



**Investor Presentation**

November 2021

# Forward Looking and Cautionary Statement



*This presentation has been prepared by JSW Energy Limited (the "Company") based upon information available in the public domain solely for information purposes without regard to any specific objectives, financial situations or informational needs of any particular person. This presentation should not be construed as legal, tax, investment or other advice. This presentation is strictly confidential, being given solely for your information and for your use, and may not be copied, distributed or disseminated, directly or indirectly, in any manner. Furthermore, no person is authorized to give any information or make any representation which is not contained in, or is inconsistent with, this presentation. Any such extraneous or inconsistent information or representation, if given or made, should not be relied upon as having been authorized by or on behalf of the Company.*

*This presentation contains statements that constitute forward-looking statements. These statements include descriptions regarding the intent, belief or current expectations of the Company or its directors and officers with respect to the results of operations and financial condition of the Company. These statements can be recognized by the use of words such as "expects," "plans," "will," "estimates," "projects," or other words of similar meaning. Such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and actual results may differ from those specified in such forward-looking statements as a result of various factors and assumptions. The risks and uncertainties relating to these statements include, but are not limited to, (i) fluctuations in earnings, (ii) the Company's ability to manage growth, (iii) competition, (iv) government policies and regulations, and (v) political, economic, legal and social conditions in India. The Company does not undertake any obligation to revise or update any forward-looking statement that may be made from time to time by or on behalf of the Company. Given these risks, uncertainties and other factors, viewers of this presentation are cautioned not to place undue reliance on these forward-looking statements.*

*The information contained in this presentation is only current as of its date and has not been independently verified. The Company may alter, modify or otherwise change in any manner the contents of this presentation, without obligation to notify any person of such revision or changes. No representation, warranty, guarantee or undertaking, express or implied, is or will be made as to, and no reliance should be placed on, the accuracy, completeness, correctness or fairness of the information, estimates, projections and opinions contained in this presentation. None of the Company or any of its affiliates, advisers or representatives accept any liability whatsoever for any loss howsoever arising from any information presented or contained in this presentation. Please note that the past performance of the Company is not, and should not be considered as, indicative of future results. Potential investors must make their own assessment of the relevance, accuracy and adequacy of the information contained in this presentation and must make such independent investigation as they may consider necessary or appropriate for such purpose. Such information and opinions are in all events not current after the date of this presentation.*

*The Potential investors shall be in compliance with the applicable Insider Trading Regulations, with respect to the Company in reference to the information provided under this presentation.*



## Sustainability

Overview

Key Investment Highlights

Appendix

# 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>Renewable Power:</b> Enhance the renewable power to 2/3rd of our Total Installed Capacity</p>	<p><b>Biodiversity:</b> No Net Loss for Biodiversity</p>
<p><b>Waste:</b> 100% Ash (Waste) utilization</p>	<p><b>Waste Water:</b> Zero Liquid Discharge</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

**Aligned to National & International Frameworks**

## 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

Committed to set science based targets to keep global warming to 1.5°C under SBTi

## Integrated Reporting since FY19

# 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>
	<hr/>				
<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>Maintain 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>
	<hr/>				
<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>	-	
<hr/>					
<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%	
<hr/>					
<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

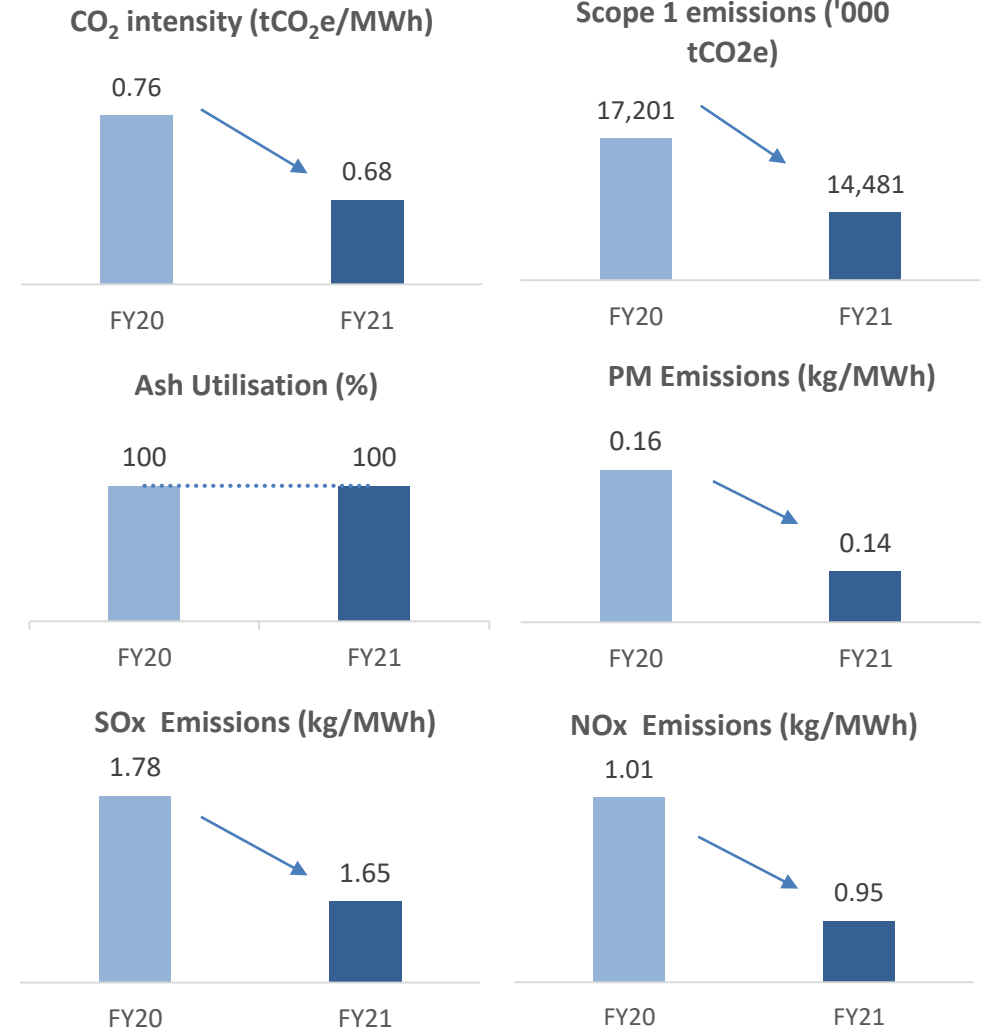
- Calibration of Low NOx burners at Vijayanagar
- Use of low Sulphur coal at Ratnagiri
- Modification of ESP resulting in reduction of Dust at Barmer



### 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

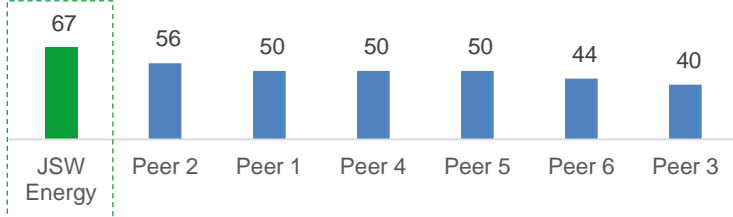
## Performance



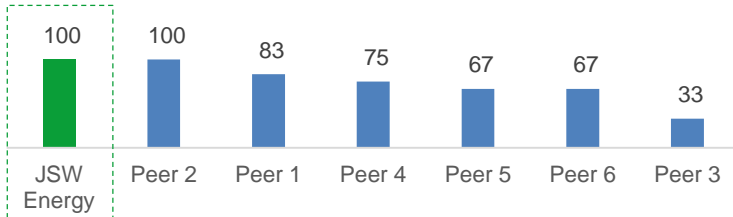
# ESG Performance amongst the best in the sector

## Board & Governance

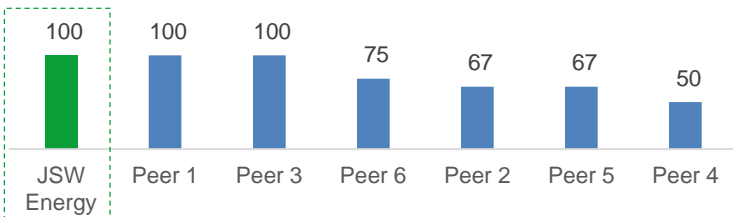
### % Board Independent



### % Audit Committee Independent

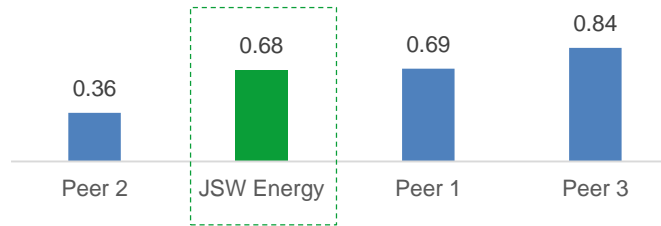


### % Nomination & Remuneration Committee Independent

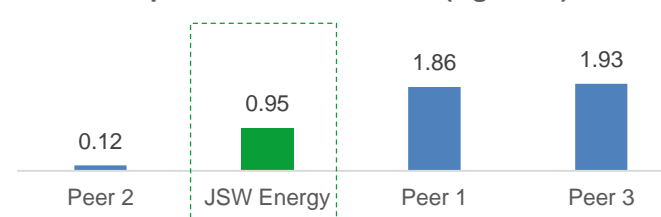


## Air Emissions

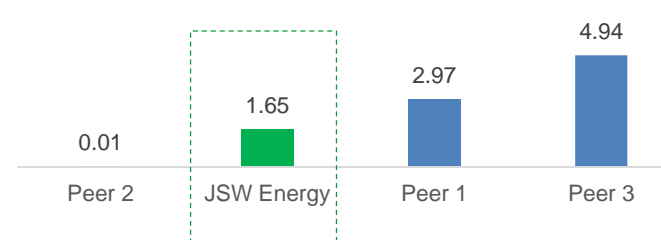
### CO<sub>2</sub> Intensity (t CO<sub>2</sub>e/MWh)



