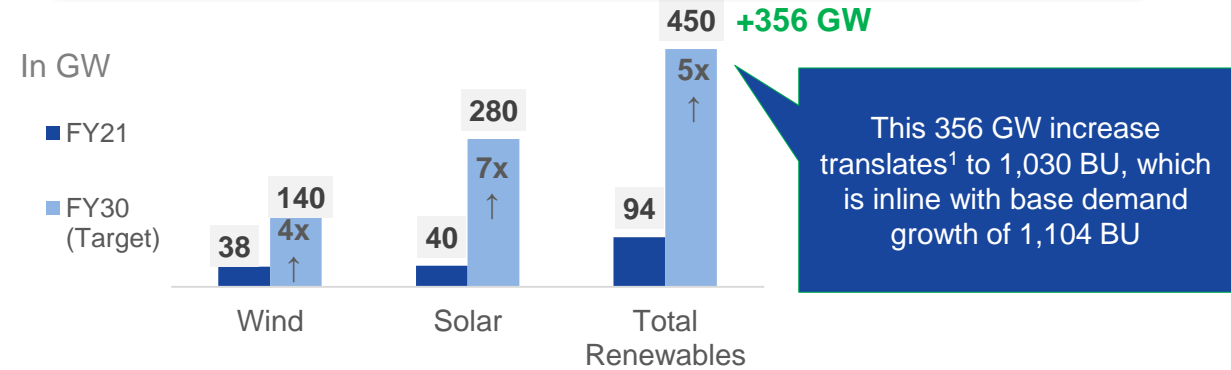
### Goals of India's Intended Nationally Determined Contribution:



PARIS2015  
UN CLIMATE CHANGE CONFERENCE  
COP21-CMP11

- To reduce the emissions intensity of GDP by 33-35% from 2005 levels by 2030
- To achieve about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030, conditional upon financial assistance
- India has set a 450 GW Renewable capacity target by 2030

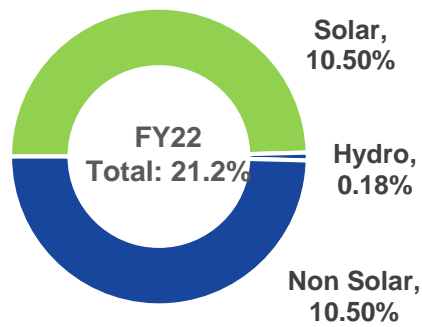
## Demand to be met incrementally with Renewable Energy



## RPO to provide filip to RE demand

RPO as % of total power purchased

Discoms as well as Commercial & Industrial consumers have to adhere to renewable purchase obligation (RPO) for procuring power

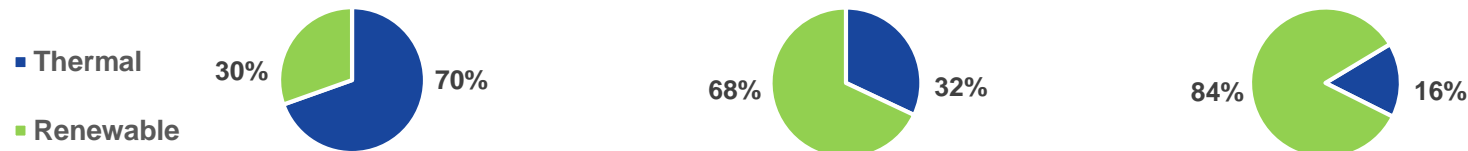
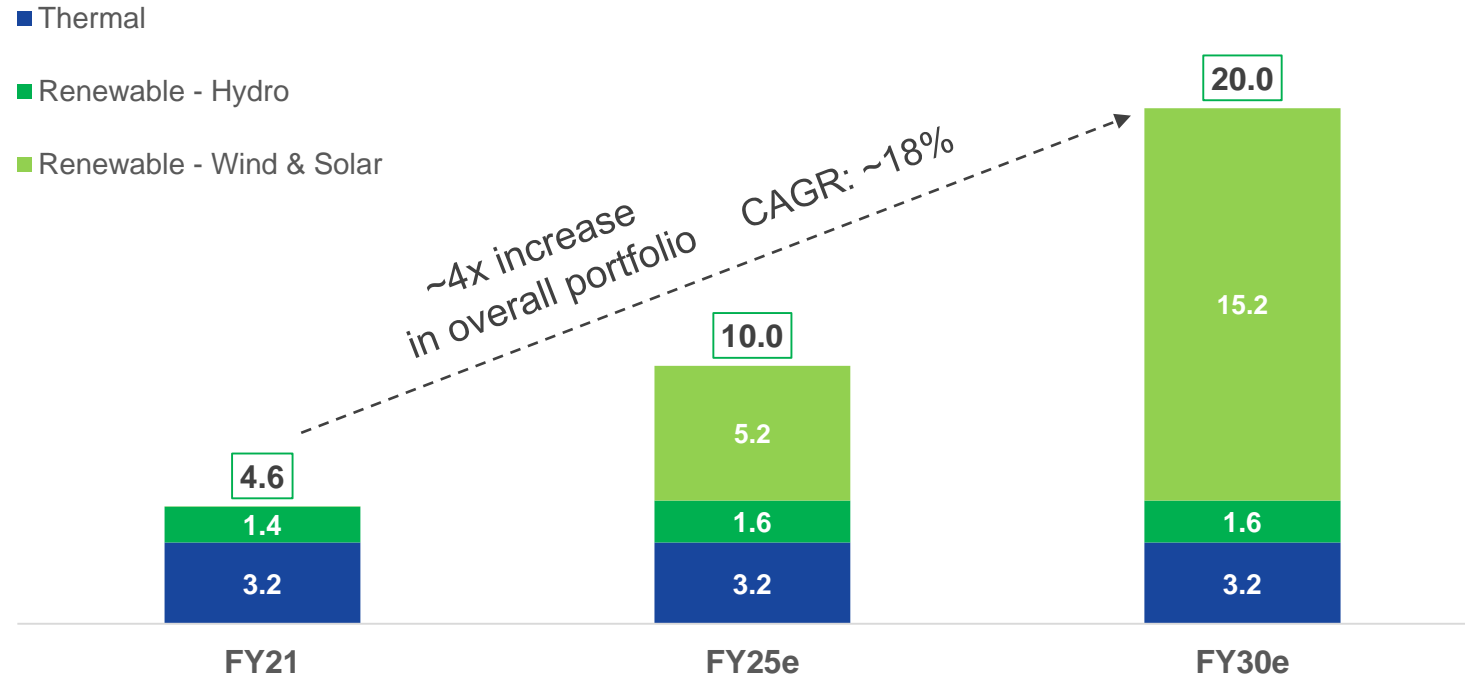


## India: Attractive market for Renewable Energy Investments

EY's 'Renewable Energy Country Attractiveness Index'

