



**JSW Energy Limited**

**Q4 and FY21 Results**

**Presentation**

June 25, 2021

BETTER EVERYDAY

# Forward Looking and Cautionary Statement



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**Key Highlights**

**Sustainability**

**Growth Strategy**

**Operational & Financial Performance**

**Business Environment**

**Appendix**



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Appendix

## Operational

- Long Term (LT) Net Generation: Higher by 3% in both Q4 and FY21
- LT Net Thermal Generation: Higher by 5% in Q4 and 8% in FY21
- LT PPA at Ratnagiri plant increased by 179 MW in May'21, further de-risking the portfolio; Ratnagiri LT PPA tie-up now at 96%
- 86% of overall portfolio under LT PPA as on date vs 81% at FY20-end
- Central Electricity Authority approved uprating of Karcham Wangtoo capacity by 91 MW to 1091 MW, in a phased manner

## Consolidated Financials

- EBITDA: ₹677 Crore in Q4; ₹3,144 Crore in FY21
- Profit Before Tax: ₹126 Crore in Q4; ₹1,081 Crore in FY21
- Profit After Tax at ₹107 Crore in Q4; ₹795 Crore in FY21
- Receivables declined 23% QoQ and 38% YoY - Lowest outstanding in last 3 years
- Net Debt reduced by ₹513 Crore in Q4 and by ₹2,739 Crore in FY21
  - Net Debt to Equity at 0.43x
  - Net Debt to EBITDA (TTM) at 1.97x
  - Strong Liquidity: Cash & Cash Equivalents\* at ₹2,137 Crore
- JSW Hydro Energy Ltd issued USD 707 million, 10 year green bonds for refinancing term loans
- The Board has recommended a dividend of ₹2/ equity share subject to approval of the Shareholders



## Update on Growth Strategy

- Pursuing renewable-led growth strategy to expand from 4.6 GW to 10 GW by FY25 and to 20 GW by FY30
- 2.5 GW under-construction in full-swing:
  - SECI IX - 810 MW: PPA signed for 540 MW with SECI; Balance 270 MW PPA to be signed in Q2 FY22
  - SECI X - 450 MW Wind Project: PPA to be signed in Q2 FY22
  - Solar/Wind Group Captive with JSW Steel: 958 MW approved by the board; PPA to be signed in Q2 FY22
  - 240 MW Kutehr HEP: PPA under finalization with Haryana discom

## ESG

- Amongst the first companies globally to endorse Global Framework Principles for Decarbonizing Heavy Industry
- Specific GHG emissions declined 11% YoY in FY21
- 100% Utilisation of Fly Ash and Zero Liquid Discharge maintained in FY21

## Awards and Recognitions

- JSW Energy (Barmer) Limited:
  - 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 plant was awarded 'The Best Operating Thermal Power Generator' by Independent Power Producers Association of India (IPPAI)



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Appendix

# Covid-19 Relief Efforts



**2,200+** workforce vaccinated via drives conducted across locations



**24x7** Covid support helpdesk for employees and their families



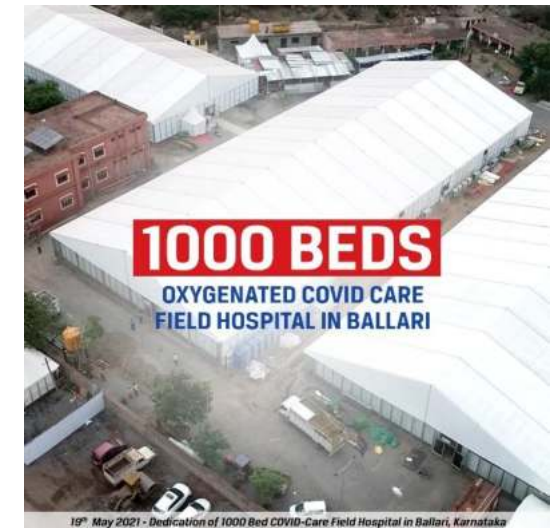
**450+** beds provided in isolation centres created across locations



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

## Protecting our employees and communities:

- **4000** masks, **500** litres of Sodium hydrochloride provided to District Authorities
- **3000** Sanitizer bottles, **1000** masks & 200 testing kits provided to Police Station at Ratnagiri
- Donated **10 ventilators** with accessories to Covid Centre at Jindal Sanjeevani Hospital, Vijayanagar
- Donated **40 Oxygen Concentrators** and PPE kits to District Administration, Barmer
- Monetary support to Rajasthan CMRF for Covid control measures
- Hospital beds and **COVID Ambulance** for village communities at Ratnagiri
- Disinfection Treatment Drives at regular intervals in adjoining villages
- Conducting ANTIGEN tests, CBC & CRP test in the communities at Barmer





# 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



BB



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>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>
	<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



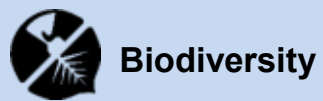
### Waste

- 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

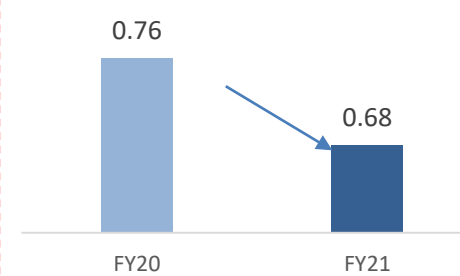


### Biodiversity

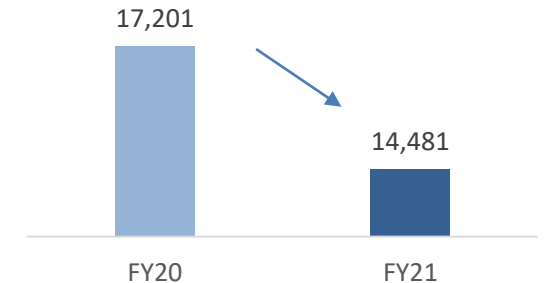
- Plantation of local species by cultivating in own nursery at Ratnagiri
- Two local NGOs engaged for restoration and protection of habitats at Barmer
- Watershed area taken under development of Silvi-pasture plantation at Barmer

## Performance

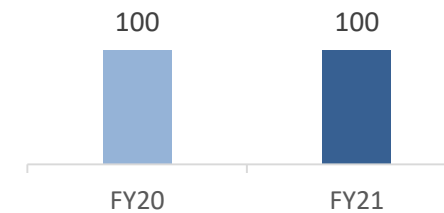
CO<sub>2</sub> intensity (tCO<sub>2</sub>e/MWh)



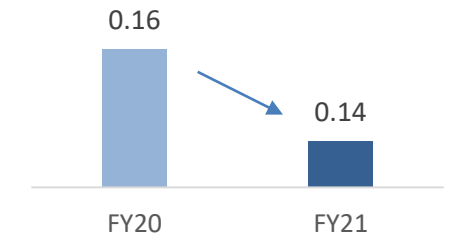
Scope 1 emissions ('000 tCO<sub>2</sub>e)



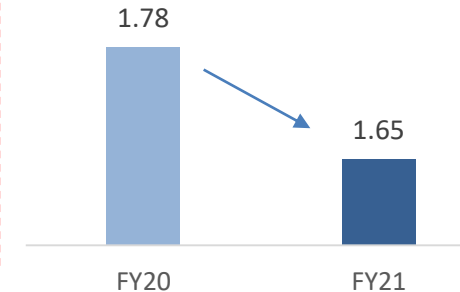
Ash Utilisation (%)



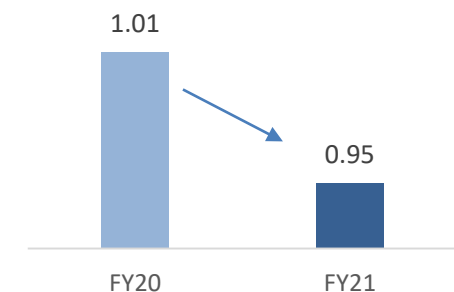
PM Emissions (kg/MWh)



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



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



## Empowering communities with sustainable livelihoods

### Social Development

- Creating community awareness of various Govt. welfare schemes through HAQDARSHAK programme : ~3600 beneficiaries
- Focus on women empowerment through handloom initiative (CHARKHA)

### Water Management

- Addition of 1,69,000 m3 of rainwater harvesting by de-silting & restoring ponds – serves 18000+ livestock & 7 wildlife – Barmer
- Drinking water supply to 440+ village households via piped water supply

### Waste Management

- Ash Management: 45000 MT Ash Silo constructed to store Ash for domestic & International Export – Ratnagiri
- 100% ash utilisation



CSR Footprint – JSW Energy



Piped water supply to village community at Barmer

~3600 beneficiaries under the HAQDARSHAK scheme



Restoring 13 traditional Naadi's & providing 1,69,000 m3 of water

Investment in innovative solutions – 45000 MT ASH SILO



Health & Nutrition



Water & Environment



Waste Management



Agri-business



Education



Women's BPO & Livelihoods



Skill Enhancement



Art, Culture & Heritage



Sports



# Continuing our Health & Safety Excellence Journey

Figures are for FY21



**Zero Severe/Major Injuries**



**58% reduction in Lost Time Injury Frequency Rate (LTIFR)**



**92,000+ Safety Observations**

INFLUENCING POSITIVE SAFETY BEHAVIOR OF OUR WORKFORCE



**100% employees completed Safety Training**

INCLUDES SAFETY E-LEARNING MODULES COVERING 5 HIGH RISK AREAS



**BRITISH SAFETY COUNCIL 5 STAR RATING**

JSW Energy Barmer achieved coveted five-star grading in the British Safety Council's Occupational Health and Safety Audit



Safety Excellence continues with the achievement of following **'Serious Accident Free Operations'**

Serious Accident Free Days	
Baspa	5,991
Barmer	1,524
Ratnagiri	1,522
Karcham Wangtoo	1,041
Vijayanagar	1,025



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## 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

- 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: 1.97x 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

- Pivoting from ~30% renewable to ~70% renewable energy by FY25; To be Carbon Neutral by 2050
- Committed to set science based emission reduction targets (SBTi) to keep global warming to 1.5°C