### Specific NO<sub>x</sub> Emissions(Kg/MWh)

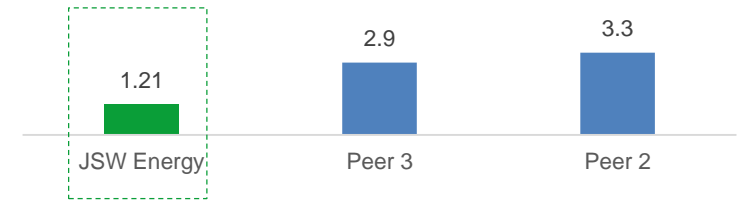


### Specific SO<sub>x</sub> Emissions(Kg/MWh)

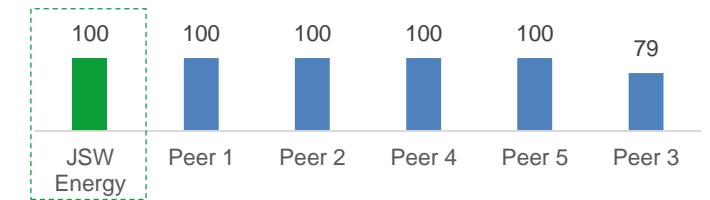


## Water & Waste Management

### Specific Fresh Water Consumption (m<sup>3</sup>/MWh)



### Ash Utilisation (%)



## ESG Ratings\*



Entity	CDP Rating
JSW Energy	B
Peer 1	C
Peer 3	D
Peer 5	D
Peer 6	D
Peer 2	F
Peer 4	F



Entity	MSCI Rating
JSW Energy	BB
Peer 6	A
Peer 1	BB
Peer 4	CCC

Peers include: Adani Green, Adani Power, CESC, NTPC, Tata Power, Torrent Power

Source: Company Annual Reports, Maybank Kim Research; Data as of FY21, as per available public disclosures

\*CDP Rating – Climate Change

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			
	Accountability		Social Responsibility
	Transparency		Environment
	Integrity		Regulatory Compliance



# Empowering Our Communities

## Empowering communities with sustainable livelihoods



Regular water supply through water pipelines & hand pumps in Barmer, Rajasthan

Scaling Community Orchards, Integrated & Progressive Farming, Vegetable Production, Dairy Units

Working with 500+ women across 16+ Gram Panchayats for market linkages, training on new techniques and designs



[Health & Nutrition](#)



[Water & Environment](#)



[Waste Management](#)



[Agri-livelihoods](#)



[Education](#)



[Women's BPO & Livelihoods](#)



[Skill Enhancement](#)



[Art, Culture & Heritage](#)



[Sports](#)

# Continuing our Health & Safety Excellence Journey

Figures are for Q2 FY21



**Zero Severe/Major Injuries**



**70% of all contractors covered by JSW CARES assessment**



**40,000+ Cumulative Safety Observations**  
INFLUENCING POSITIVE SAFETY BEHAVIOR OF OUR WORKFORCE



**Fire Safety refresher training completed at all locations**



**Safety Awards won by Vijayanagar & Hydro Plants**

JSW Energy Vijayanagar received the **Unnatha Suraksha Puraskar** by National Safety Council  
JSW Hydro Energy, Sholtu received the **PLATINUM Award** from Grow Care OH&S Awards



2021.09.23 10:18



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 21.5 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 2030, driven by renewables**
- ✓ **Market Cap: ~USD 7.1 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

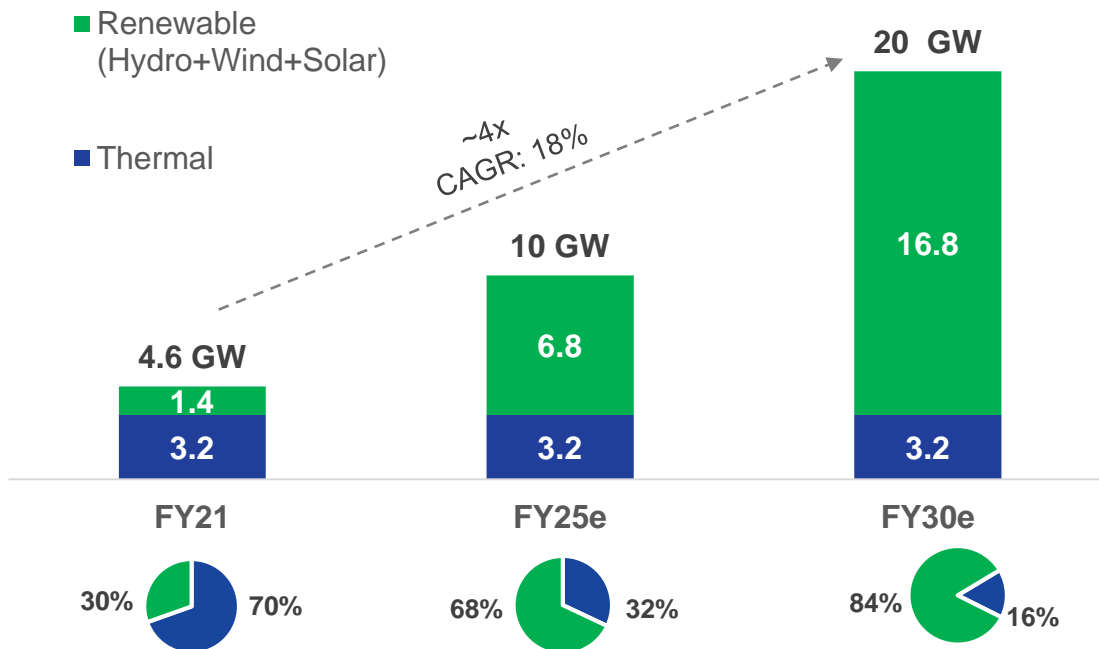


- ✓ Early-stage, tech-focused, VC fund
- ✓ Portfolio: Purple, IndusOS, LimeTray, Homelane



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

**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

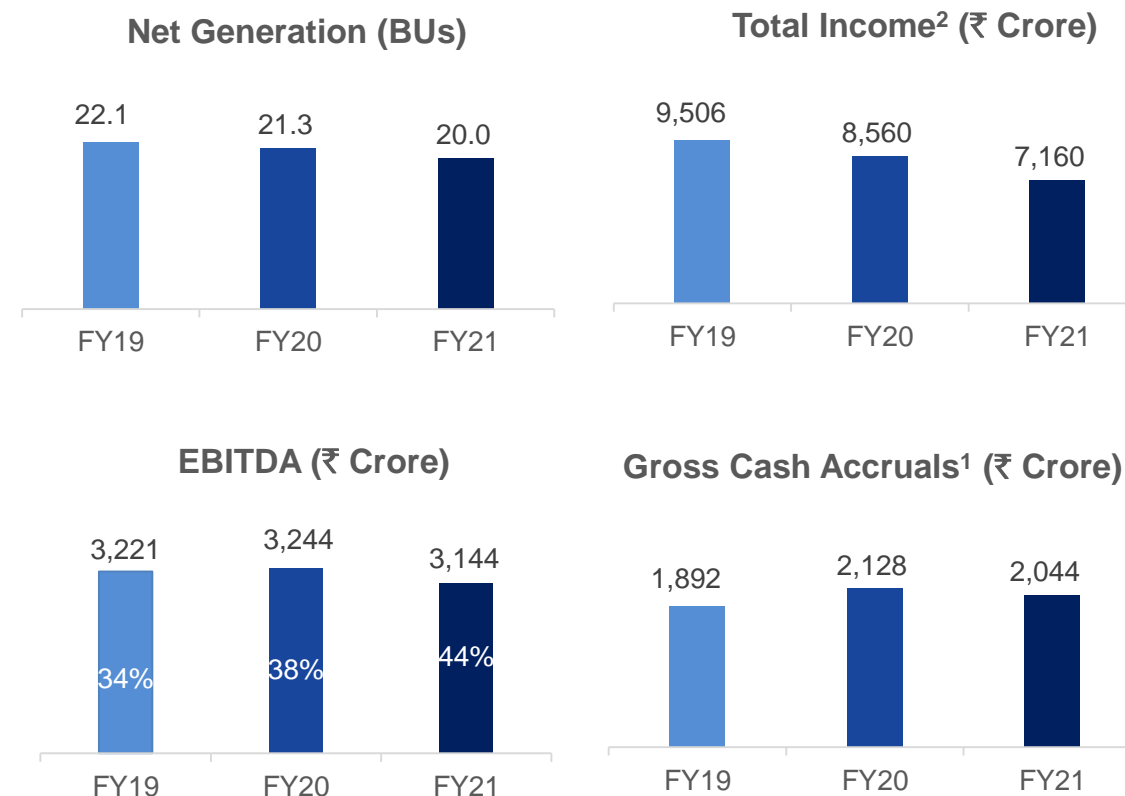
# Healthy Operations and Financials

<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**



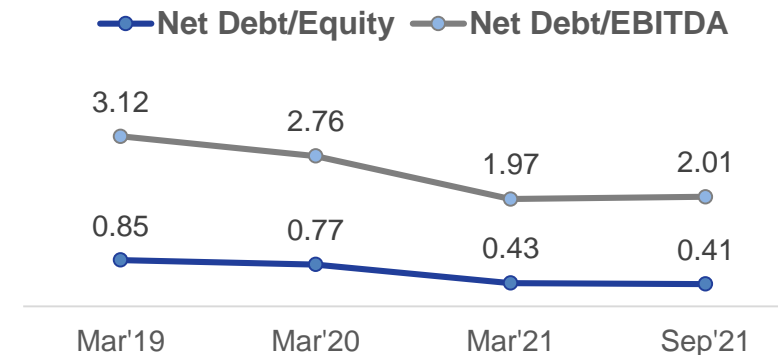
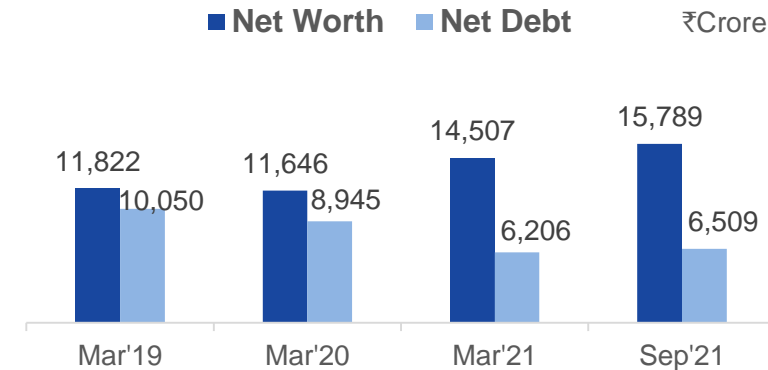
# Robust Balance Sheet