Rank	Country	Rank	Country
1	US	8	Japan
2	China	11	Brazil
3	<b>India</b>	23	Argentina
4	UK	34	Vietnam
5	France	39	Thailand

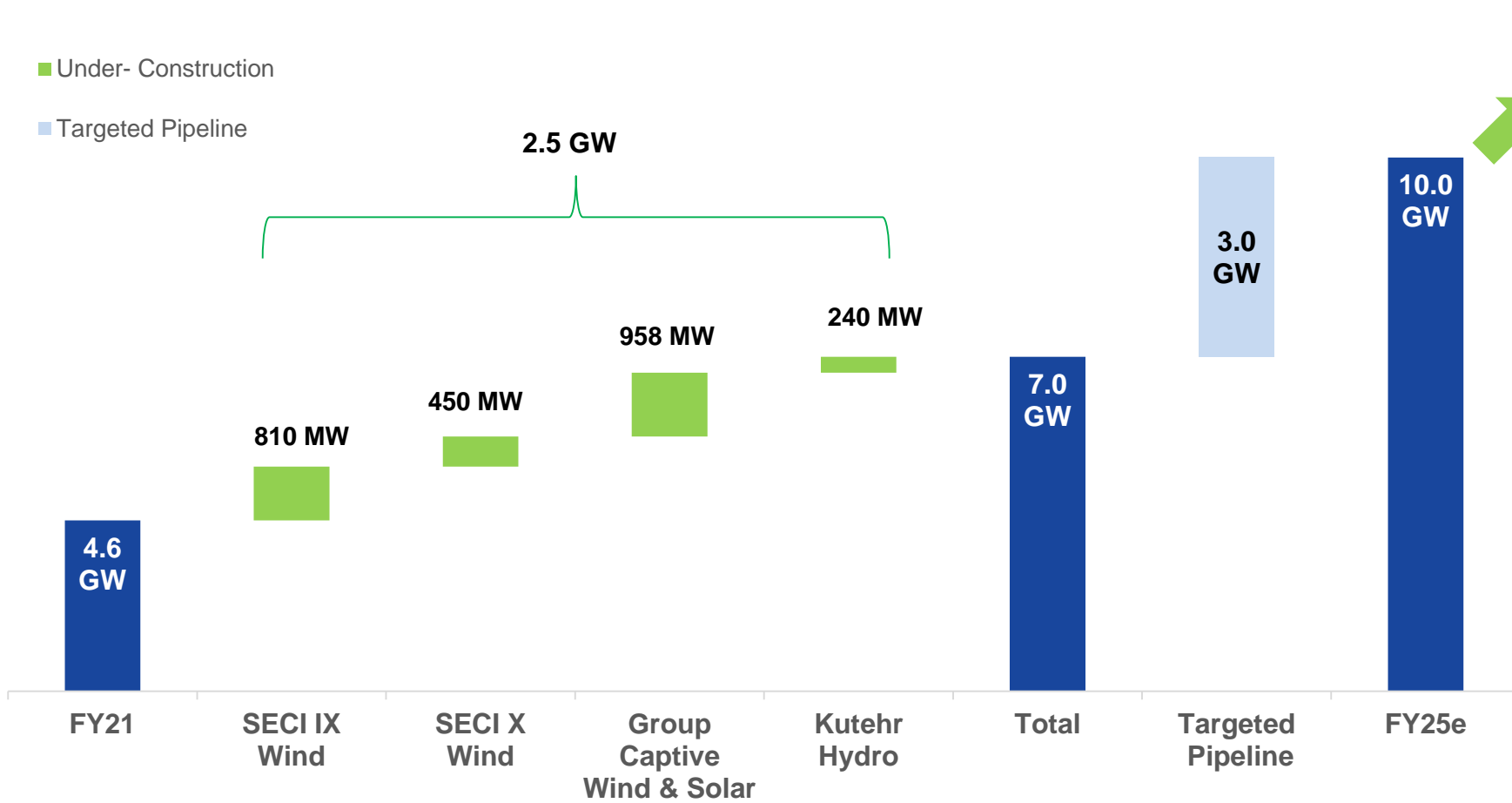
## Total Installed Capacity (GW)



**Committed to delivering sustainable growth and strong shareholder returns  
Growth to be led only by Renewable Energy**

# 2.5 GW Renewables Under-construction

■ Under- Construction  
 ■ Targeted Pipeline



Adding ~2 GW per year between FY25-30

✓ ₹ 15,800 Cr capex for 2.5 GW under-construction projects

Commissioning Schedule (2.5 GW)	
FY22	200+ MW
FY23	1200+ MW

Blended Tariff (₹/kWh)	
2.5 GW	3.31

## Key Updates on 2.5 GW Under-construction projects:



### PPA

- ✓ 810 MW SECI-IX: LT PPA signed for entire capacity
- ✓ 958 MW Group Captive with JSW Steel : LT PPA signed for entire capacity
- ✓ 450 MW SECI-X: PPA to be signed in Q2
- ✓ 240 MW Kutehr Hydro Project: PPA under finalization with Haryana Discom



### Land & Resources

- ✓ Acquired/Locked-in resources for all 2.5 GW under-construction projects



### Transmission

- ✓ Received CTU transmission connectivity approvals for 1,260 MW SECI-IX and SECI-X projects