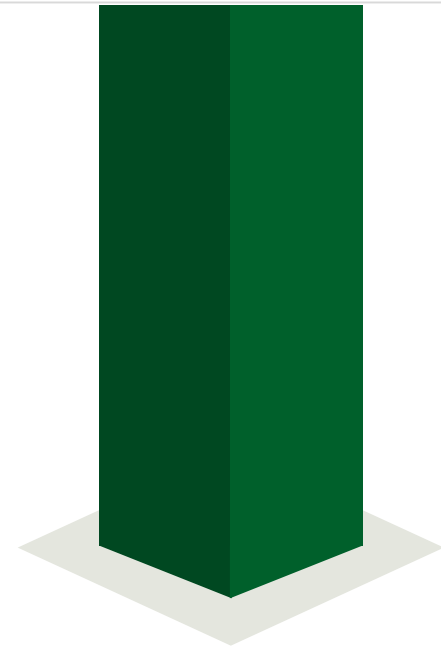
## Attractive Power Market

- 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

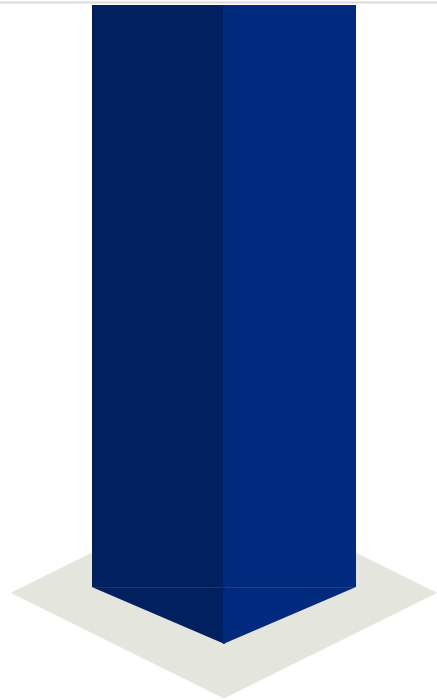
1

**Significant Market Opportunity  
& Growth Roadmap**



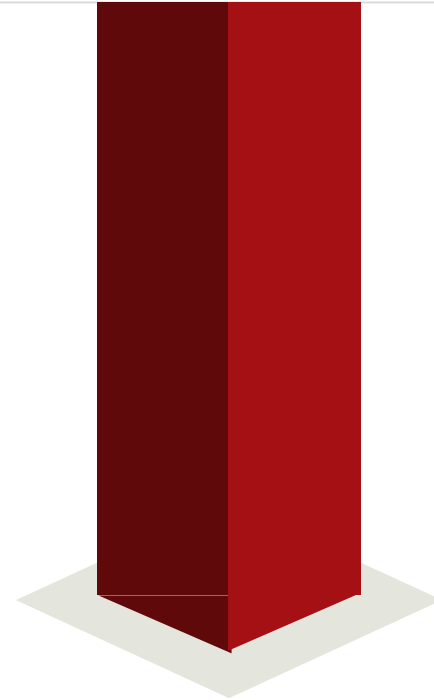
2

**Proven Project Execution  
& Operational Excellence**



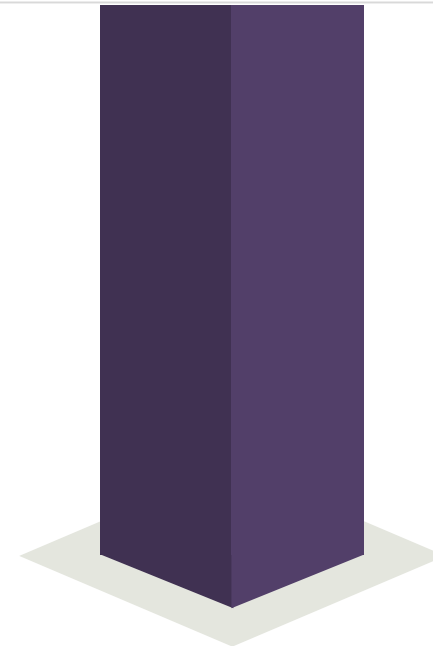
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**Locked-in  
Resources**



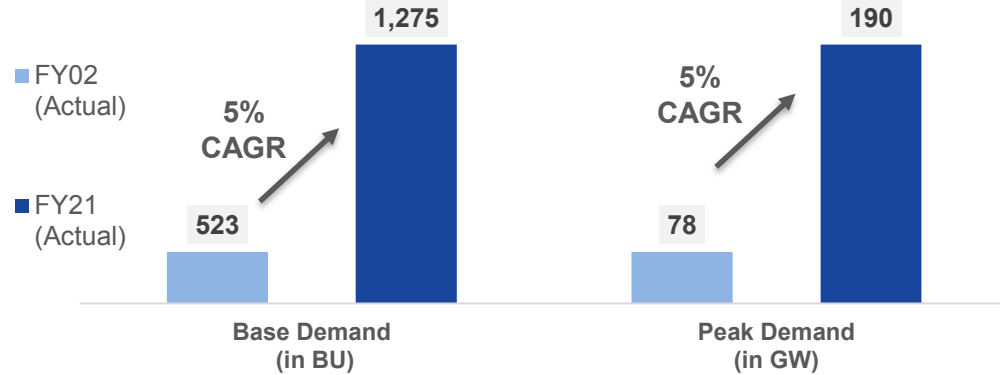
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**Growth Capital  
Available**

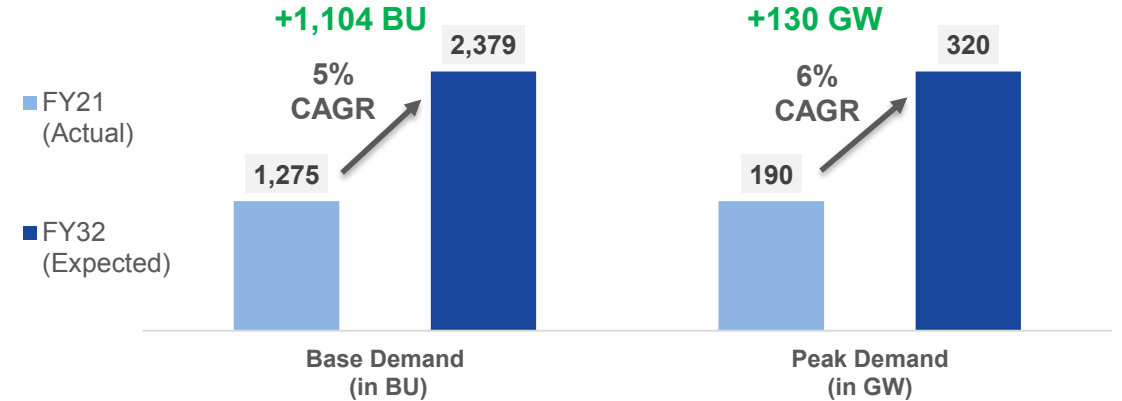




**Historically, Power demand has grown at a CAGR of ~5%**

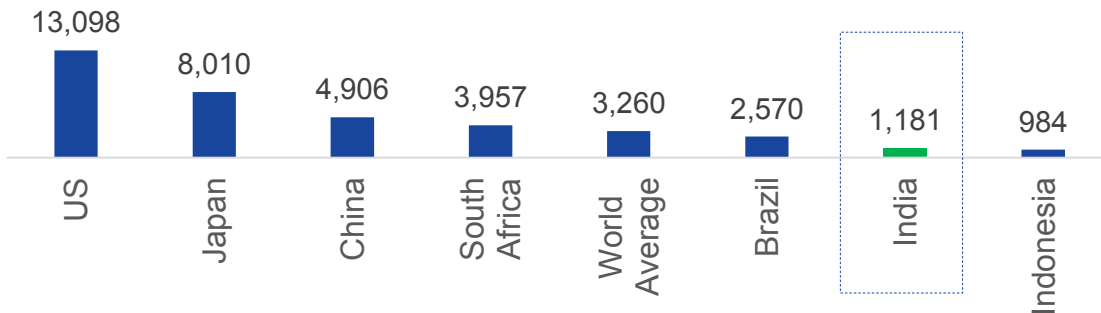


**Similar growth expected over next decade**



**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

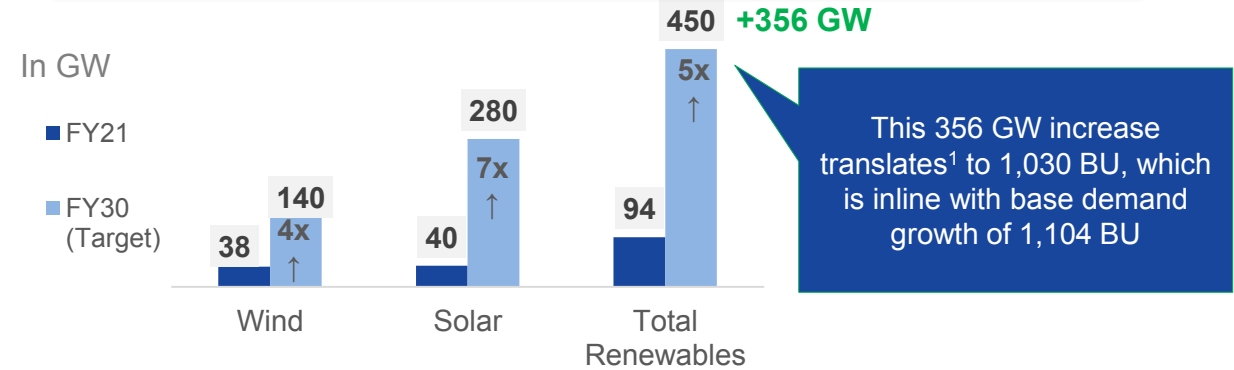
### Goals of India's Intended Nationally Determined Contribution:



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

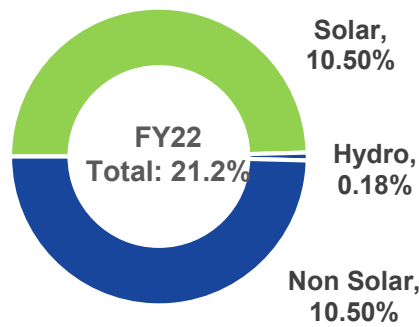
## Demand to be met incrementally with Renewable Energy