<b>2.01x</b> Net Debt/EBITDA	<b>0.41x</b> Net Debt/Equity
<b>8.04 %</b> Wt. average cost of debt	<b>↓ 19% YoY</b> Decline in Receivables Outstanding

Figures as of Sep 30, 2021

- ✓ Strong Liquidity with healthy cash balances: ₹1,777 Crore
- ✓ Financial flexibility enhanced by equity investments:
  - Holding 7Cr JSW Steel shares (Value<sup>1</sup>: ₹~4,680 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

Overview

**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 annual 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: 2.01x Net Debt/EBITDA, 0.41x 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



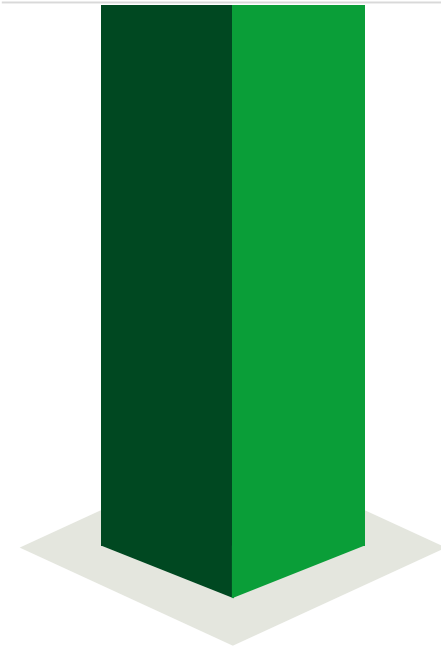
## Attractive Power Market

- Power demand expected to grow at CAGR of 5% to 2030
- India has renewables target of 450 GW by 2030 from 102 GW currently
- Govt. committed to power sector reforms