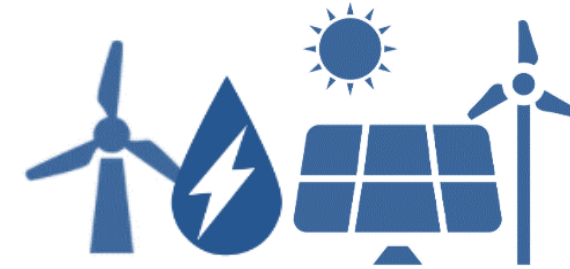
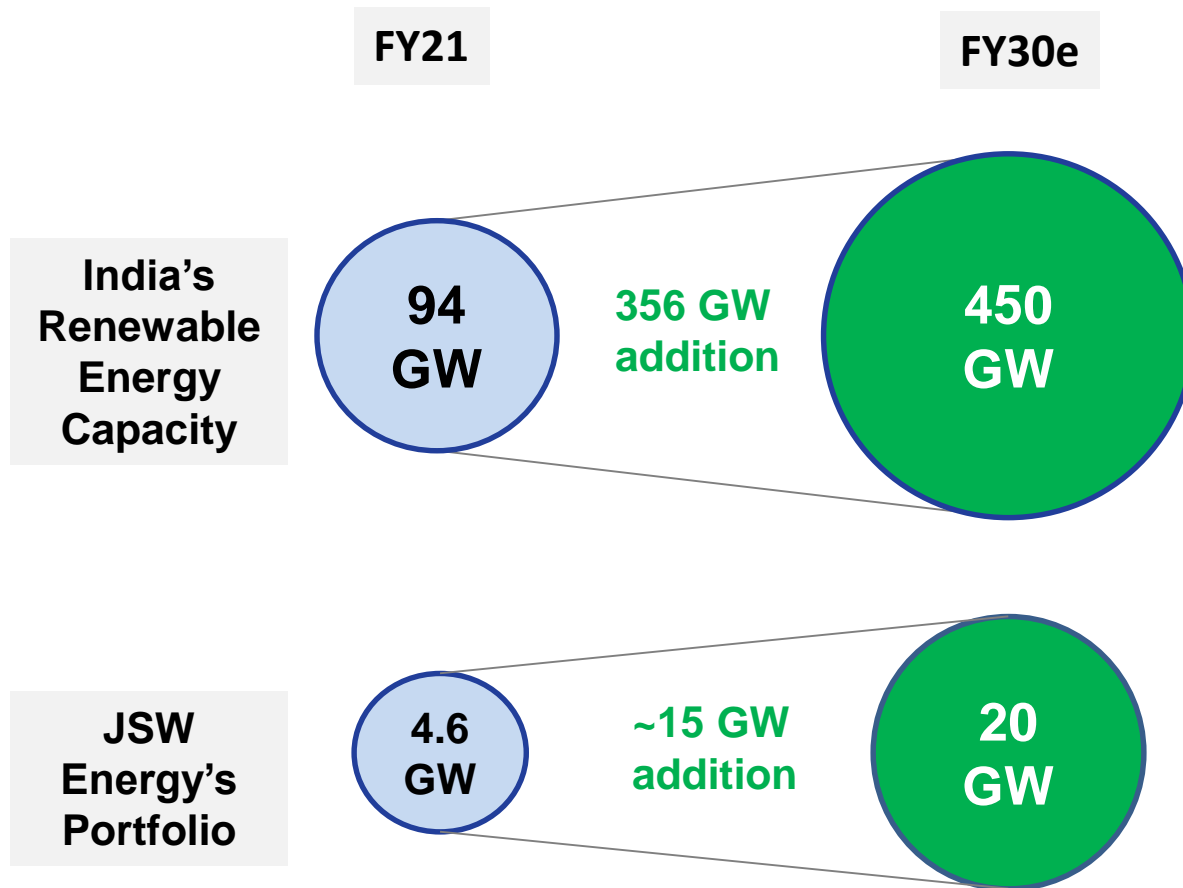


### Equipment

- ✓ Orders placed for Solar Modules and Term sheets signed for Wind Turbines with leading equipment manufacturers

### Capacity Upgrading – Karcham Wangtoo HEP

- ✓ Received CEA approval for uprating by 91 MW to 1,091 MW: 1,045 MW in the first phase for two monsoon seasons in CY21 & CY22, and to 1,091 MW thereafter
- ✓ Commenced Operations of 45 MW uprated capacity in July'21
- ✓ Uprating without any additional capex



- JSW Energy plans to add 15 GW renewable capacity, which is ~4% of overall renewable additions
- Applying stringent risk return criteria to target a niche segment of market that can offer healthy returns
- No compromise on shareholder returns to meet growth
  - Target mid-teen post-tax equity IRRs



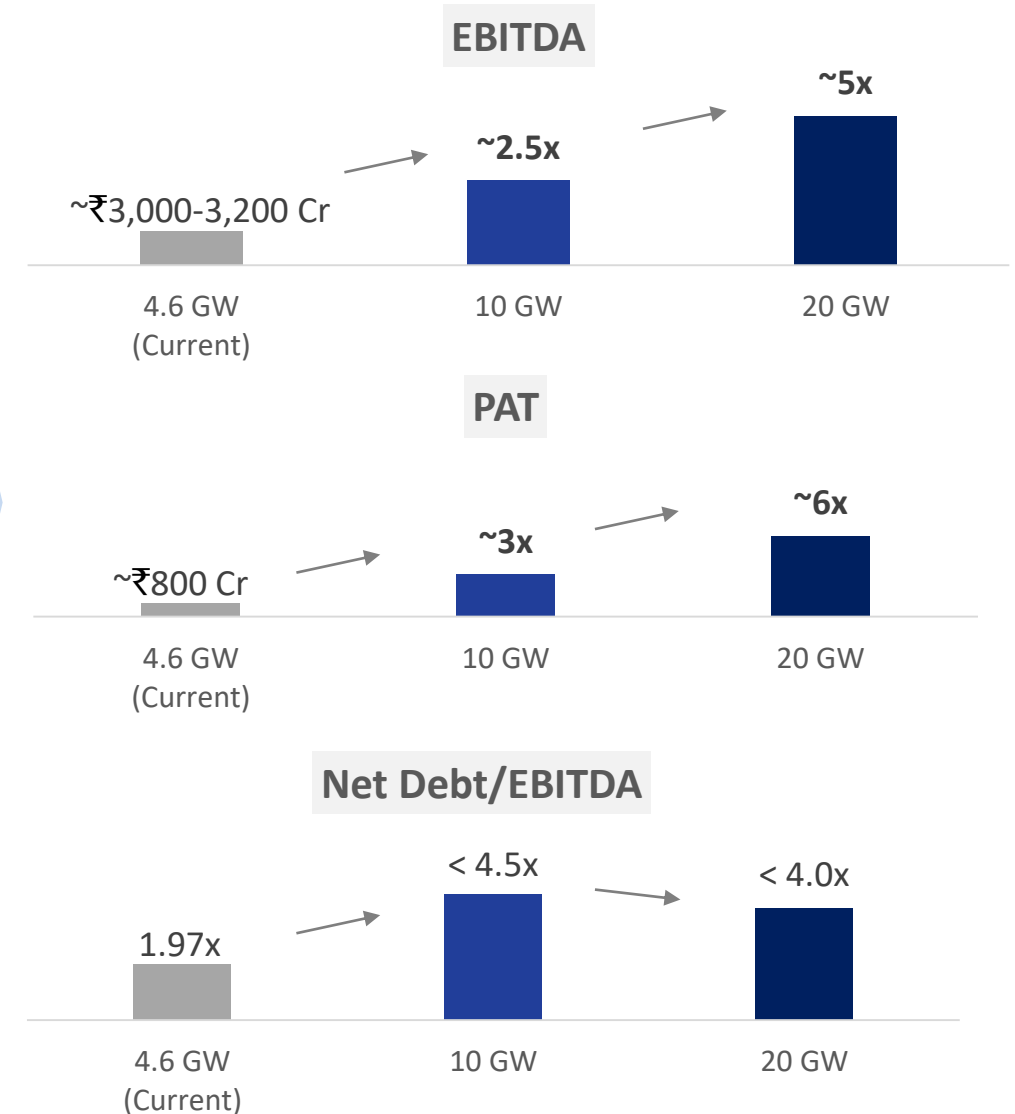
### Existing Portfolio (4.6 GW) generating healthy CF & returns<sup>1</sup> of >15%