## 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



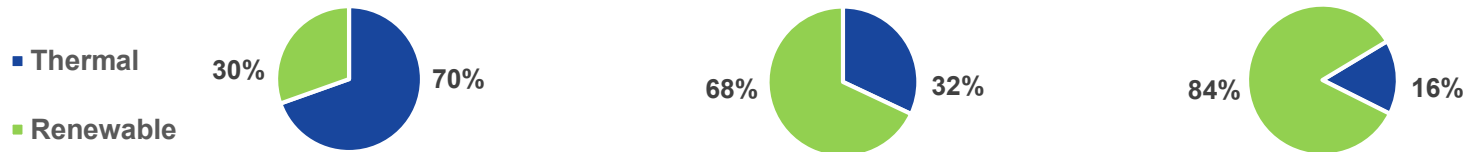
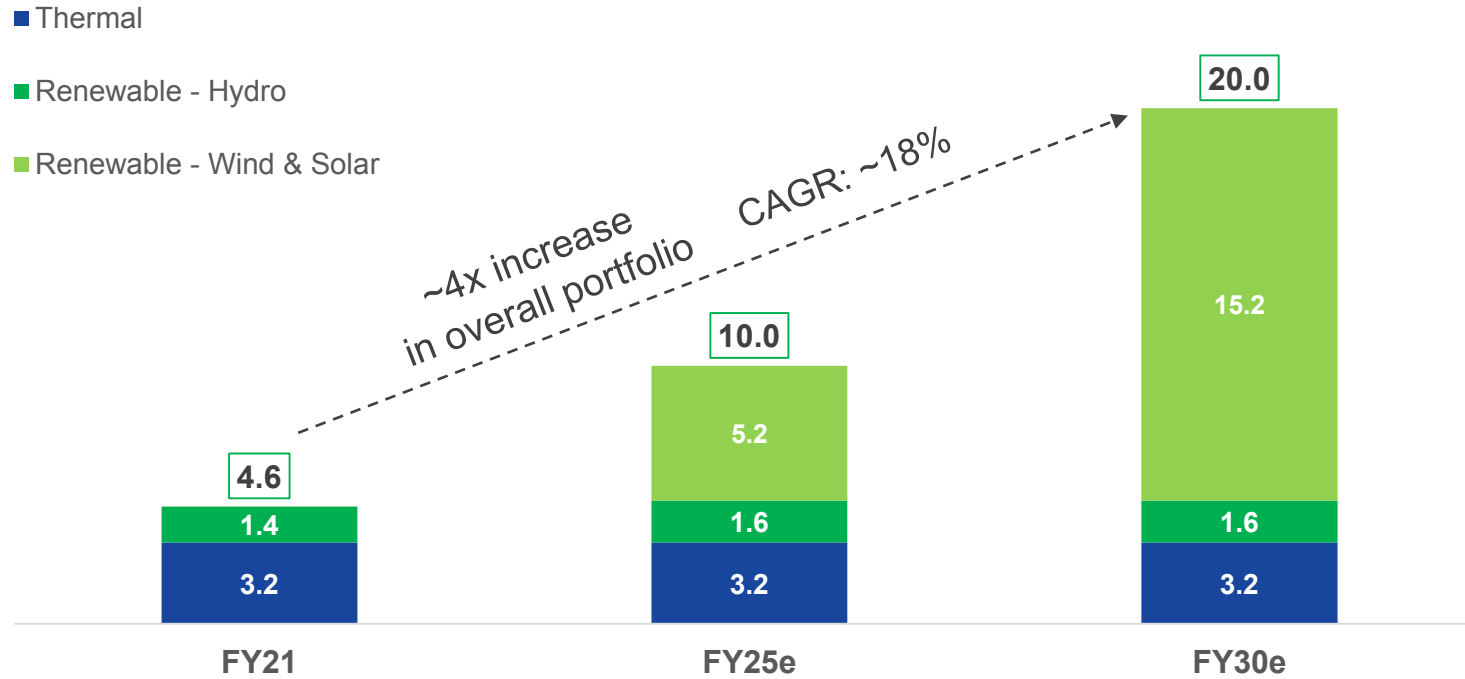
## India: Attractive market for Renewable Energy Investments

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

# JSW Energy: Growth Roadmap to 20 GW

Total Installed Capacity (GW)

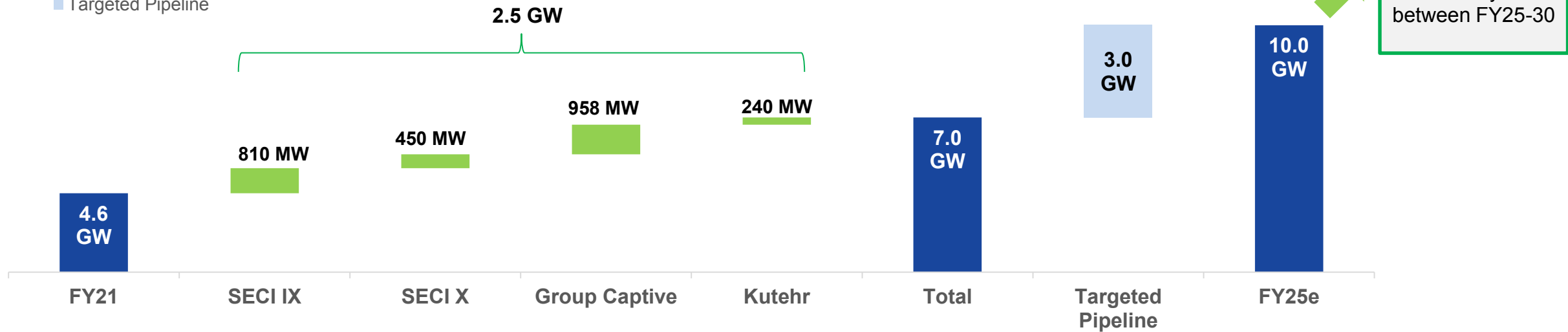


**Committed to delivering sustainable growth and strong shareholder returns  
Growth to be led only by Renewable Energy**

# JSW Energy: 10 GW Portfolio by FY2025

■ Under- Construction

■ Targeted Pipeline



## 2.5 GW Under-Construction

Blended Tariff ₹3.31/unit

Total Capex<sup>1</sup> ~₹15,800 Crore

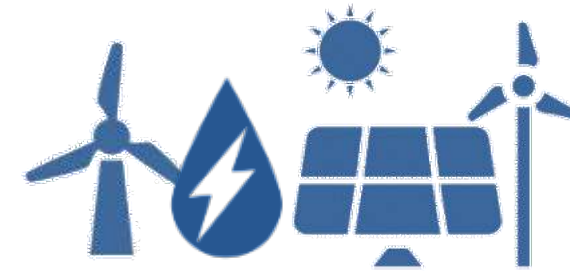
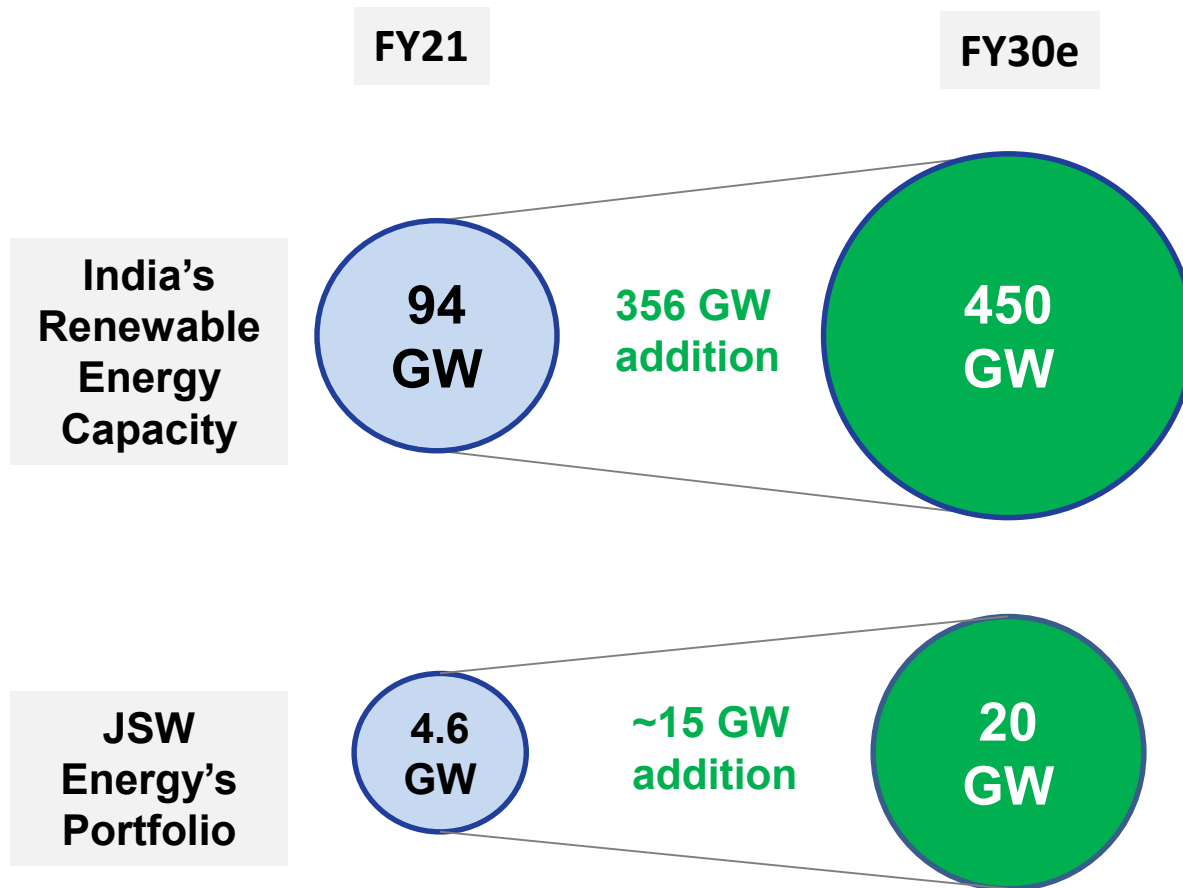
## Commissioning Schedule

FY22 200+ MW

FY23 1200+ MW

- **SECI IX 810 MW:** Highest ever single bid secured under any Indian renewable auction
  - 540 MW - Single largest wind PPA with SECI
  - Balance 270 MW PPA to be signed in Q2FY22, necessary approvals in advanced stage
- **SECI X:** 450 MW Wind bid secured ; PPA to be signed in Q2FY22, necessary approvals in advanced stage
- **Solar/Wind Group Captive with JSW Steel:** 958 MW approved by the board; PPA to be signed in Q2FY22
- **Kutehr HEP 240 MW:** PPA with Haryana discom under finalization
- Targeting **3 GW** through upcoming TBCB auctions





- 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

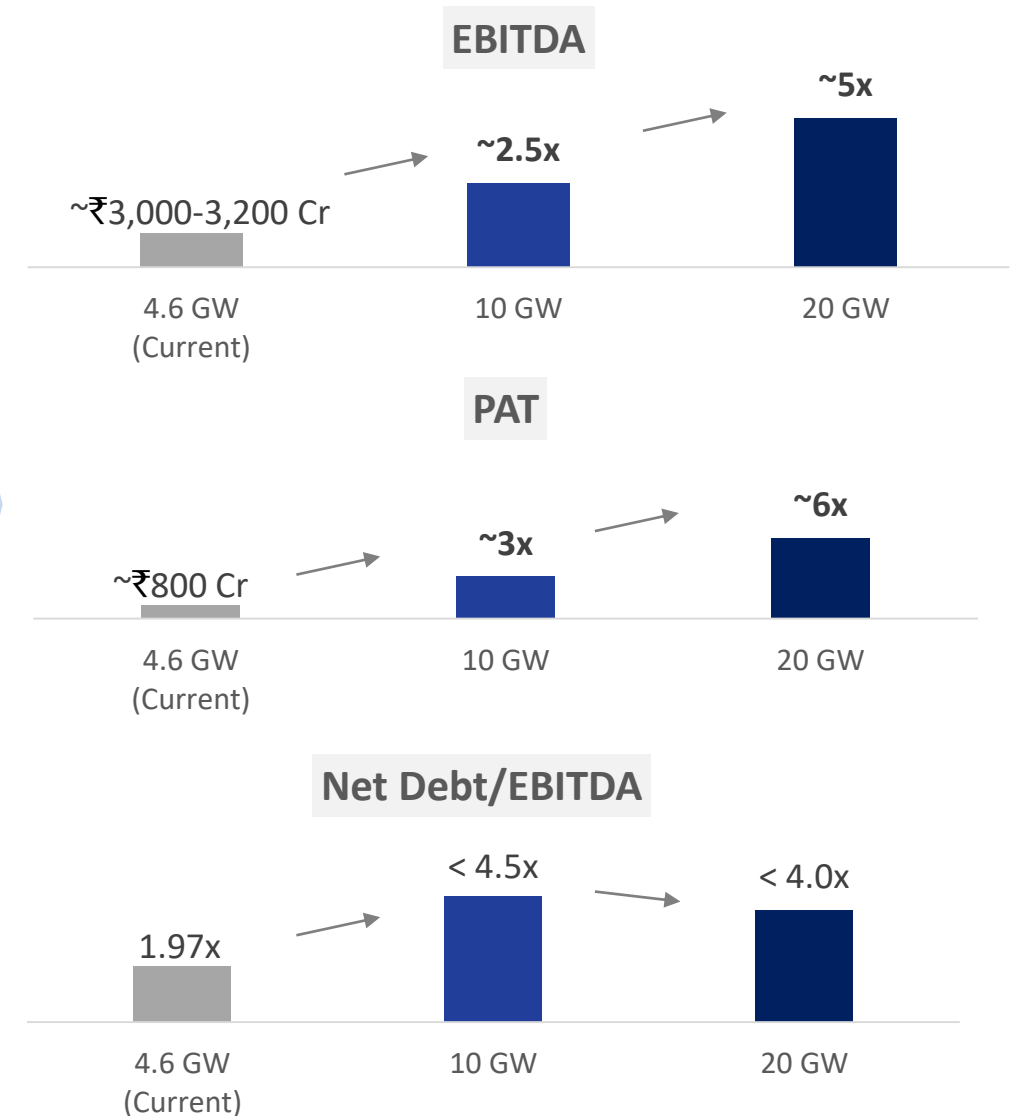
### Existing Portfolio (4.6 GW) generating healthy CF & returns<sup>1</sup> of >15%