# Growth Strategy Pillars

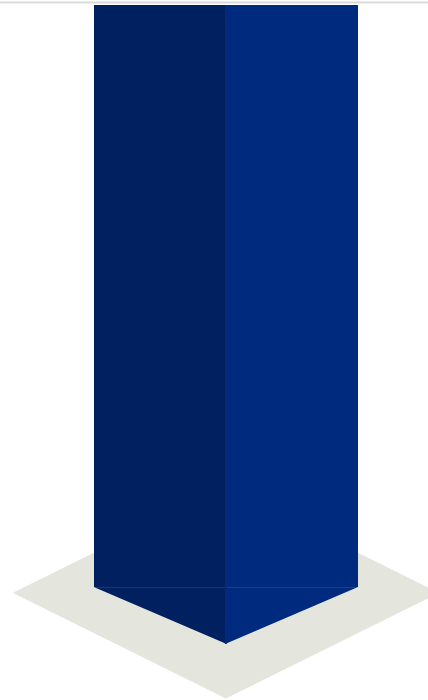
1

**Significant Market Opportunity  
& Growth Roadmap**



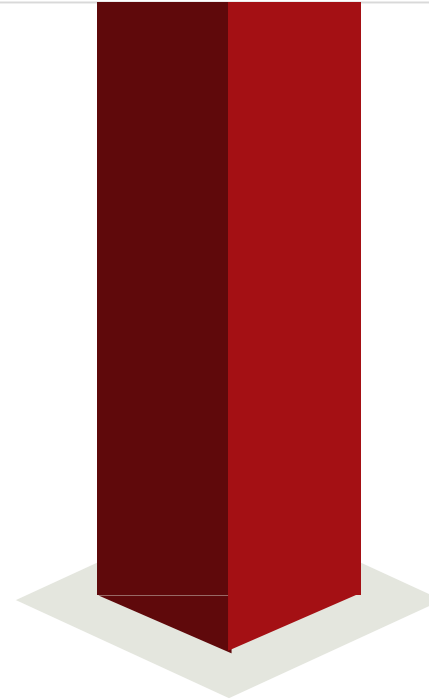
2

**Proven Project Execution  
& Operational Excellence**



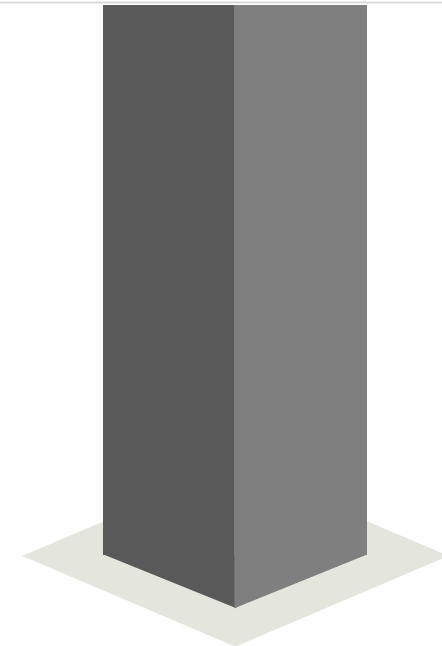
3

**Locked-in  
Resources**

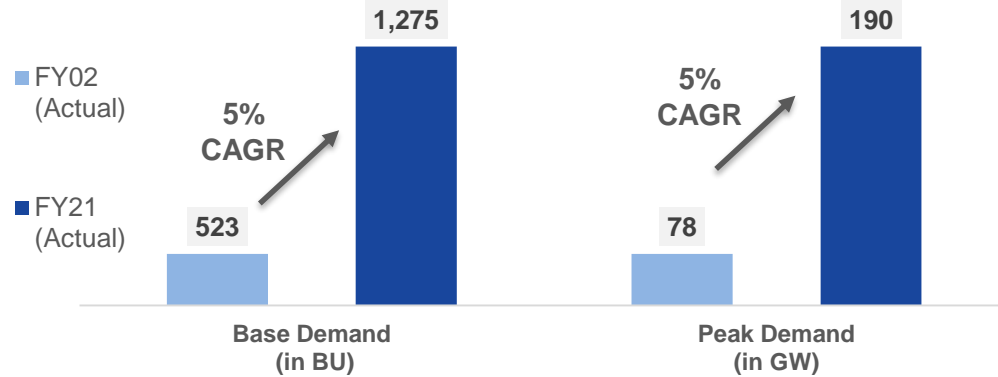


4

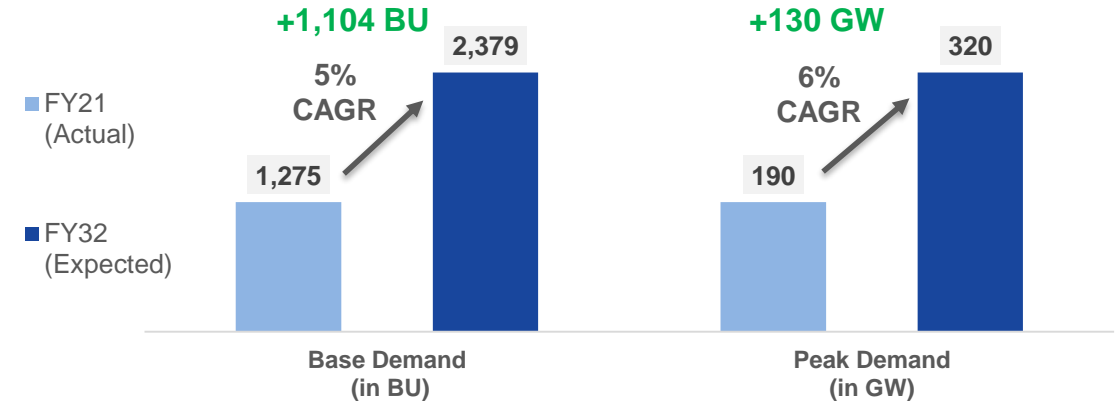
**Growth Capital  
Available**



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

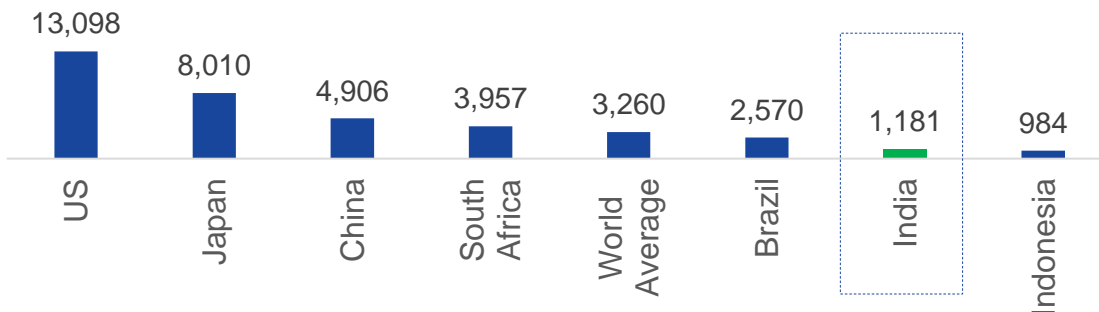


**Similar growth expected over next decade**



**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

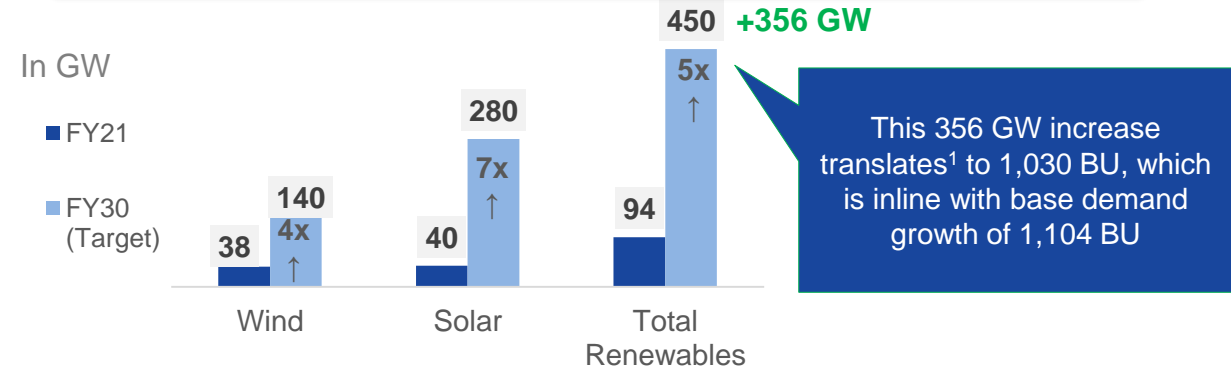
## India plans to achieve a low-carbon future, and be Carbon Neutral by 2070

### India made 5 commitments at the COP26 summit:

- To increase its non-fossil energy capacity to 500 GW by 2030
- To meet 50% of its energy requirements from renewable energy by 2030
- To reduce the total projected carbon emissions by 1 billion tonne from now till 2030
- To reduce the carbon intensity of its economy to less than 45% by 2030
- To be carbon neutral by 2070



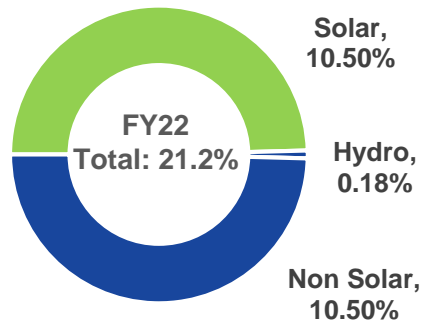
## Demand to be met incrementally with Renewable Energy



## 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

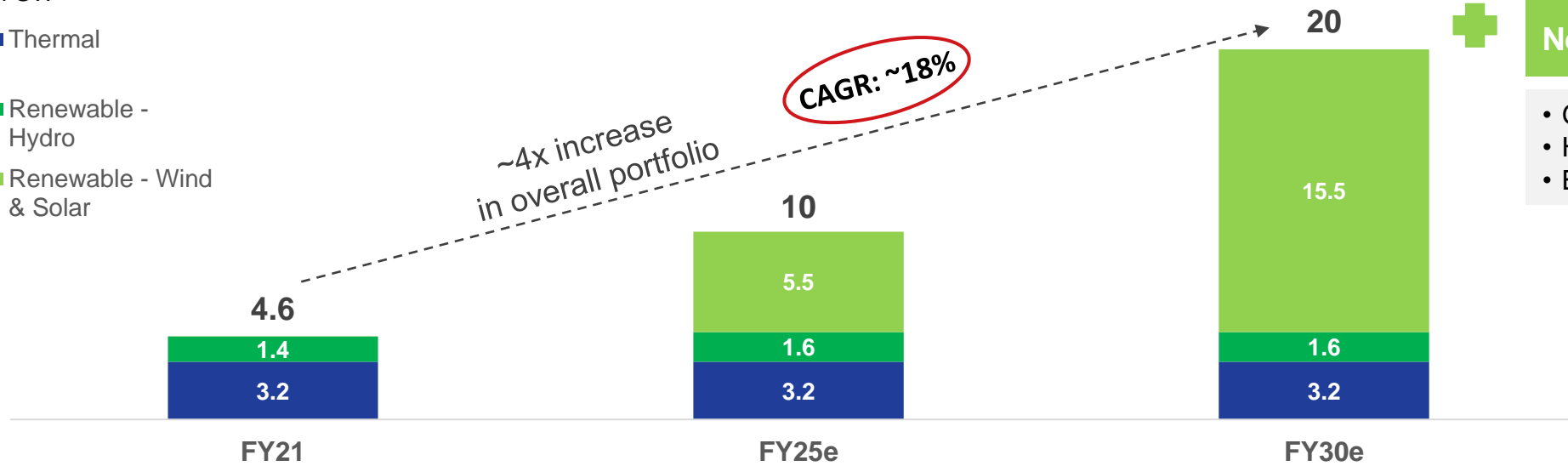
## Renewables-led growth to 20 GW by 2030

In GW

■ Thermal

■ Renewable - Hydro

■ Renewable - Wind & Solar

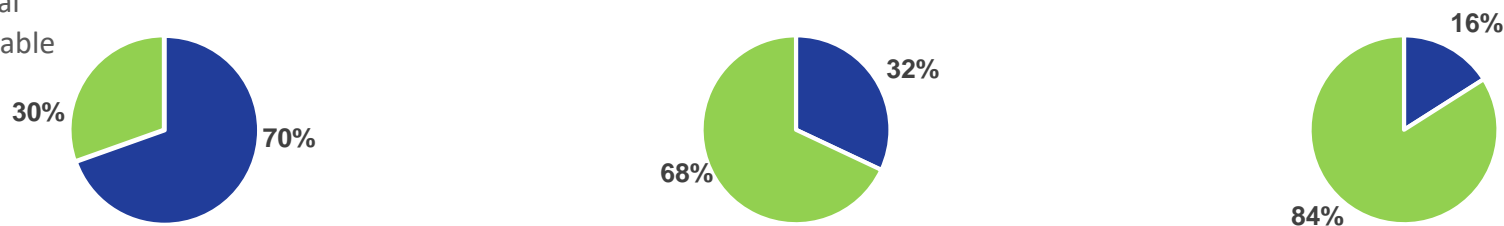


### New Growth Platforms

- Green Hydrogen
- Hydro Pumped Storage
- Battery Energy Storage

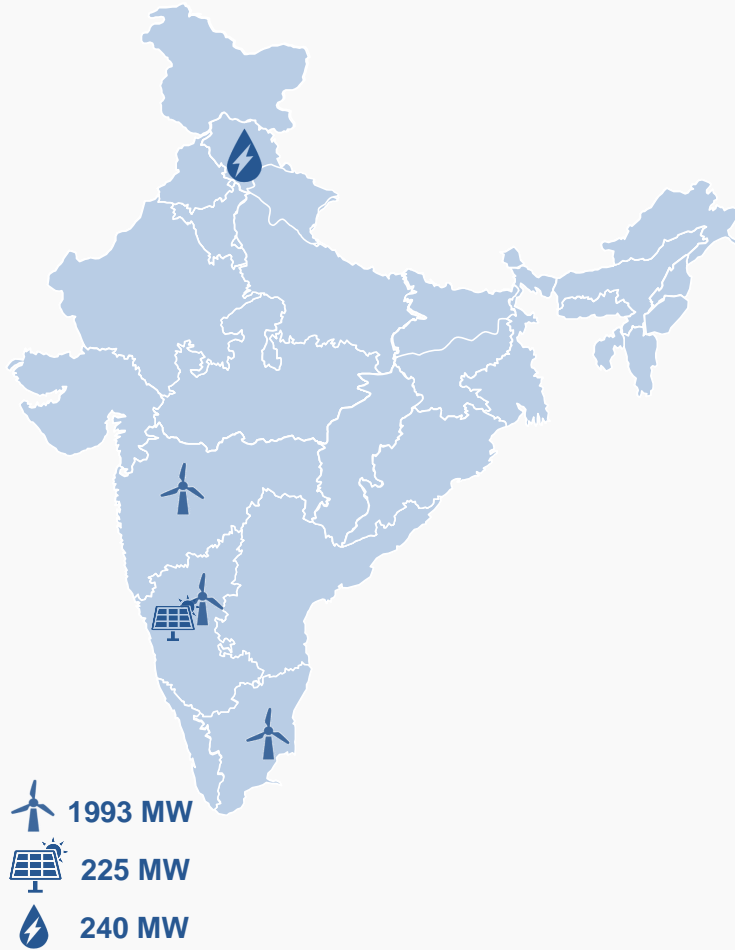
■ Thermal

■ Renewable



Being at the forefront of Energy Transition

## 2.5 GW Under-construction Projects



Map for illustrative purposes, showing project locations

### SECI: Wind Projects Tamil Nadu: 1,260 MW

- SECI IX (810 MW) + SECI X (450 MW)
- Signed 25-year PPA with SECI
- Commissioning: progressively from Q1 FY23

### Group Captive: Wind & Solar Projects Karnataka: 825 MW

- Solar : 225 MW; Wind: 600 MW
- Signed 25-year PPA with JSW Steel
- Commissioning: Solar - from Q4 FY22 (Solar), Wind - progressively from Q1 FY24