- Steady operations and robust financials
  - Generating Gross Cash Accruals (GCA) of > ₹2,000 Crore p.a.
- 86% of portfolio tied-up under Long Term PPA:
  - Remaining Avg. Life of PPA: ~20 years
  - Remaining Avg. Life of Assets: ~30 years
- Thermal Business: Ample free cash generation for funding growth and option to refinance/term-out the debt
- Healthy Receivable Management, low working capital tied-up



### Growth Portfolio (15 GW)

- Additional Renewable Capacity Additions to have similar return profile of ~15%
- Existing 4.6 GW portfolio and new additions to generate strong cash flows to fund 2 GW p.a. growth upto FY30 and >3 GW p.a. growth post FY30

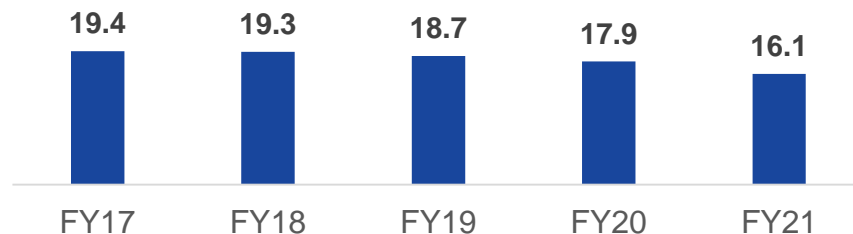


Prudent and consistent capital allocation strategy for growth over a 25 year history

Business model resilient despite several sectoral headwinds over the last decade

Sound operating efficiency characterized by one of the lowest O&M Cost/MW

O&M Expenses (₹Lakh/MW)



JSW Energy has one of the lowest project execution cost in the industry

Project Location	Capacity MW	Project cost		1 <sup>st</sup> COD Year
		₹Crore/MW	\$mn/MW <sup>2</sup>	
<b>Coal-based</b>				
Nigrie	1,320	7.92	0.11	2014
Janjgir-Champa	1,200	7.02	0.09	2014
Warora	600	6.25	0.08	2013
Padampur	540	6.18	0.08	2013
Chandrapur	600	6.22	0.08	2014
Amarkantak	600	5.23	0.07	2009
Maithon	1,050	5.24	0.07	2011
Udupi	1,200	4.67	0.06	2010
JSW : Ratnagiri <sup>3</sup>	1,200	4.60	0.06	2010
JSW: Vijayanagar	260	4.34	0.06	2000
JSW: Vijayanagar	600	3.28	0.04	2009
<b>Lignite Based <sup>1</sup></b>				
Giral	250	7.69	0.10	2011
Barsingsar	250	7.00	0.09	2010
JSW: Barmer	1,080	6.63	0.09	2009

### Project Selection Philosophy

- Stringent risk return metrics
- Bidding with conservative CUF assumptions of P-90
- High quality offtakers
- Captive PPAs with JSW Group companies (strong credit ratings) at arm's length pricing

### Project Construction and Land Acquisition

- De-scoping of EPC packages to have competitive edge
- Synergies with group businesses (steel, cement, paints, etc.) for better material availability
- Systematic approach of deploying in-house experienced land acquisition team in all resource-rich states
- Deployed experienced legal teams for title search and execution of lease deeds; dedicated team for securing Right-of-Way (RoW)

### Power Evacuation

- Strategic selection of ISTS substations for connectivity with high capacity margins to facilitate future expansions
- Identification of land parcel near to substation in order to reduce transmission line cost
- Effective due diligence & route surveys for risk mitigation
- Futuristic planning & designing to optimize use of evacuation infrastructure



### Supplier & Vendors

- Robust selection process through competitive route; Award of packages to best-in-class / Tier-I vendors only
- Comprehensive Contracts with strong performance & product warranty and performance bank guarantee provisions
- Developing strong relationships with all major OEMs, EPC contractors, BoP contractors

### Quality Control

- Dedicated team for quality assurance
- Standard operating procedure for quality checks
- Special checks on quality & type test certifications
- Implementation of TQM, ISO and other relevant standards

### O&M

- Skilled in-house O&M team
- Continuous implementation of innovative practices to further optimize O&M cost through TQM
- Operating Stations supported by experienced professionals at corporate office in areas such as Policy, Regulatory, Design & Engineering, Finance, Construction & Maintenance and HR

- ✓ Systematic approach of deploying in-house experienced land acquisition team in all resource-rich states
- ✓ Deployed experienced legal teams for title search and execution of lease deeds; dedicated team for securing RoW
- ✓ Acquired/ Locked-in sites in resource rich states, along with requisite transmission connectivity



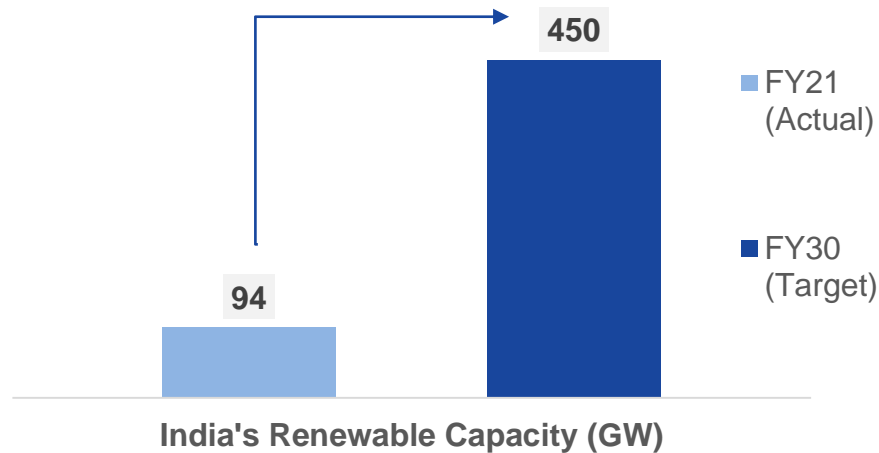
Site Photo for upcoming project

Acquired resources for  
2.5 GW, which is under-  
construction

Another 3 GW is locked-in

Around 15 GW in process

## Significant investments required in renewable energy industry



Average yearly addition of ~36 GW require an investment of ~₹2 lakh Crore<sup>1</sup> p.a.