- 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

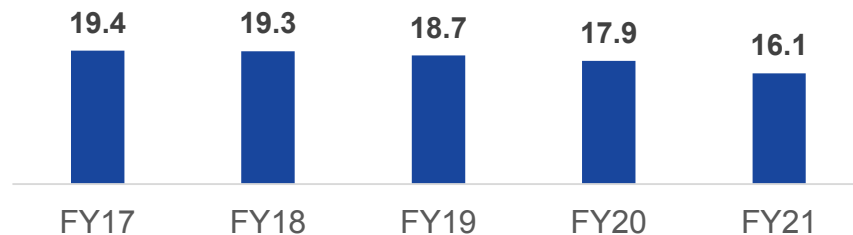


Prudent and consistent capital allocation strategy for growth over a 25 year history

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	1.08	2014
Janjgir-Champa	1,200	7.02	0.96	2014
Warora	600	6.25	0.86	2013
Padampur	540	6.18	0.85	2013
Chandrapur	600	6.22	0.85	2014
Amarkantak	600	5.23	0.72	2009
Maithon	1,050	5.24	0.72	2011
Udupi	1,200	4.67	0.64	2010
JSW : Ratnagiri <sup>3</sup>	1,200	4.60	0.63	2010
JSW: Vijayanagar	260	4.34	0.59	2000
JSW: Vijayanagar	600	3.28	0.45	2009
<b>Lignite Based<sup>1</sup></b>				
Giral	250	7.69	1.05	2011
Barsingsar	250	7.00	0.96	2010
JSW: Barmer	1,080	6.63	0.91	2009

(1) High capital cost due to CFBC boilers for lignite based power plant

(2) USD/ INR = 73 (3) Includes FGD Cost

Source: Respective Company filings

## 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



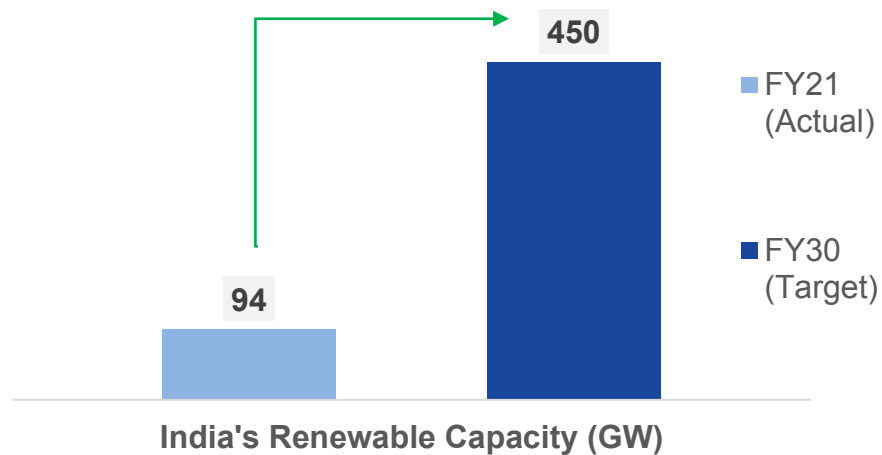
Site Photo for upcoming project

**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: ~₹4,760 Crore<sup>2</sup>) gives further headroom to accelerate growth, if required
  - JPVL shares: Monetised over 90% of holdings for ~₹156 Crore in Q1'FY22
- Access to diversified pools of liquidity



Key Highlights

Sustainability

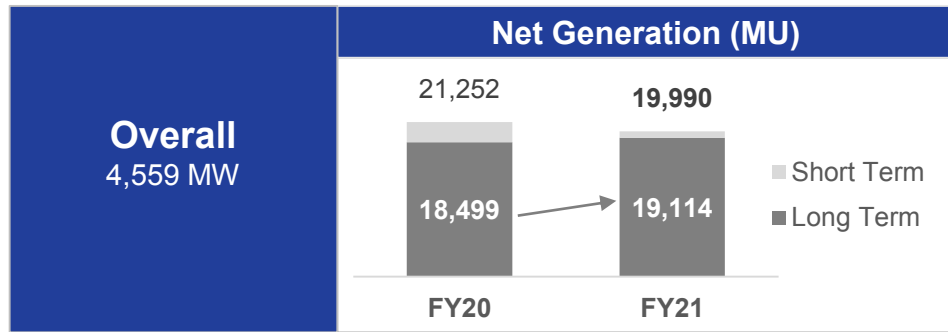
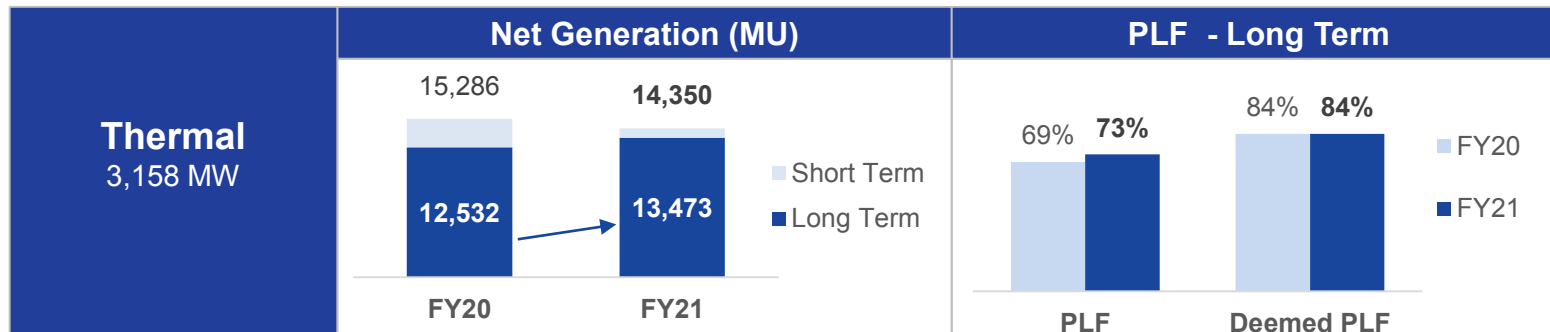
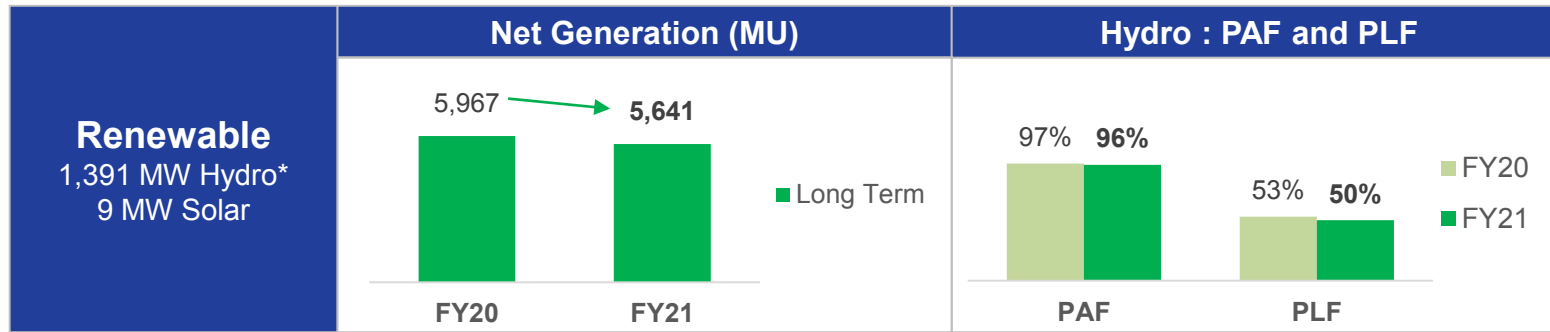
Growth Strategy