### Group Captive: Wind Project Maharashtra: 95 MW

- Signed 25-year PPA with JSW Steel
- Commissioning: progressively from Q4 FY23

### Group Captive: Wind Project Tamil Nadu: 38 MW

- Signed 25-year LT PPA with JSW Steel
- Commissioning: progressively from Q4 FY23

### Kutehr Hydro Project Himachal Pradesh: 240 MW

- 3x80 MW Run-of-the-river Hydro Power Plant
- PPA under finalization with Haryana Discom
- Commissioning: September CY24

Blended tariff	₹3.08/unit (excl. hydro)
Capex	<ul style="list-style-type: none"> <li>Total : ~₹16,660 Crore</li> <li>Spent: ~₹1,250 Crore</li> </ul>
PPA	Signed for 2.2 GW
Land & Resources	Acquired/Locked-in
Transmission	Construction commenced for dedicated transmission lines for SECI projects
Equipment	<ul style="list-style-type: none"> <li>1.4 GW wind turbines ordered</li> <li>Solar module delivery commenced</li> </ul>
Expected Commissioning	<ul style="list-style-type: none"> <li>FY22: 100+ MW</li> <li>FY23: 1200+ MW</li> <li>FY24: 700+ MW</li> <li>FY25: 240 MW (Kutehr)</li> <li>Modular/phased commissioning to provide accelerated cashflow generation</li> </ul>



**Group Captive: 225 MW Solar Power Plant Under-construction in Karnataka  
Targeted Commissioning from Q4 FY22**

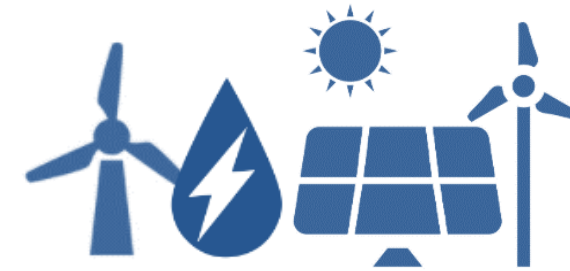
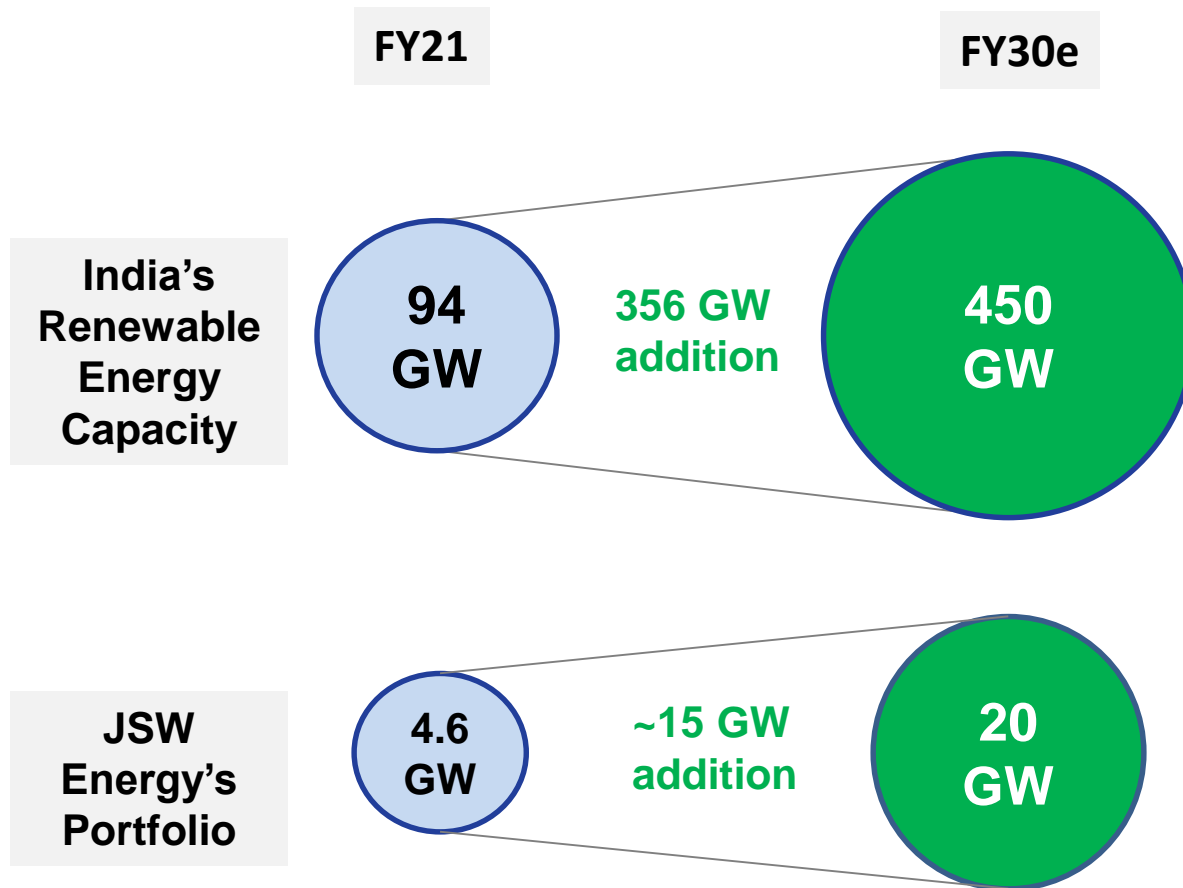


**Construction commenced for dedicated transmission lines and sub-station  
Targeted Commissioning from Q1 FY23**





**Completed 10 km tunneling, achieving half the distance ahead of timelines  
Targeted Commissioning by Sept 2024**



- 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

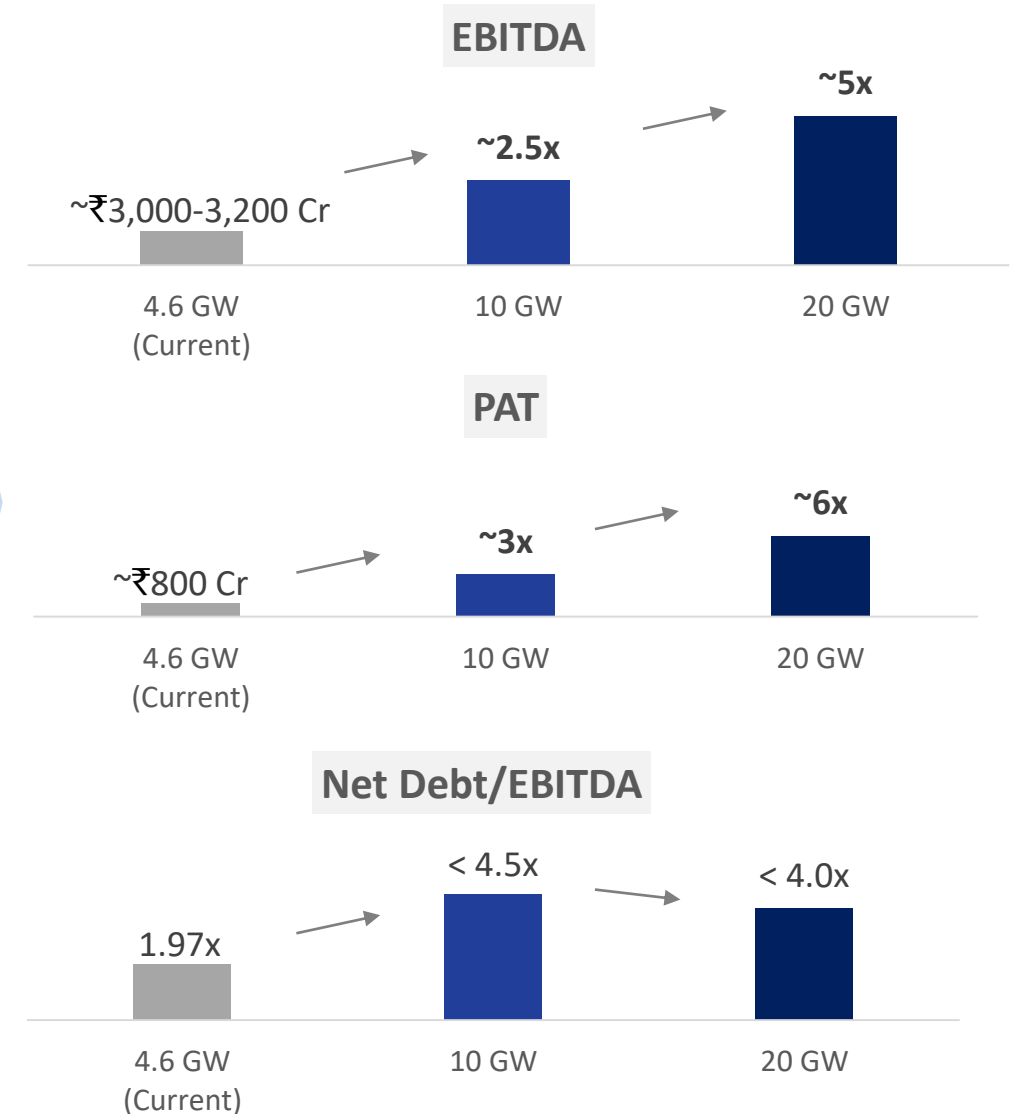
### Existing Portfolio (4.6 GW) generating healthy CF & returns<sup>1</sup> of >15%