## JSW Energy has sufficient balance sheet headroom & strong cashflow to pursue growth to 20 GW by FY30

- Sources for Growth Capital Available:
  - Balance Sheet Strength (current gearing ~0.43x)
  - Internal Accruals: Steady EBITDA & cashflow from operating projects (GCA: >₹2,000 Crore annually)
  - Healthy Cash Balance
  - No equity dilution envisaged for this growth
- Non-strategic Equity Investments (JSW Steel: ~₹5,290 Crore<sup>2</sup>) gives further headroom to accelerate growth, if required
  - JPVL shares: Monetised entire holdings for ~₹167 Crore in Q1 FY22
- Access to diversified pools of liquidity

## Spearheading development of Green Hydrogen in a bid to decarbonize the economy



**FORTESCUE  
FUTURE  
INDUSTRIES**



- JSW Future Energy and Australia's Fortescue Future Industries Pty Ltd (FFI) to collaborate and conduct scoping work on potential projects relating to the production of green hydrogen
- Utilisation potential across green steel making, hydrogen mobility, green ammonia and other mutually agreed industrial applications
- Collaboration to tap significant clean energy market opportunity in India and become a front-runner in a future hydrogen economy

## India's Hydrogen Potential

**H<sub>2</sub>**

### Significant H<sub>2</sub> demand

Expected to grow to ~24 MMT by 2050; can spur USD 65-70 Bn investments in incremental RE capacity



### National Hydrogen Mission

Announced in the Union Budget 2021 for making a hydrogen roadmap for the country



### India's Clean Energy commitments

Green H<sub>2</sub> adoption can contribute to emission reduction in allied sectors



### 2030 RE Generation Target of 450 GW

RE generation at low tariffs can help achieve scale in Green H<sub>2</sub> production



Sustainability

Overview

Key Investment Highlights

Appendix



# JSW Energy – Portfolio Growth with Renewables

**Barmer: 1,080MW**

- Configuration:** 8 X 135MW
- Units operating:** since 2009<sup>3</sup>
- Technology:** Sub-critical pithead Lignite based TPP
- Fuel Source:** Captive Lignite mines of BLMCL<sup>1</sup>
- Power Offtake:** Long Term PPA : 100%
- Project Cost:** INR 7,165 Crore/ \$968mn<sup>2</sup>

**Ratnagiri: 1,200MW**

- Configuration:** 4 X 300MW
- Units operating:** since 2010<sup>3</sup>
- Technology:** Sub-critical TPP
- Fuel Source:** Imported Thermal Coal
- Power Offtake:** Long Term PPA: 96%
- Project Cost:** INR 5,516 Crore/ \$745mn<sup>2</sup>

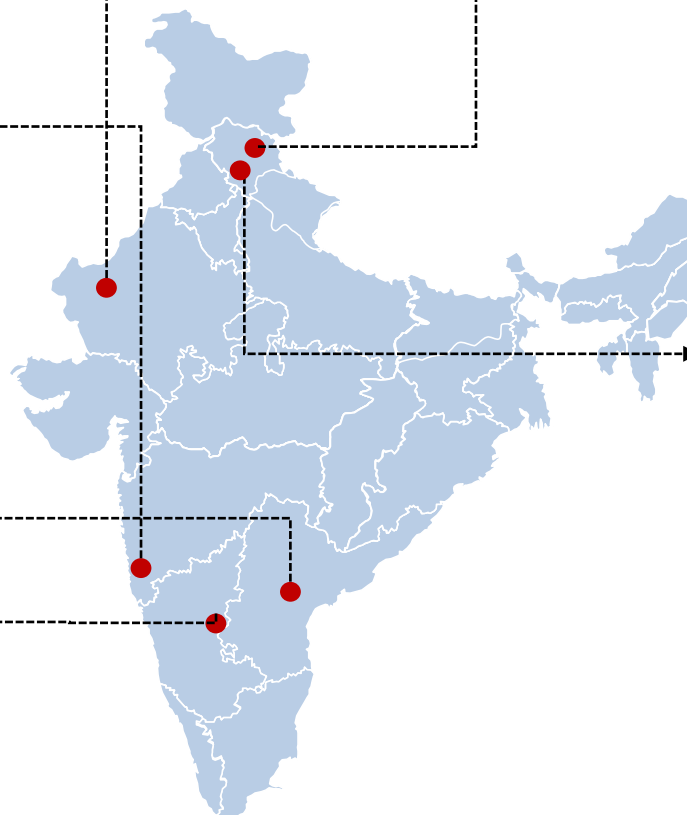
**Nandyal: 18 MW**

- 1x18MW Thermal Power Plant
- 100% LT PPA under Group Captive scheme

**Vijayanagar: 860 MW**

- Configuration:** 2 X 130MW and 2 X 300MW
- Units operating:** since 2000<sup>3</sup>
- Technology:** Sub-critical TPP
- Fuel Source:** Imported Thermal Coal & Gas
- Power Offtake:** Long Term PPA : 35%
- Project Cost:** INR 3,096 Crore/ \$418mn<sup>2</sup>

<b>4.6 GW</b>	<b>2.5 GW</b>
<b>Installed</b>	<b>Under-Construction</b>
30% Renewable	100% Renewable
70% Thermal	



**Baspa II: 300MW & Karcham Wangtoo: 1,091MW<sup>4</sup>**

- Configuration:** 3x100MW (Baspa II) ; 4x272.75MW (Karcham)
- Units operating:** Baspa II since 2003<sup>3</sup> and Karcham Wangtoo since 2011<sup>3</sup>
- Technology & Fuel Source:** Hydro
- Power Offtake:** Long Term PPA
- Asset Value to JSW Energy:** INR 9,275 Crore/\$1,253mn<sup>2</sup>

**Solar: 10 MW**

- Ground based and rooftop solar power projects across various locations with captive power tie-up within JSW Group

**Kutehr: 240 MW (Under - Construction)**

- Configuration:** 3x80MW
- Fuel Source:** Hydro Power Plant
- Power Offtake:** PPA with Haryana under finalization

**Renewable: 2,218 MW (Under - Construction)**

- 810 MW, Wind: SECI IX – PPA Signed
- 450 MW, Wind: SECI X – PPA to be signed
- 733 MW Wind, 225 MW Solar : JSW Steel – PPA Signed

Long term FSA with BLMCL for supply of lignite from its captive mines (2) ) USD/ INR = 74

(3) Denotes start of first unit in respective calendar year; TPP – Thermal Power Plant

(4) Current approved operational capacity at 1,045 MW. CEA approval received for uprating from 1,000 MW to 1,091 MW, in a phased manner over CY21 and CY22

# Awards & Recognitions - FY21



## Barmer

- National Energy Conservation Award-2020 by Ministry of Power
- Rajasthan Energy Conservation Award-2020
- Achieved Five-star grading in the British Safety Council's Occupational Health and Safety Audit
- Awarded 'National Efficiency Awards 2021' for Best Energy Efficient Plant- Lignite by Mission Energy Foundation



## Ratnagiri

- Recognized as 'Energy Efficiency Unit' at the CII National Award for Excellence in Energy Management
- Awarded State Award for Excellence in Energy Conservation & Management, by Maharashtra Energy Development Agency
- Awarded 'The Best Operating Thermal Power Generator' by Independent Power Producers Association of India (IPPAI)