**Operational & Financial Performance**

Business Environment

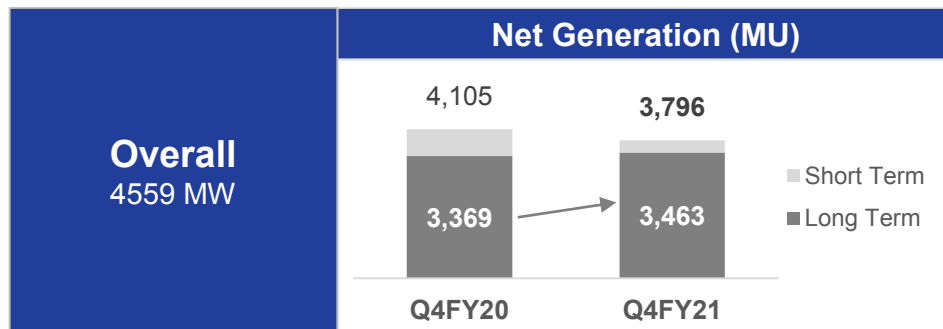
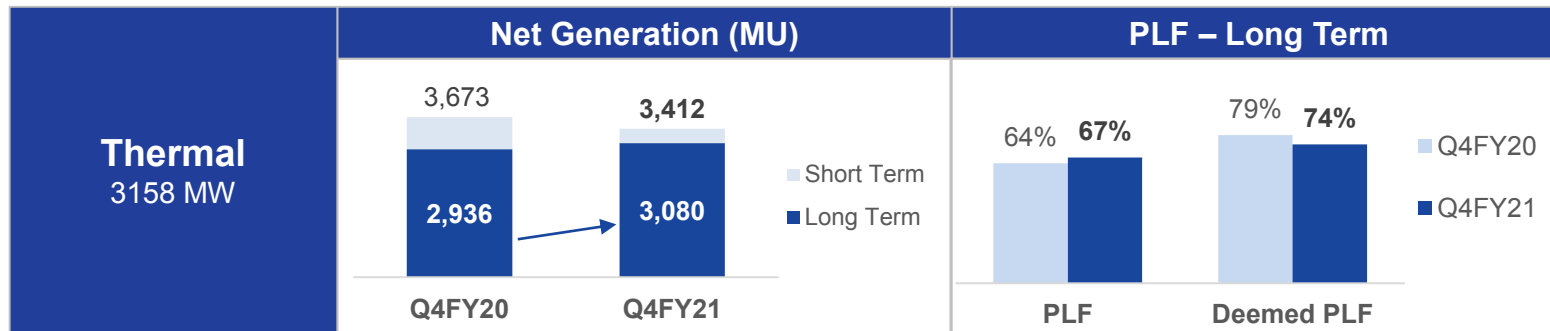
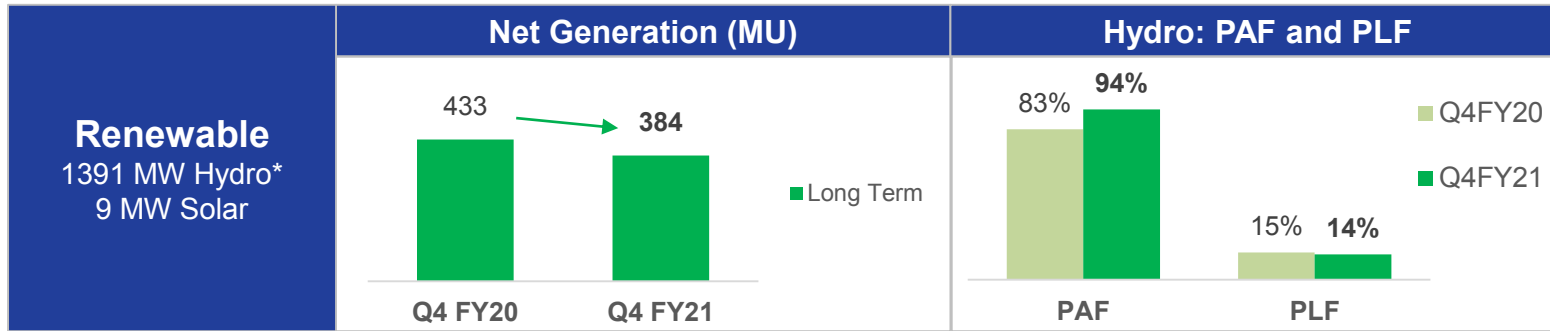
Appendix

# Operational Performance – FY21



- **Renewable Net Generation lower by 5% YoY**
  - Lower water flow at hydro plants, however PAF at 96%; Maintained PAF at over 90% normative level
  - Hydro generation above Design Energy in FY21
- **Thermal Generation under Long Term PPA up 8% YoY**
  - Driven by higher offtake from long term customers in Barmer (+21%) and Ratnagiri (+4%)
- **Overall Generation under Long Term PPA up 3% YoY**

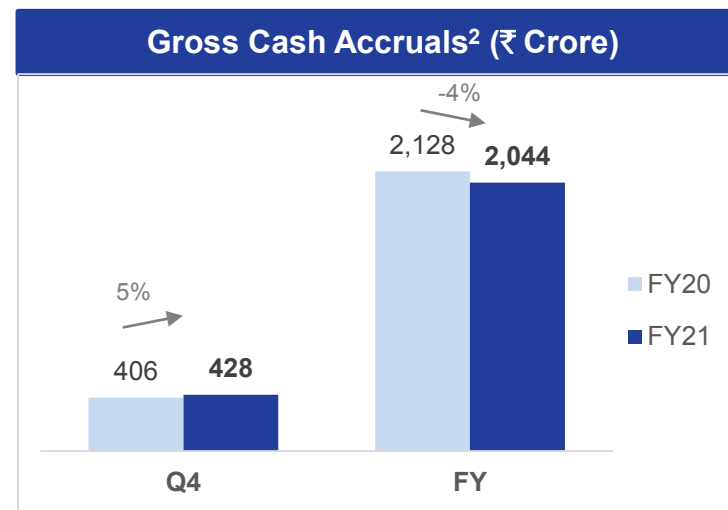
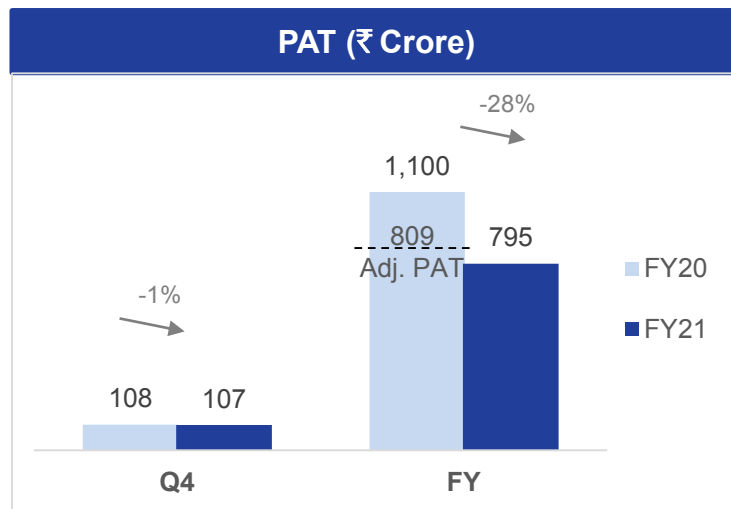
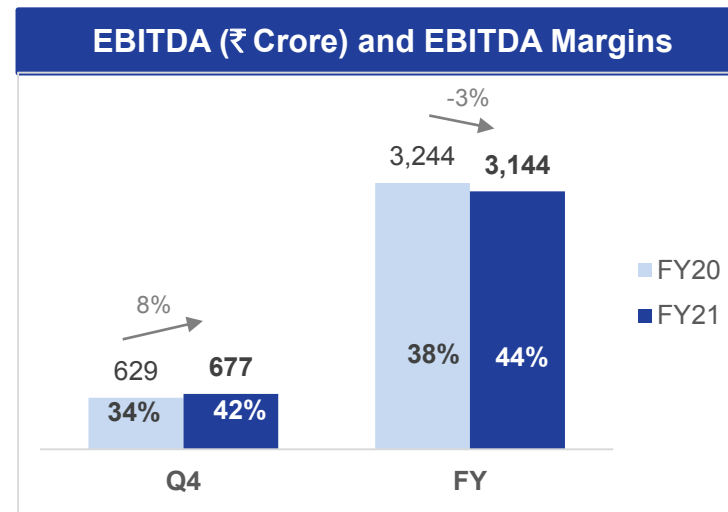
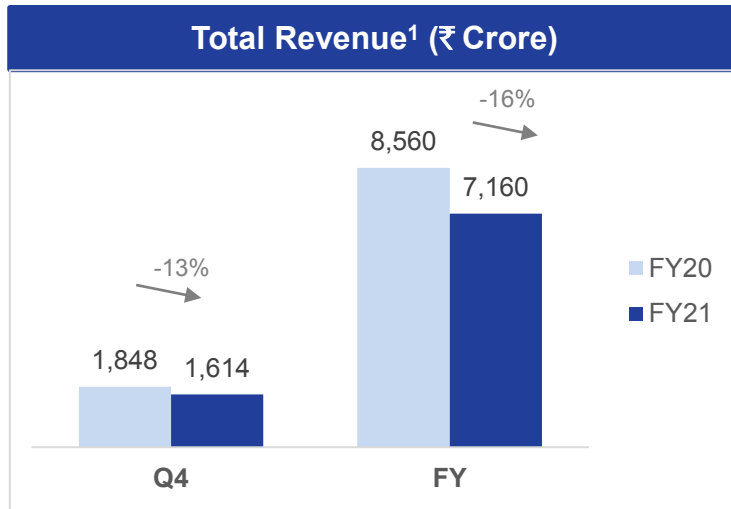
# Operational Performance – Q4FY21



- **Renewable Net Generation lower by 11% YoY**
  - This was due to lower water flow at hydro plants
- **Thermal Generation for capacity under Long Term PPA up 5% YoY**
  - Driven by higher offtake from long term customers in Barmer (+13%)
- **Overall Generation for capacity under Long Term PPA up 3% YoY**



# Consolidated Financial Results – Q4 and FY21

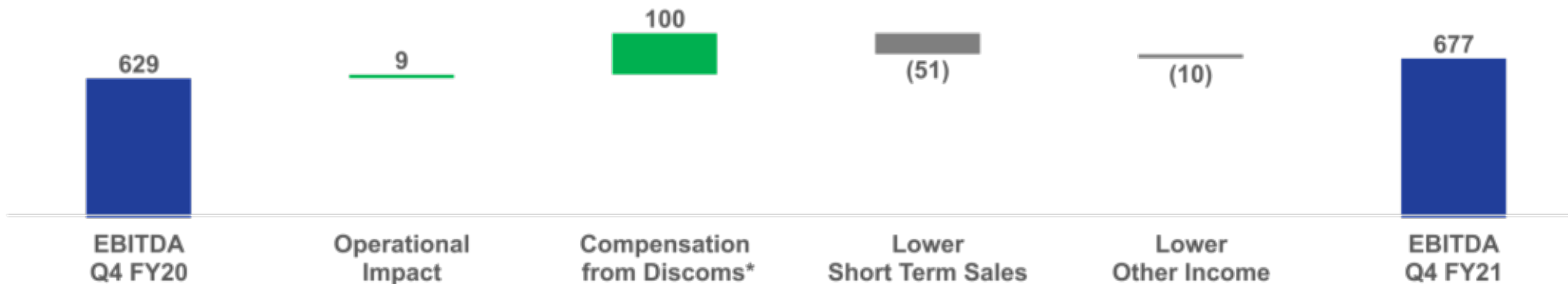


- Decline in Revenue mainly due to shift to Job-work model with certain customers during FY21
- Maintained strong EBITDA, PAT and GCA generation
  - Steady EBITDA generation in FY21
  - FY21 PAT lower due to one-off adjustments in FY20