- 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

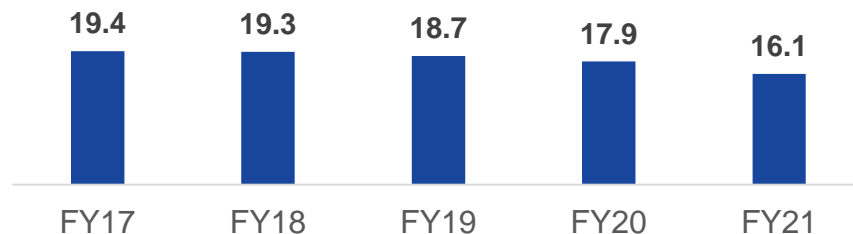


Prudent and consistent capital allocation strategy for growth over a 25 year history

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 &amp; 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&amp;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



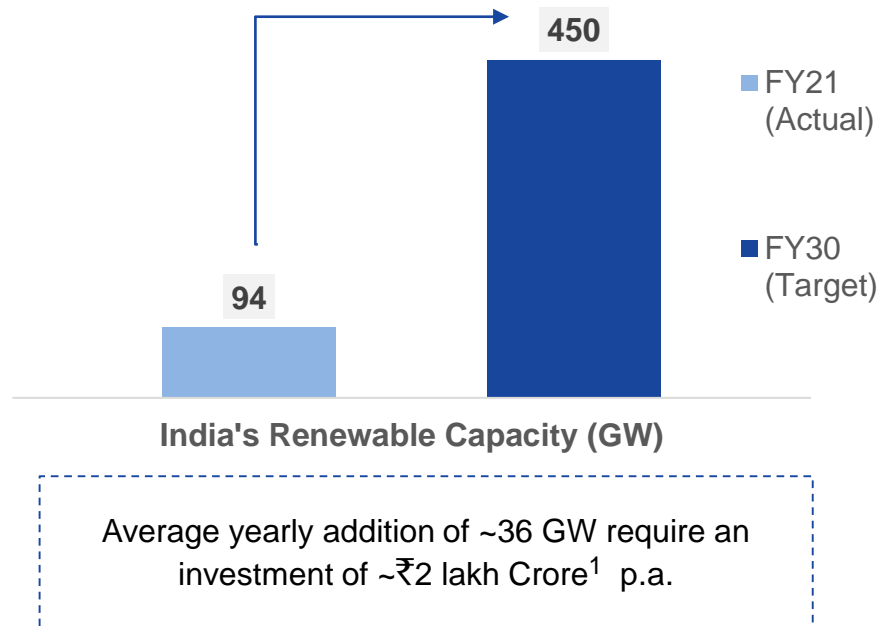
Site Photo for upcoming project

**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



## 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 ~0.41x)
  - 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: ~₹4,680 Crore<sup>2</sup>) gives further headroom to accelerate growth, if required
  - Monetised entire JPVL<sup>3</sup> equity holdings for ~₹167 Crore in Q1 FY22
- Access to diversified pools of liquidity





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/ \$962mn<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/ \$740mn<sup>2</sup>

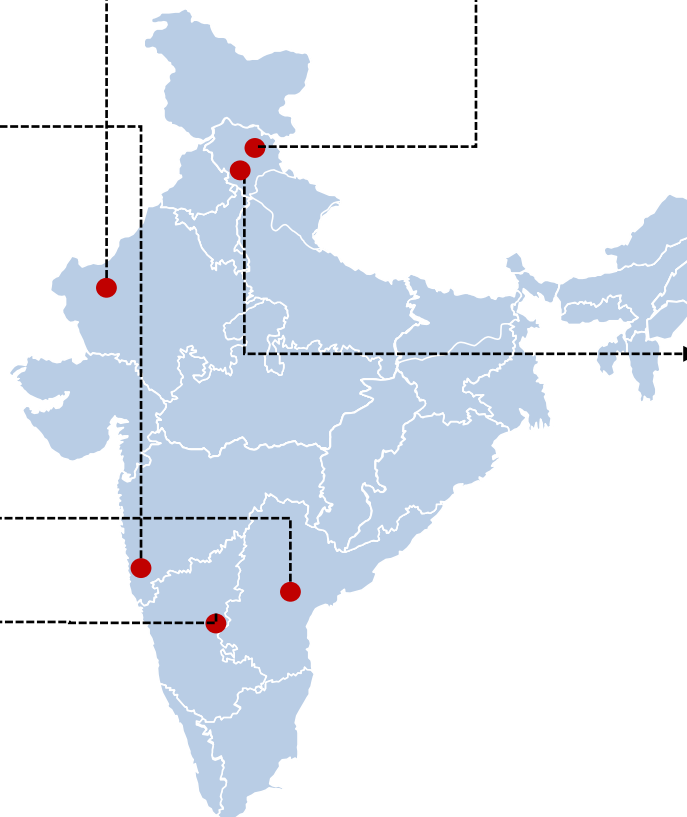
## Nandyal: 18 MW

- 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/ \$416mn<sup>2</sup>

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



## 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(1300MW), Short Term(45MW)
- **Asset Value to JSW Energy:** INR 9,275 Crore/\$1,245mn<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 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 = 74.5

(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

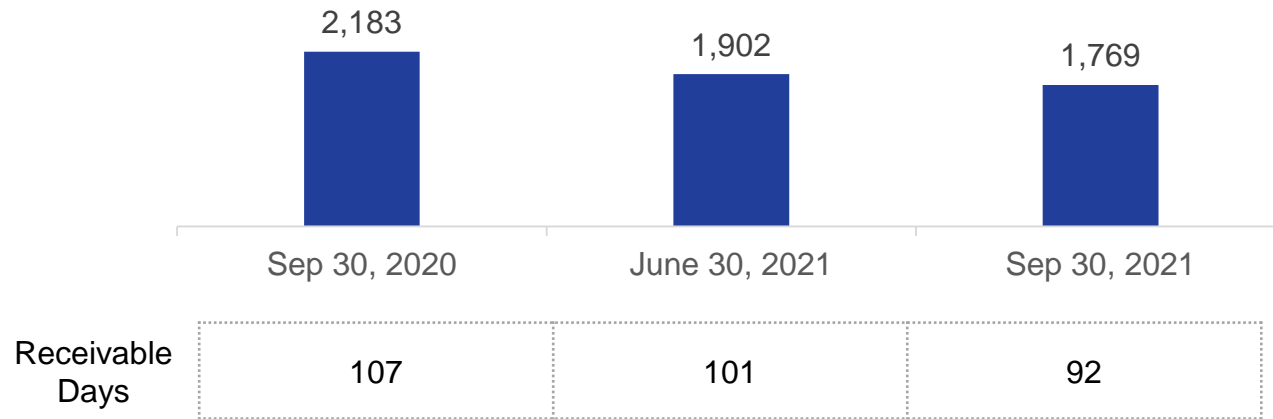
- JSW Group's Unit CPP 4 - 300 MW at Vijayanagar, whose Operation and Maintenance (O&M) is undertaken by the Company, set a national record by running continuously for 711 days
- Recognized as 'Energy Efficiency Unit' at the CII National Award for Excellence in Energy Management



## Hydro

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

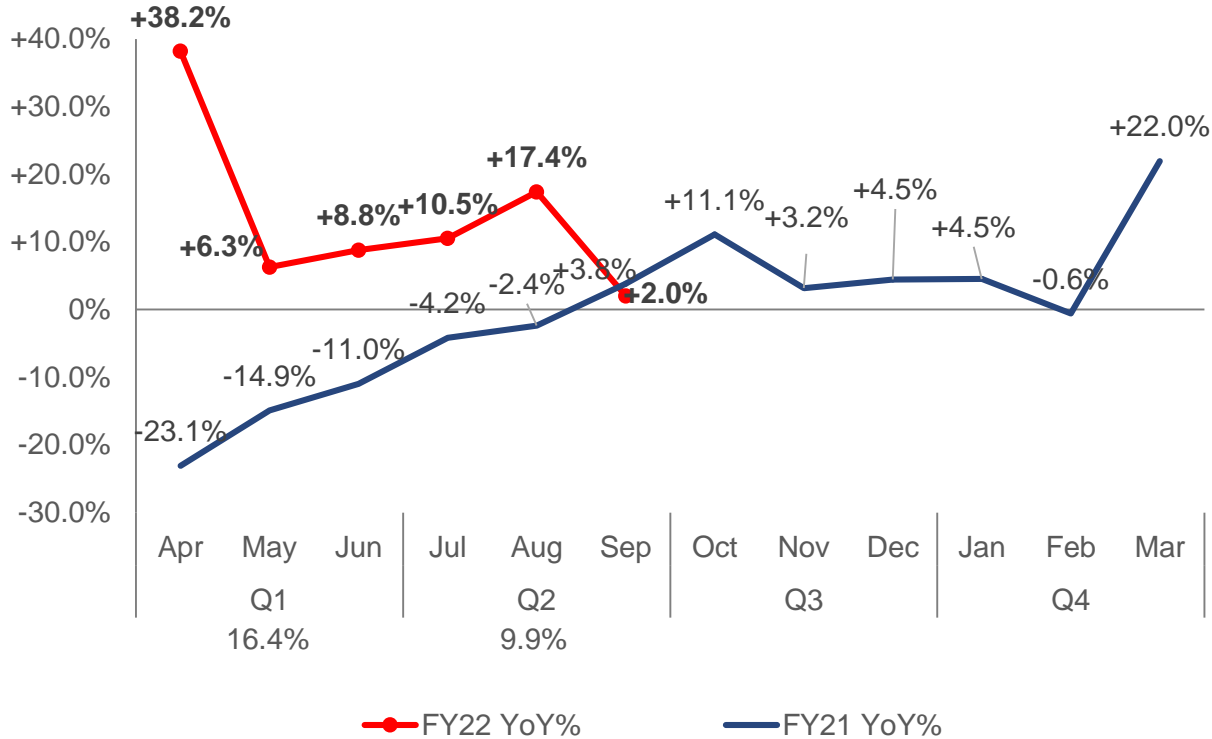
## Consolidated Trade Receivables\* (₹ Crore )