## Vijayanagar

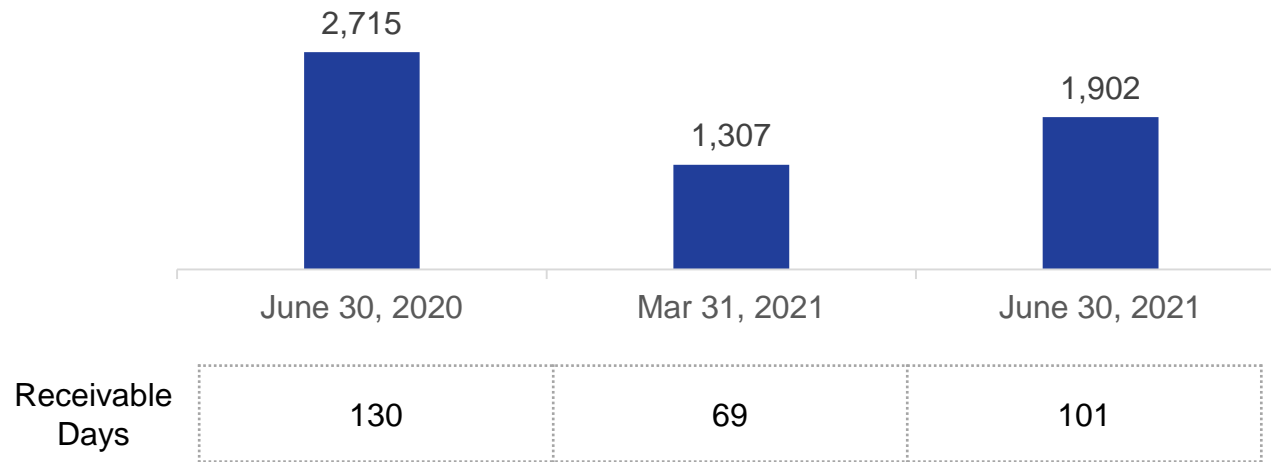
- JSW Group's Unit CPP 4 - 300 MW at Vijayanagar, whose Operation and Maintenance (O&M) is undertaken by the Company, set a national record by running continuously for 711 days
- Recognized as 'Energy Efficiency Unit' at the CII National Award for Excellence in Energy Management



## Hydro

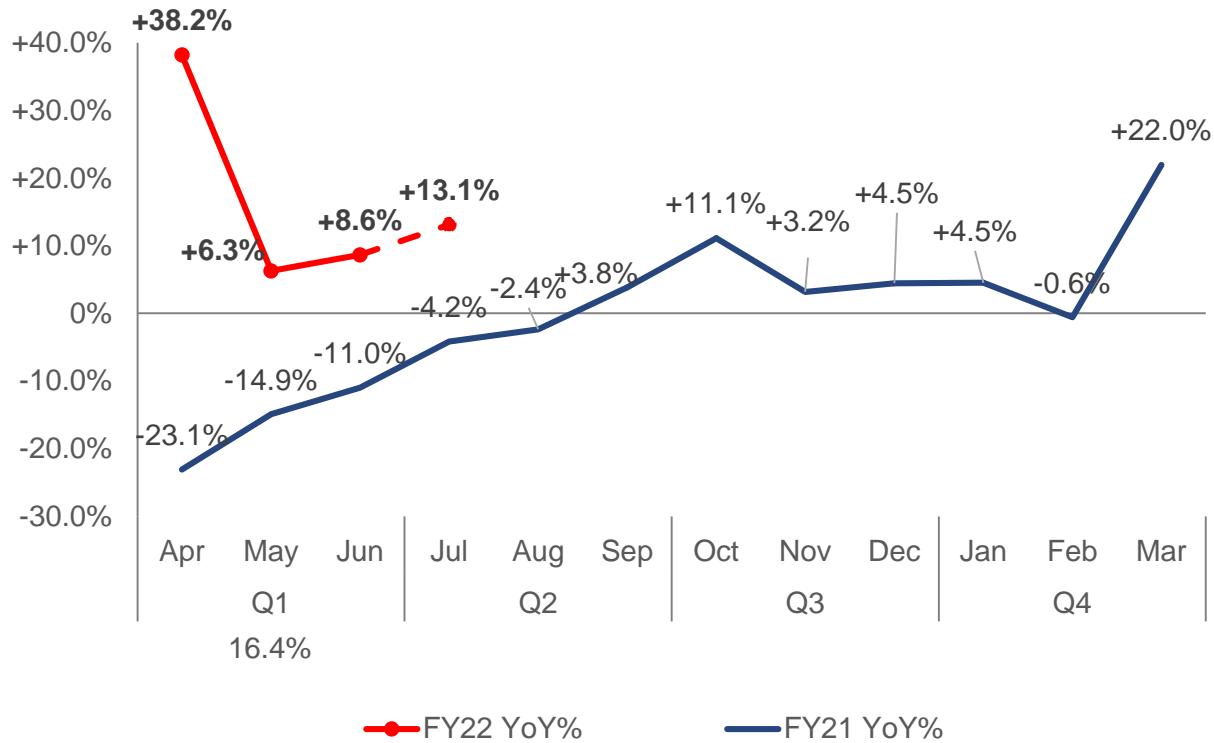
- Grow Care India Environment Award-2020 (Gold Shield)
- Grow Care India Safety Award-2020 (Gold Shield)

## Consolidated Trade Receivables\* (₹ Crore )



- Receivables decline 30% YoY in Q1 FY22
  - YoY: Q1 FY21 was impacted by Covid related delays from customers
  - QoQ: Impact due to seasonality in Hydro generation as well as Covid related delays due to second wave of covid in Q1
- All plants placed favourably in States' Merit Order Dispatch
  - Further, Hydro plants under 'Must-run status' with no scheduling risk
- No history of any bad debts from routine long term trade receivables
- Payment security mechanism in force for power tied under long term PPA with Discoms
- Recovery of late payment surcharge in case of delayed payments from discoms