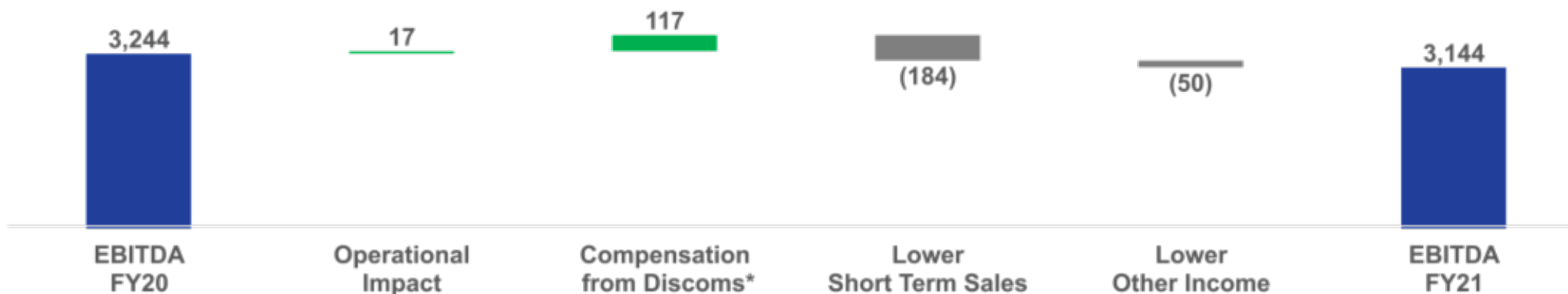
# EBITDA Bridge – Q4 and FY21

Particulars in ₹ Crore

## Q4- YOY



## FY21- YOY



High long term PPA tie-ups ensuring steady EBITDA generation

# Robust Balance Sheet

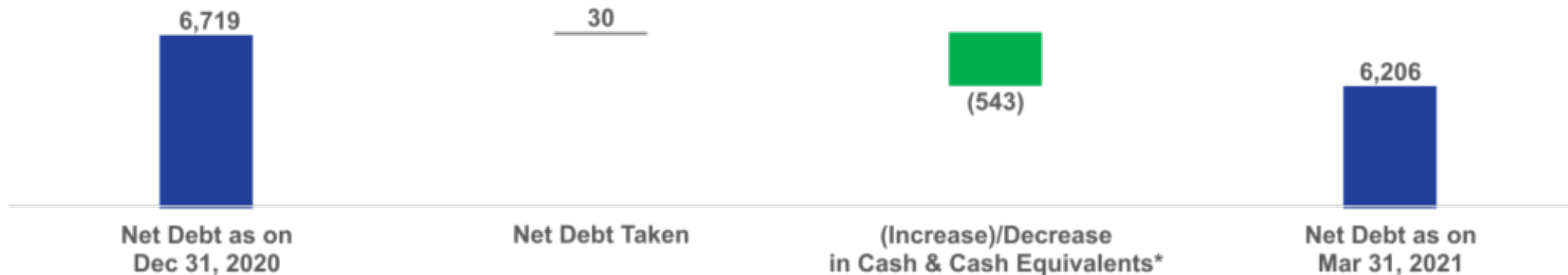
- Amongst the strongest balance sheets in the sector - Well positioned to pursue growth opportunities
- Strong Liquidity with healthy cash balances<sup>1</sup>: ₹2,137 Crore
- Financial flexibility enhanced by equity investments:
  - JSW Steel shares: 7 crore shares held (Value as on June 24, 2021: ₹~4,760 Crore)
  - JPVL shares: Monetised over 90% of holdings for ~₹156 Crore in Q1'FY22
- Healthy Credit Ratings:
  - India Rating & Research: AA- (Stable outlook)
  - Brickwork Ratings: AA- (Positive outlook)
- Strong relationships with domestic and international banks, and financial institutions
  - Successfully raised USD 707 million green bond for JSW Hydro Energy Ltd in May'21; Rated (P) Ba1 by Moody's and BB+ (EXP) by Fitch

Figures in ₹ Crore	As on Mar 31, 2021
<b>Networth</b>	14,507
<b>Net Debt</b>	6,206
<b>Net Debt/EBITDA</b>	1.97x
<b>Net Debt/Equity</b>	0.43x
<b>Wtd. Average Cost of Debt</b>	8.21%

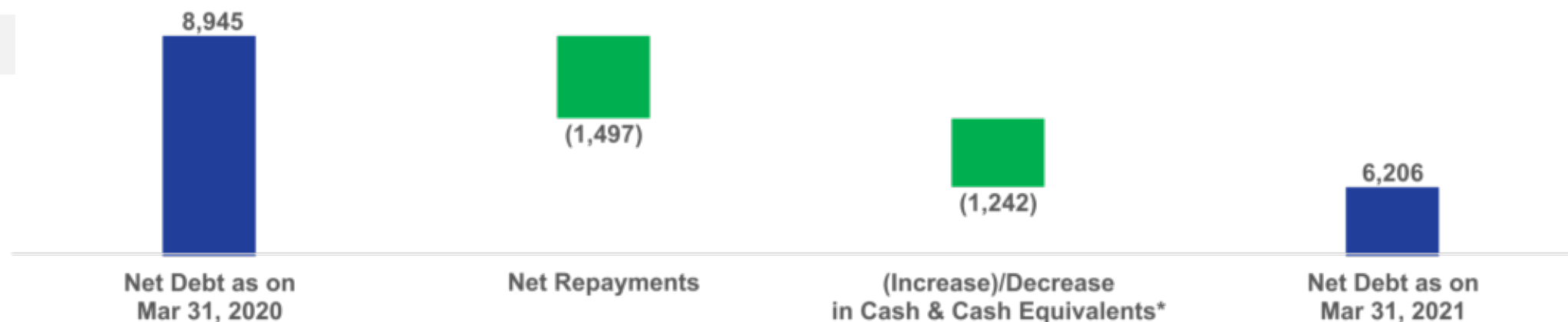
# Net Debt Movement – Q4 and FY21

Particulars in ₹ Crore

Q4- YOY

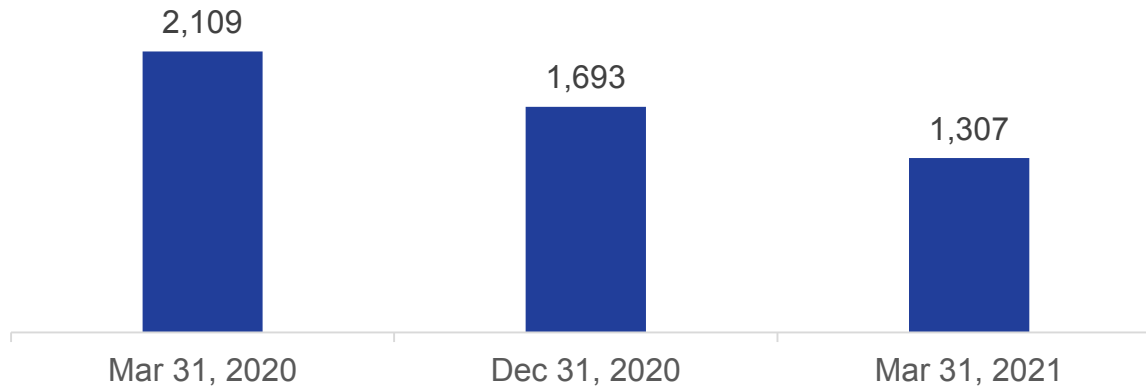


FY21- YOY



Large balance sheet headroom available to embark on growth projects

## Consolidated Trade Receivables\* (₹ Crore)



- Receivables decline 23% QoQ and 38% YoY in Q4FY21
- 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 declined to lowest level in last 3 years**





Key Highlights

Sustainability

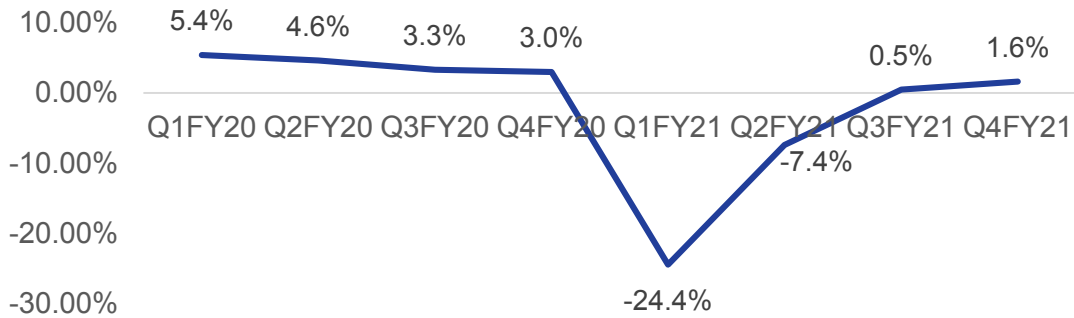
Growth Strategy

Operational & Financial Performance

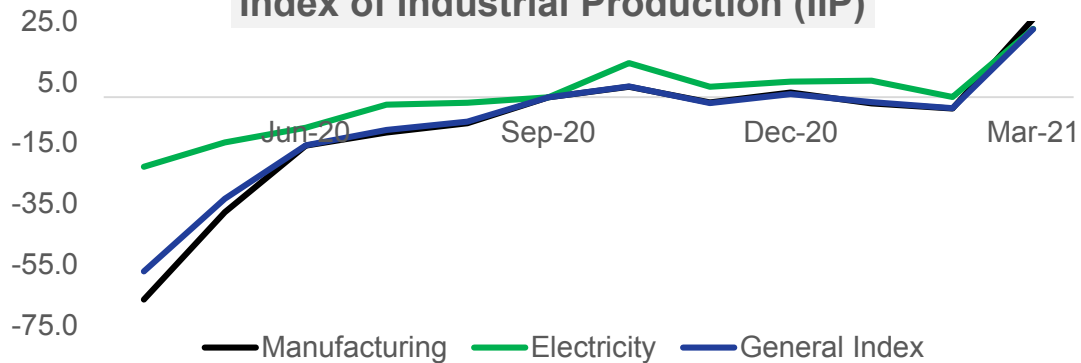
**Business Environment**

Appendix

## Real GDP Growth



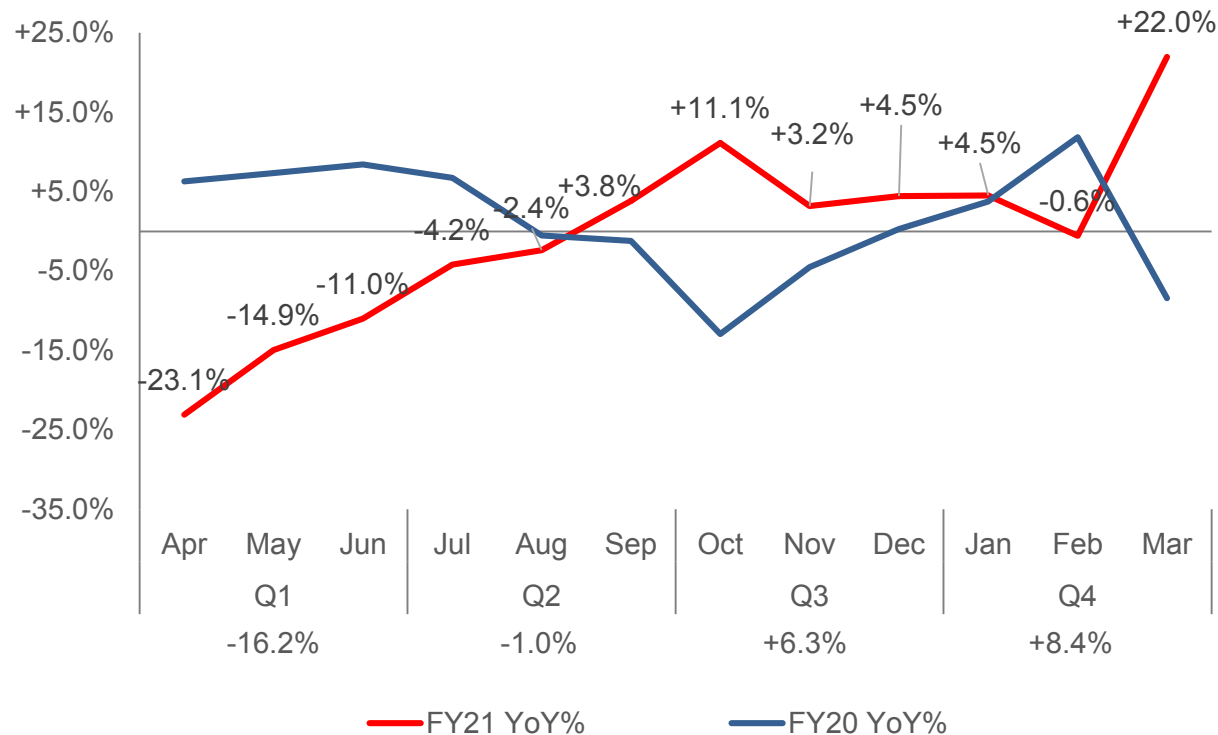
## Index of Industrial Production (IIP)