- Receivables decline 19% YoY in Q2 FY22
  - Q2 FY21 was impacted by Covid related delays from customers
- 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

**Receivables decline 19% YoY in Q2 FY22**

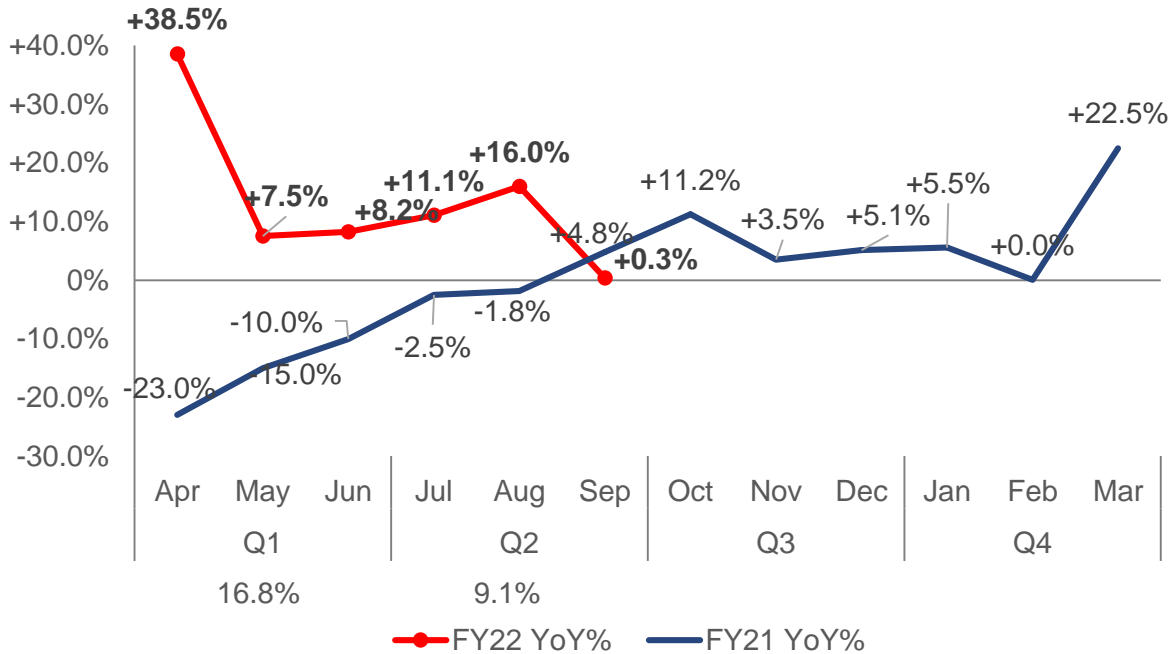
Power Demand Growth YoY



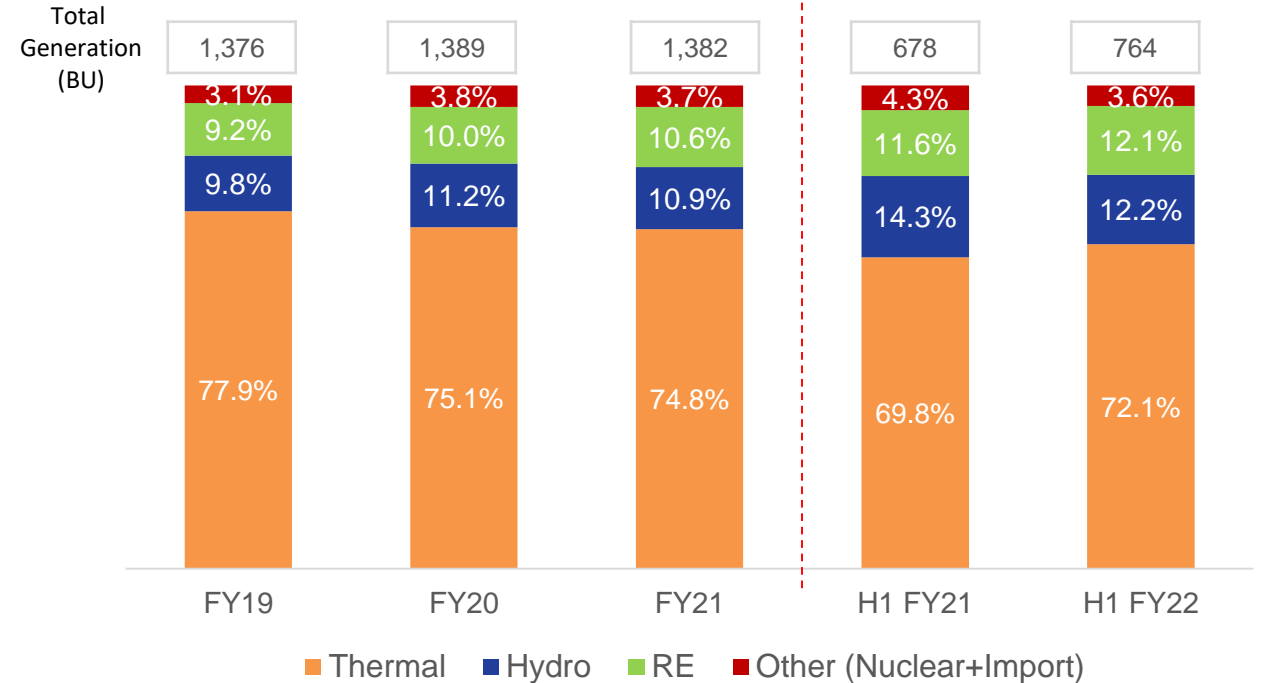
- **Power demand in H1 FY22 saw a strong increase of 13.0% YoY**
  - A strong pickup in economic activity coupled with a low base effect.
  - In H1 FY21 demand had declined by 8.7% YoY when Covid-19 led restrictions/lockdowns were first imposed in the country
- **Power demand in Q2 FY22 stood at 9.9% YoY**
  - Demand had turned positive for the first time last year in the month of Sep'21, with a 3.8% YoY increase
  - In Q2 FY22, All India demand had touched an all time high of ~203 GW in the month of Jul'21
- **For first 27 days in Oct'21, power demand increased by 3.3% YoY (and 14.4% compared to Oct'19)**

**Power Demand growth at a healthy 13% in H1 FY22**

### Power Generation Growth YoY



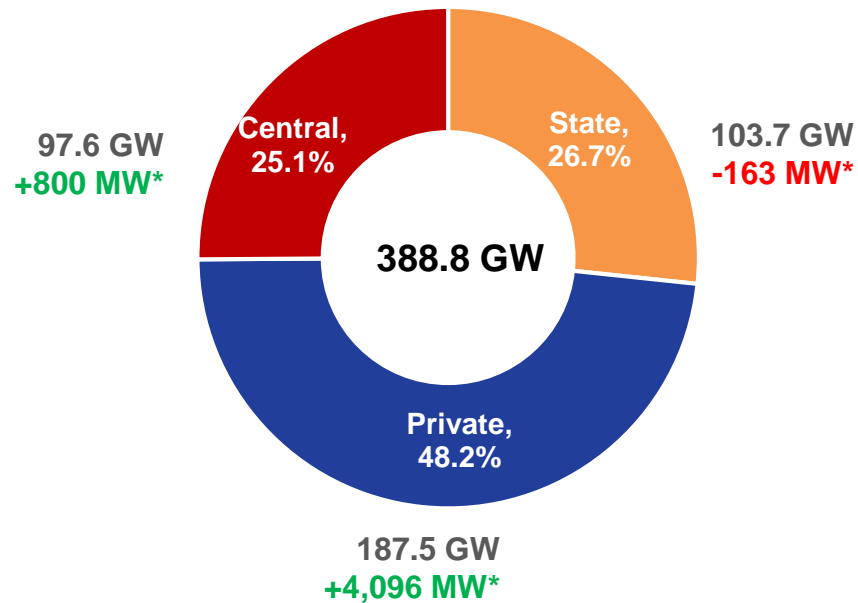
### Segment-wise Share in Generation



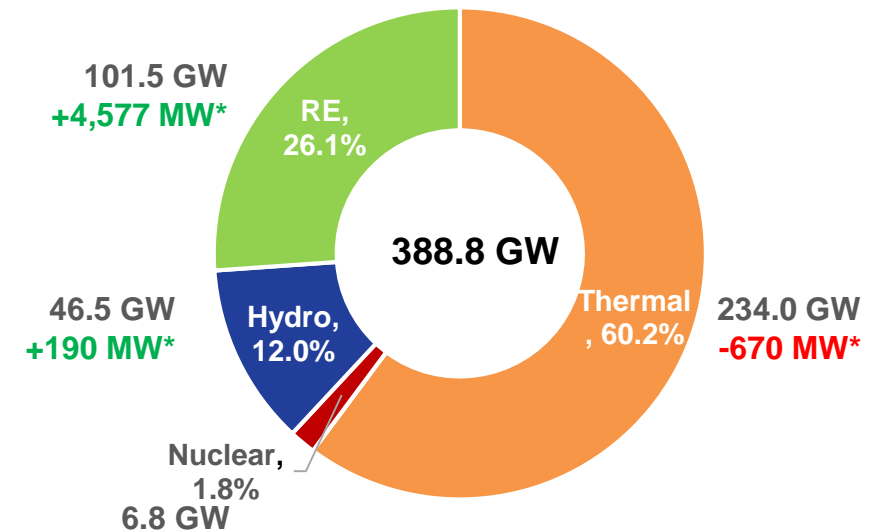
- In H1, Generation increased 12.7% YoY led by RE (18%) and Thermal (16%) segments
- In Q2, Generation increased 9.1% YoY led by RE (22%) and Thermal (9%) segments