Power Demand Growth YoY

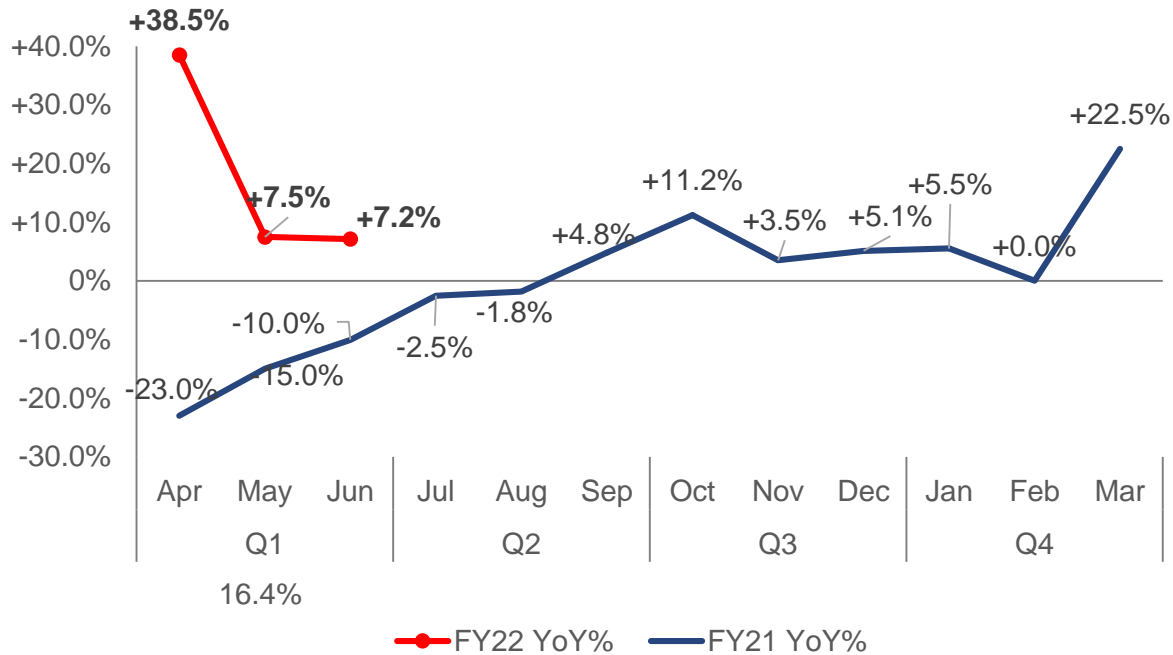


- **All India Peak Power Demand hit an all time high of ~201 GW in July'21**
  - Earlier, in Jun'21, Jan'21 and Dec'20, peak demand had reached all time highs of ~197 GW, ~186 GW and ~183 GW respectively
- **Power demand in Q1 FY22 saw a strong increase of 16.4% YoY**
  - This was driven by a strong pickup in economic activity coupled with a low base effect. In Q1 FY21 demand had declined by 16.2% YoY when Covid-19 led restrictions/lockdowns were first imposed in the country
- **For first 25 days in July'21, power demand increased by 13.1% YoY (and 7.6% compared to Jul'19)**

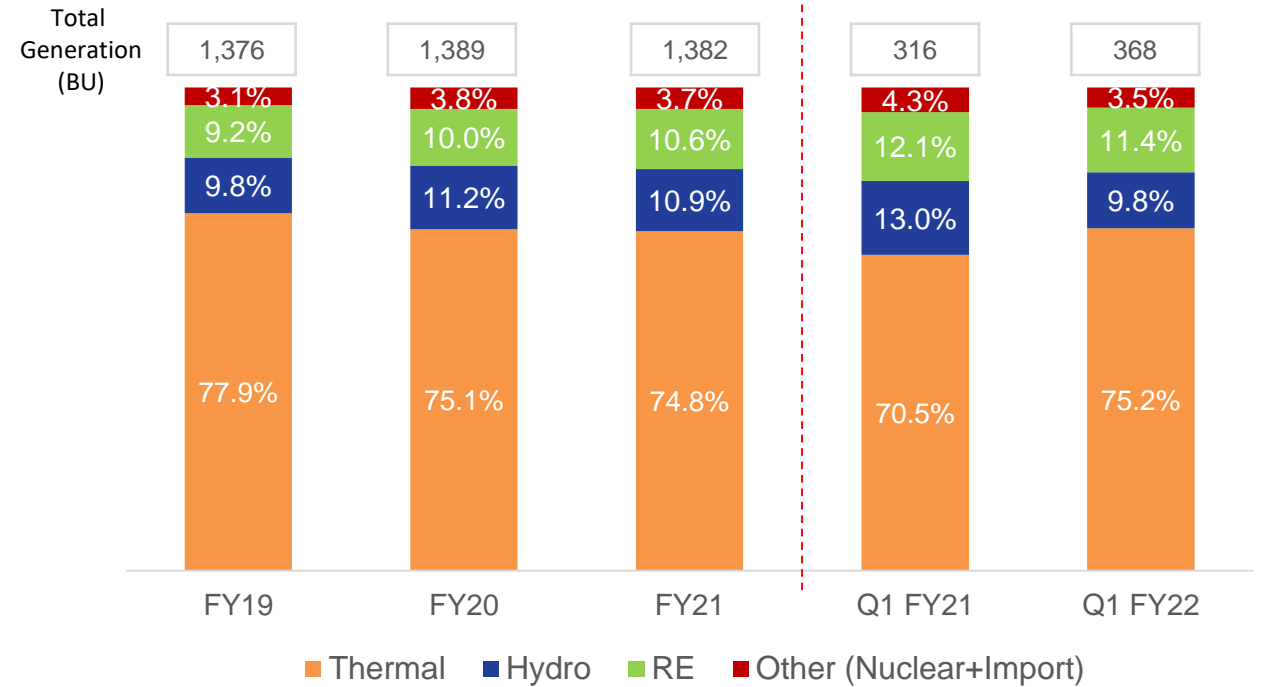
**Peak Power Demand hits an all time high in July'21**