- **Economy on an improving trend; upward momentum likely to sustain**
  - Real GDP registered a 1.6% growth in Q4FY21, driven by recovery due to opening up of economic activities
  - GST collections at all time high at ₹1.41 trillion in Apr'21
  - High-frequency indicators (such as e-way bills, railway freight traffic, port cargo, steel consumption, cement production) saw moderation in Apr-May due to imposition of localised lockdowns/restriction to contain the second wave of covid-19 pandemic
- **RBI maintains stance at 'Accommodative'**
  - CPI rose to 6.3% in May'21, driven by higher fuel & food inflation
  - RBI maintained the policy repo rate at 4.0%
  - RBI expects GDP to grow by 9.5% in FY22, with Q1 growth estimated at 18.5% supported by a low base
- **Vaccination roll-out to help normalise economic activity; Inflationary pressures remain a risk**

**Pace of vaccination key to economic recovery**

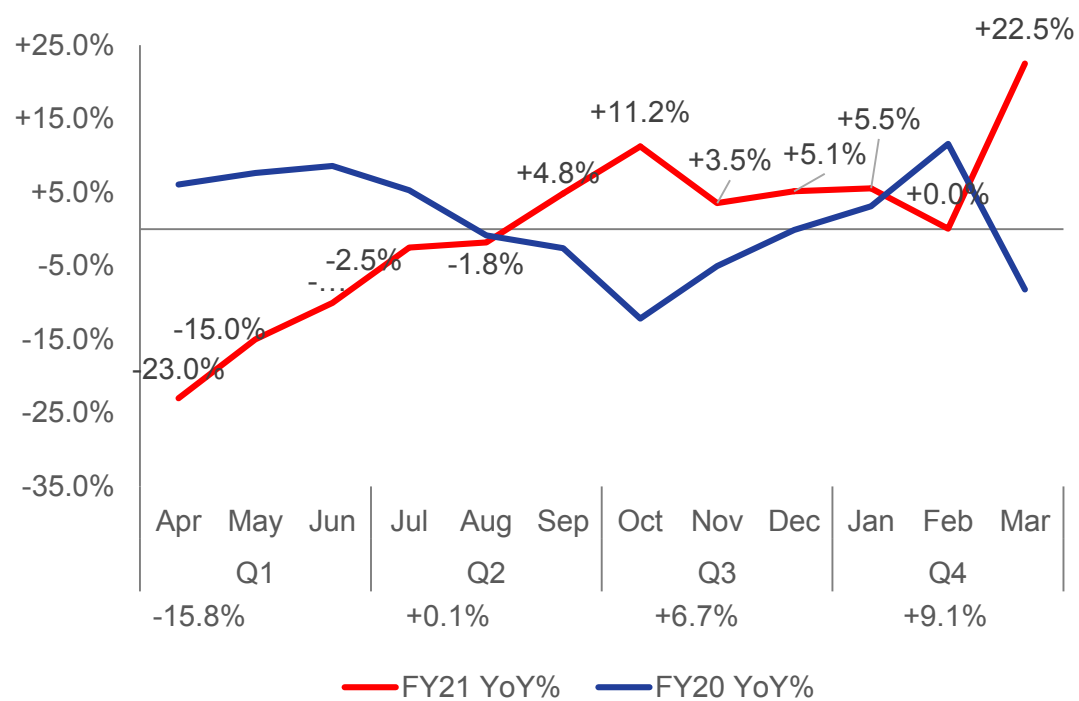
## Power Demand Growth YoY



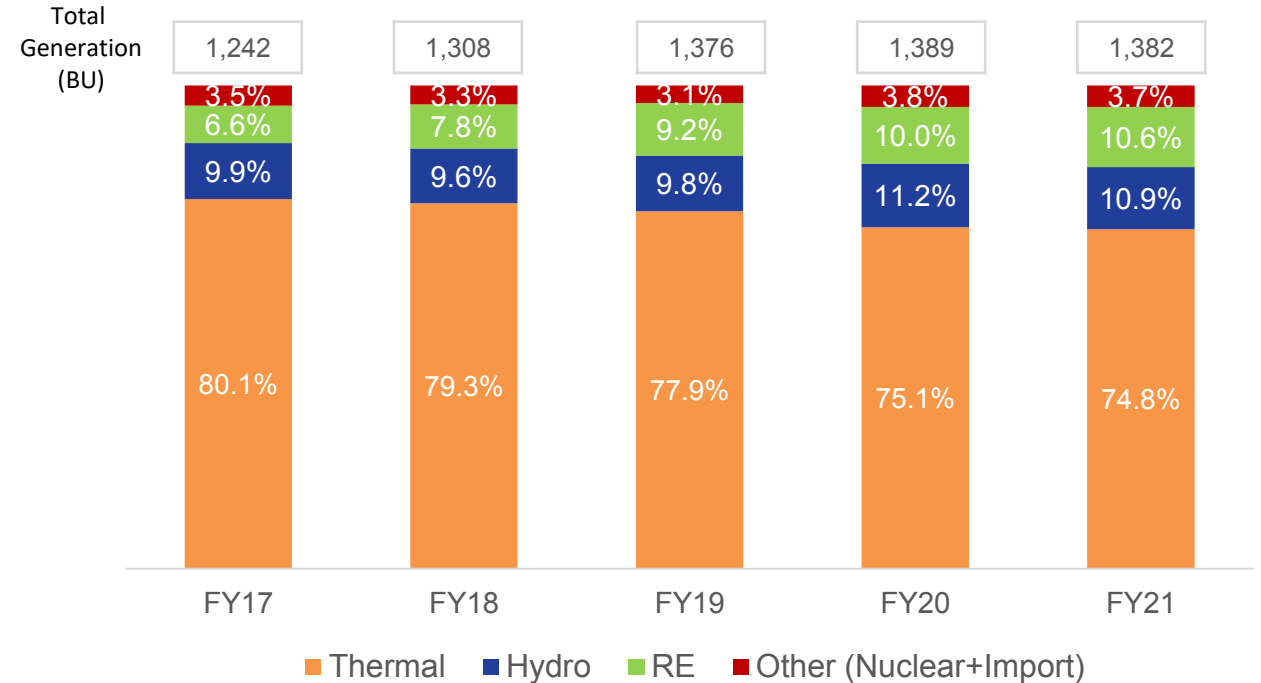
- **Power demand in Mar'21 saw a robust growth of 22.8% YoY**
  - This was driven by a strong pickup in economic activity coupled with a low base effect. In Mar'20 demand had declined by 8.4% YoY when Covid-19 led restrictions/lockdowns were first imposed in the country
- **Demand growth stood at 8.4% YoY during Q4 and at -1.2% YoY during FY21**
- **For the month of Apr-May'21, power demand is up by 21.4% led by low base effect and uptick in economic activity**

**Power demand rose sharply in Mar'21 across regions**

### Power Generation Growth YoY



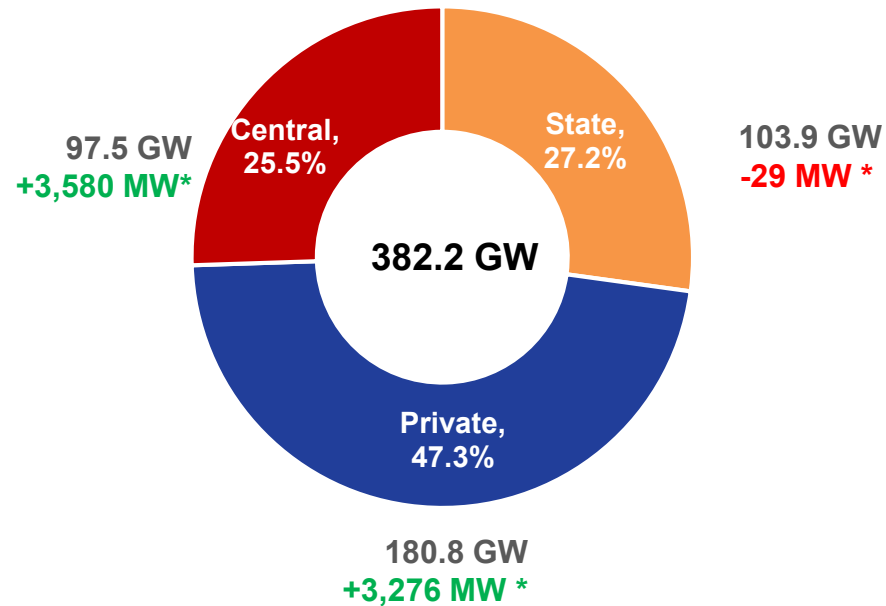
### Segment-wise Share in Generation



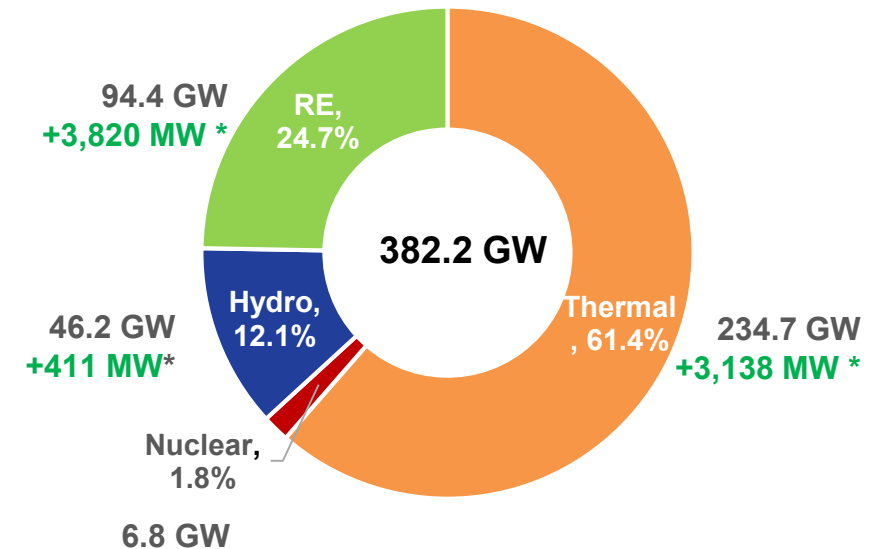
**Generation increased 9.1% YoY in Q4 led by Thermal and RE segments**