Share of Thermal and Renewables increased, while that of Hydro declined in H1 YoY

Sector-wise Installed Capacity



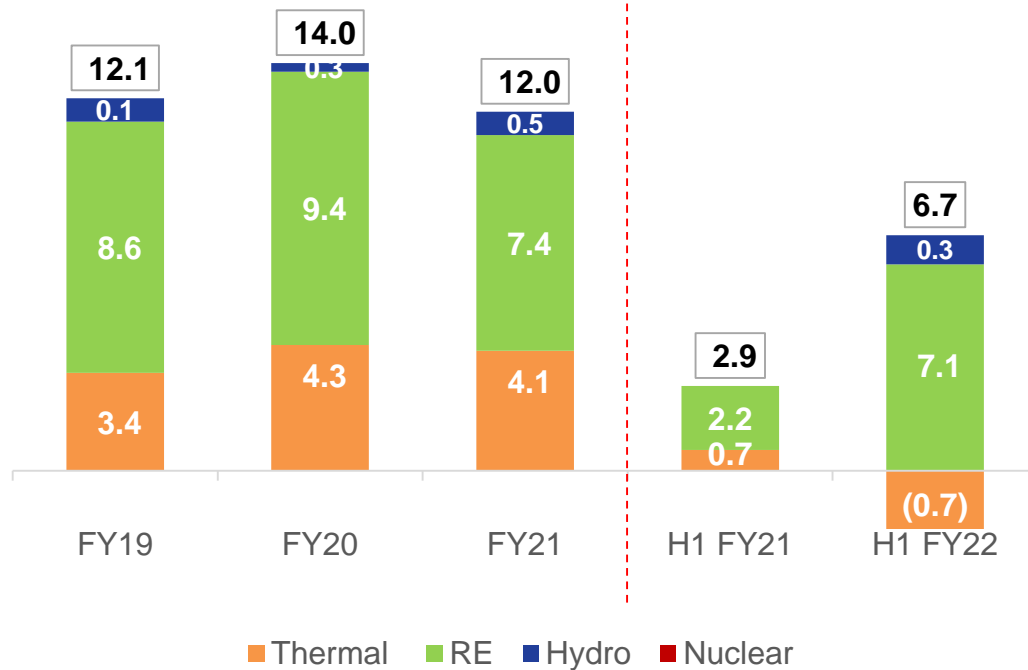
Segment-wise Installed Capacity



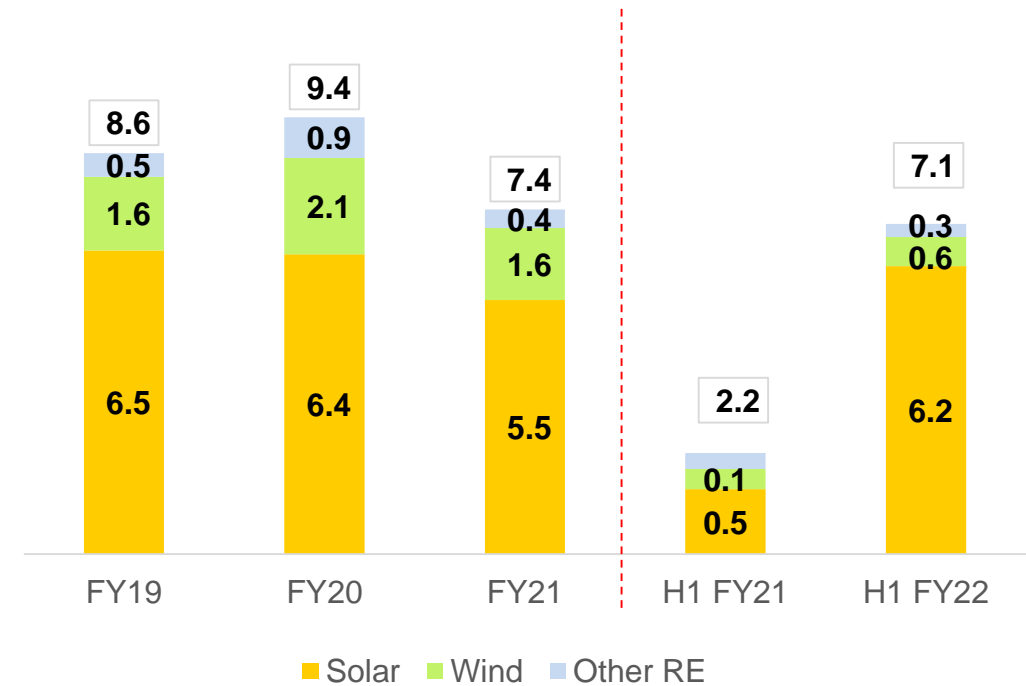
As on June 30, 2021

In Q2 FY22, Installed Capacity increased by net 4.7 GW, driven by Renewable Energy segment  
 Total Renewable Energy capacity (excl. hydro) in India crossed 100 GW mark in Sept'21

Overall Segment-wise Net Capacity Addition (GW)



RE Segment-wise Net Capacity Addition (GW)



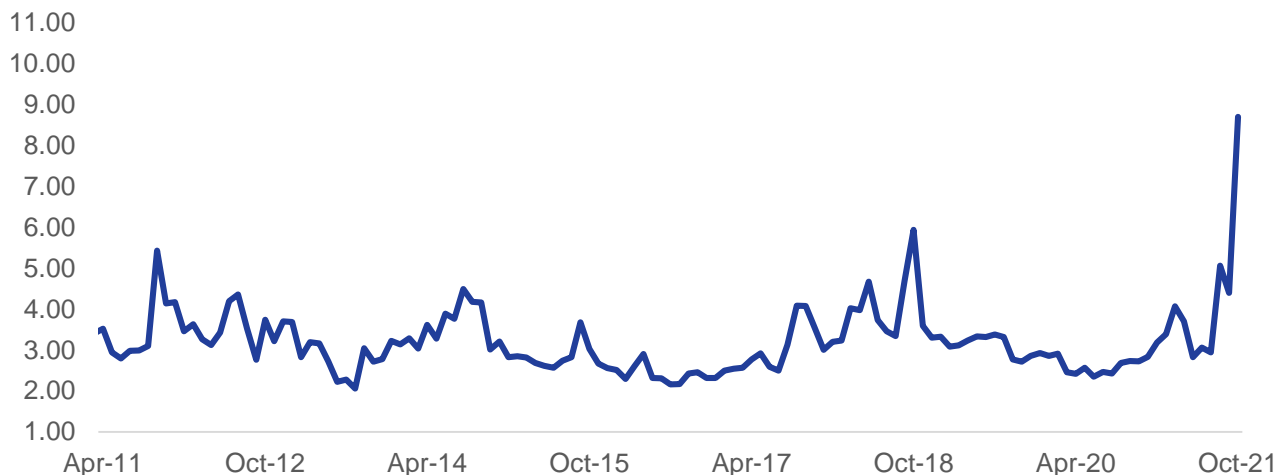
Renewable energy driving capacity addition

7.1 GW RE capacity added in H1 FY22 driven by solar segment

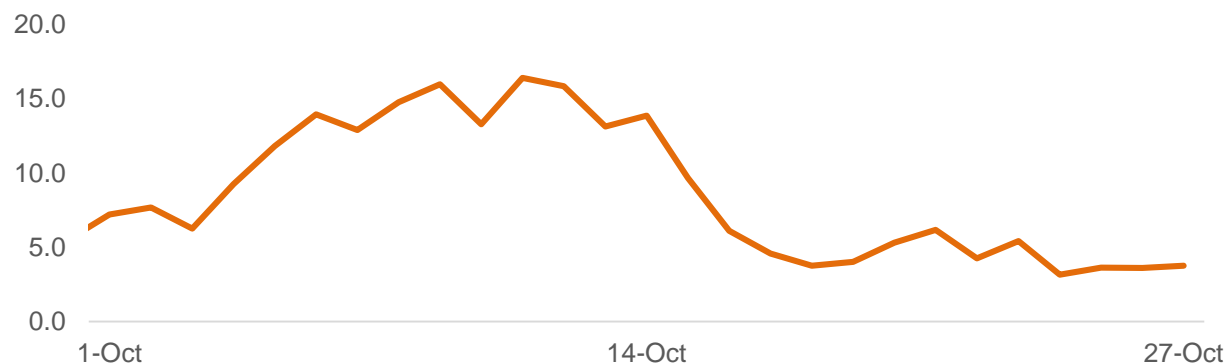


# Merchant Market Snapshot

Monthly Average Merchant Tariff (Rs/unit)



Daily Average Merchant Tariff: October 2021 (Rs/unit)



- **Monthly Merchant Prices averaged at Rs 8.7/unit in October'21<sup>1</sup> – Highest in the last decade**
  - Primarily driven by high demand, constraints in domestic coal supply and rise in imported coal prices globally
  - Coal stocks at power plants had fallen to less than 5 days supply amid high power demand and seasonally low coal production & supply constraints
  - To ease the domestic coal shortage, Govt. has taken mitigation measures, that include:
    - allowing un-requisitioned generation capacity under PPA to sell power in merchant market
    - allowing captive coal/lignite mine owners to sell 50% of annual produce in open market
    - proposing for revision in coal stocking norms for thermal plants
- **Daily Max. price touched Rs 20/unit for the first time on IEX**
- **Volumes<sup>1</sup> in Day-Ahead-Market in Oct increased ~25% YoY to 5,978 MU from 4,700 MU in corresponding period last year**

**Merchant Tariffs at a decade high in October 2021**



Investor Relations Contact:

[ir.jswenergy@jsw.in](mailto:ir.jswenergy@jsw.in)

BETTER EVERYDAY