# India - Power Generation

### Power Generation Growth YoY



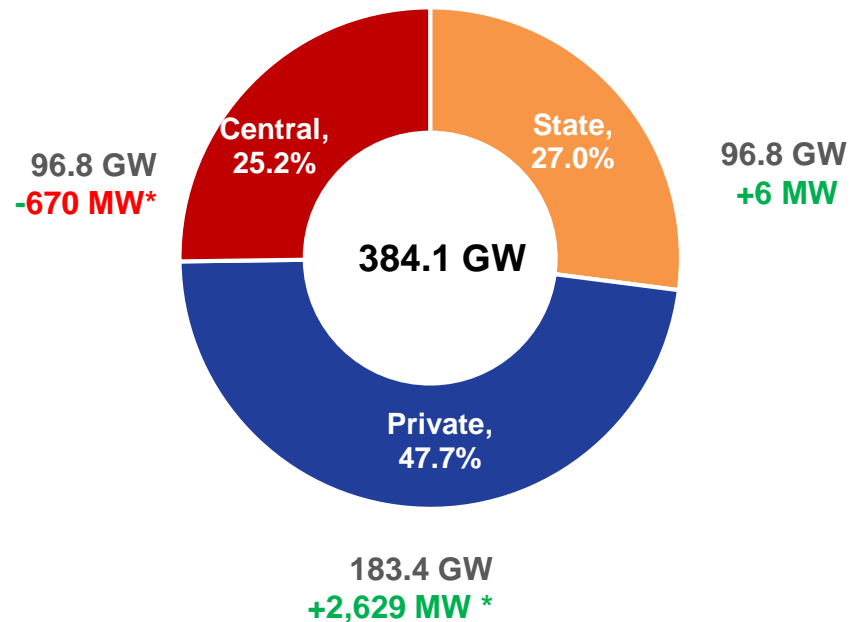
### Segment-wise Share in Generation



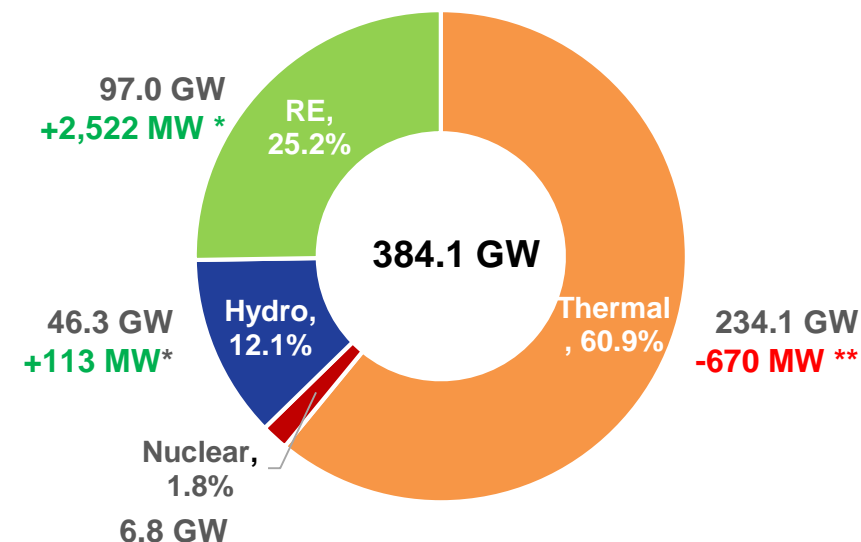
**Generation increased 16.4% YoY in Q1 led by Thermal (+24%) and RE (+10) segments**

**Share of Thermal increased, while that of Hydro declined in Q1 YoY**

## Sector-wise Installed Capacity



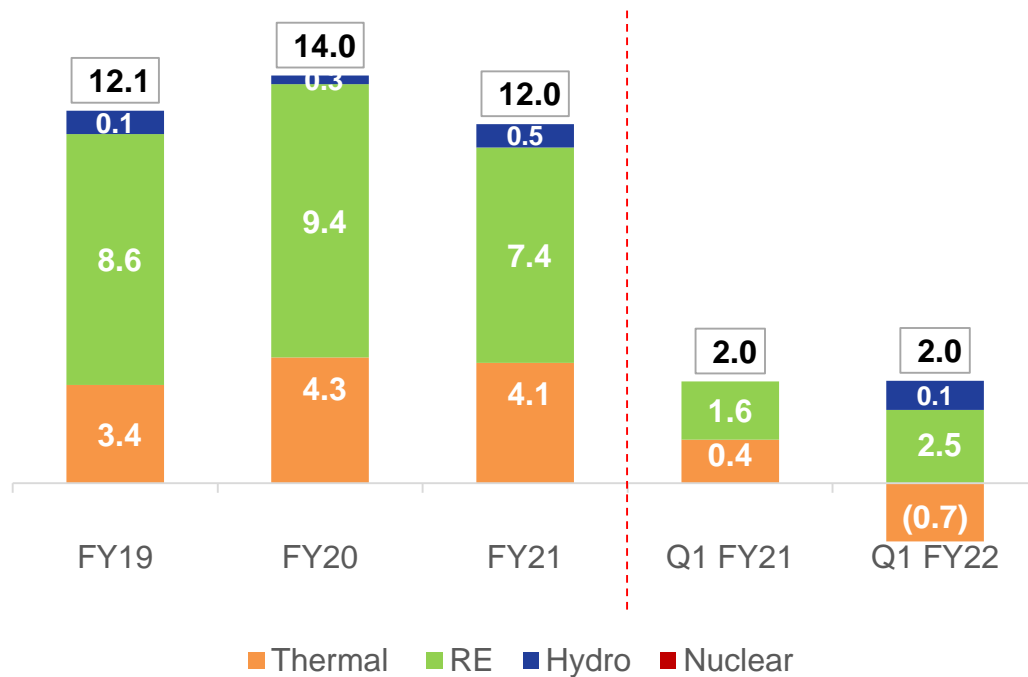
## Segment-wise Installed Capacity



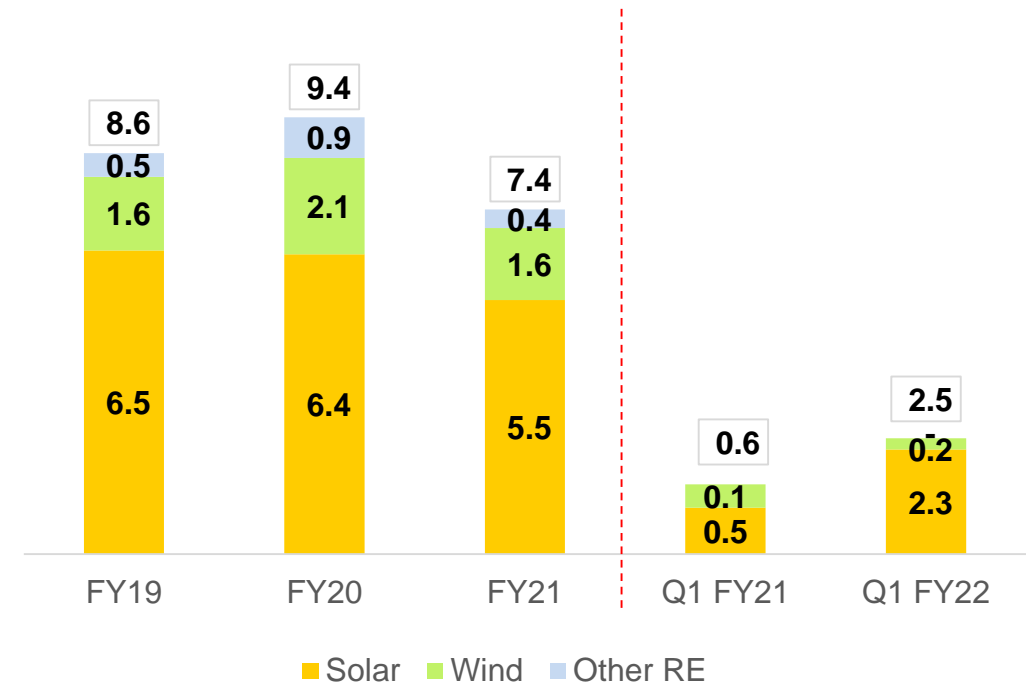
As on June 30, 2021

**In Q1 FY22, Installed Capacity increased by net ~2.0 GW, driven by Renewable Energy segment  
0.7 GW thermal capacity retired during the quarter**

Overall Segment-wise Net Capacity Addition (GW)



RE Segment-wise Net Capacity Addition (GW)



Renewable energy driving capacity addition

2.5 GW RE capacity added in Q1 FY22 driven by solar segment



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