**Share of Renewable energy in overall generation increases YoY**

Sector-wise Installed Capacity



Segment-wise Installed Capacity



As on March 31, 2021

**In Q4FY21, Installed Capacity increased by ~6.8 GW, driven by Renewable Energy and Thermal segments**

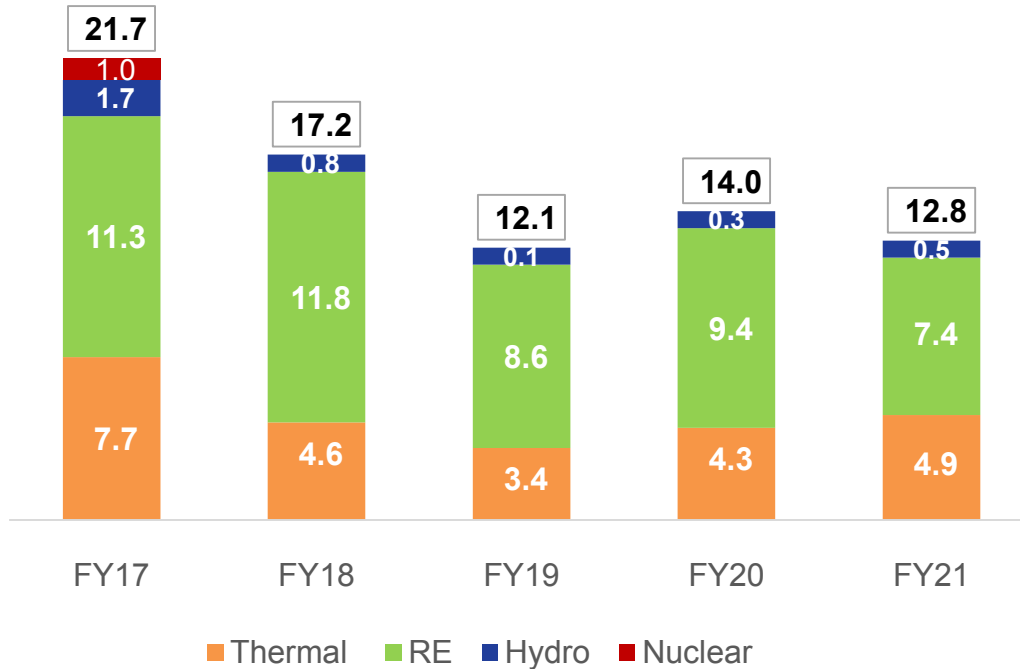


# Installed Capacity

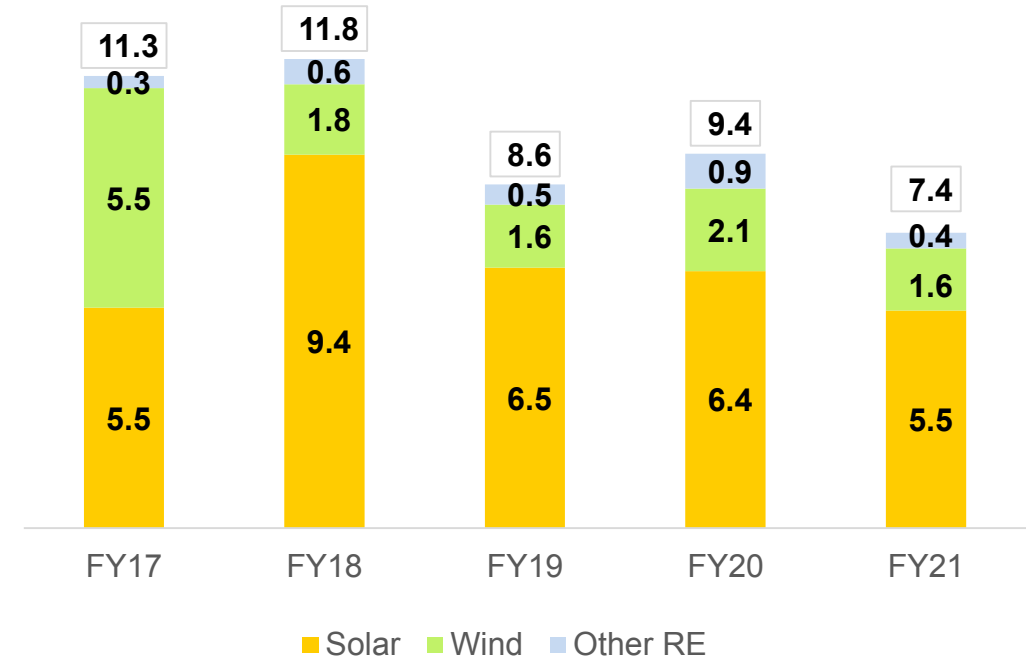
(2/2)



Overall Segment-wise Net Capacity Addition (GW)

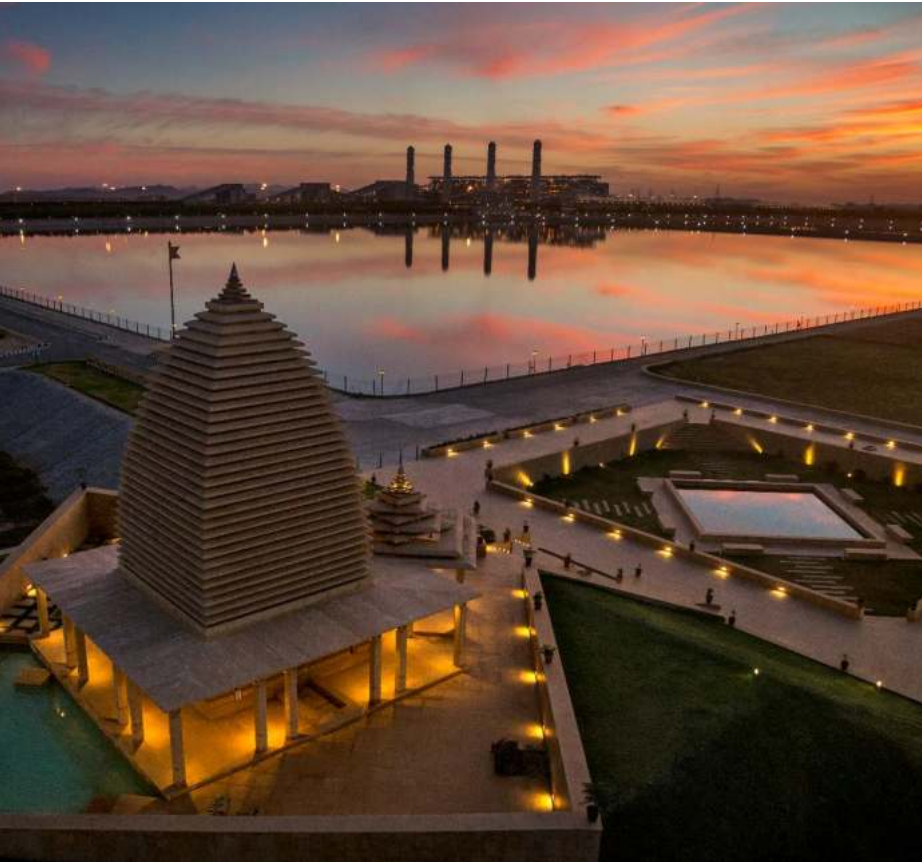


RE Segment-wise Net Capacity Addition (GW)



**Renewable energy driving capacity addition**

**~7.4 GW RE capacity added in FY21 driven by solar segment**



Key Highlights

Sustainability

Growth Strategy

Operational & Financial Performance

Business Environment

Appendix

# Operational Performance – Net Generation

Net Generation								
Location		Capacity	Q4FY21	Q4FY20	Change YoY	FY21	FY20	Change YoY
		%	MUs	MUs	%	MUs	MUs	%
Ratnagiri (1,200 MW)	LT	81%	1,085	1,125	-4%	5,255	5,070	+4%
	Total	100%	1,172	1,705	-31%	5,677	7,193	-21%
Barmer (1,080 MW)	LT	100%	1,526	1,346	+13%	6,369	5,277	+21%
Vijayanagar (860 MW)	LT	35%	436	437	NM	1,747	2,127	-18%
	Total	100%	680	593	+15%	2,202	2,758	-20%
Nandyal (18 MW)	LT	100%	33	29	+15%	102	58	74%
Total Thermal (3,158 MW)	LT	75%	3,080	2,936	+5%	13,473	12,532	+8%
	Total	100%	3,412	3,673	-7%	14,350	15,286	-6%
Hydro (1,300 MW)*	LT	100%	380	429	-11%	5,629	5,953	-5%
Solar (9 MW)	LT	100%	3	4	NM	12	13	NM
TOTAL	LT	82%	3,463	3,369	+3%	19,114	18,499	+3%
	Total	100%	3,796	4,105	-8%	19,990	21,252	-6%

# Operational Performance – PLF

		PLF					
Location	Capacity	Q4FY21	Q4FY20	FY21	FY20	Remarks – Q4 FY21	
	%	%	%	%	%		
<b>Ratnagiri (1,200 MW)</b>	LT	81%	<b>59 (*66)</b>	61 (*72)	<b>71 (*85)</b>	69 (*83)	Lower short term sales
	Total	100%	<b>50 (*55)</b>	71 (*79)	<b>59 (*69)</b>	75 (*85)	
<b>Barmer (1,080 MW)</b>	LT	100%	<b>72 (*78)</b>	63 (*83)	<b>74 (*82)</b>	62 (*82)	Higher long term sales
<b>Vijayanagar (860 MW)</b>	LT	35%	<b>73 (*86)</b>	74 (*84)	<b>74 (*87)</b>	90 (*92)	Higher short term sales
	Total	100%	<b>40 (*44)</b>	34 (*38)	<b>32 (*36)</b>	40 (*40)	
<b>Nandyal (18 MW)</b>	LT	100%	<b>94 (*100)</b>	81 (*99)	<b>71 (*97)</b>	93 (*91)	Higher long term sales
<b>Total Thermal (3,158 MW)</b>	LT	75%	<b>67 (*74)</b>	64 (*79)	<b>73 (*84)</b>	69 (*84)	Higher long term sales
	Total	100%	<b>55 (*60)</b>	58 (*69)	<b>57 (*65)</b>	61 (*72)	
<b>Hydro (1,300 MW)</b>	LT	100%	<b>14</b>	15	<b>50</b>	53	
<b>Solar (9 MW)</b>	LT	100%	<b>18</b>	20	<b>15</b>	17	

# Consolidated Financial Results

Q4FY21	Q4FY20	Particulars in ₹ Crore	FY21	FY20
<b>1,614</b>	1,848	Total Revenue <sup>1</sup>	<b>7,160</b>	8,560
<b>677</b>	629	EBITDA	<b>3,144</b>	3,244
<b>42%</b>	34%	EBITDA Margin(%)	<b>44%</b>	38%
<b>257</b>	248	Interest	<b>896</b>	1,051
<b>294</b>	289	Depreciation	<b>1,167</b>	1,168
<b>126</b>	92	Profit Before Tax (before exceptional items)	<b>1,081</b>	1,025
-	-	Exceptional Items <sup>2</sup>		61
<b>126</b>	92	Profit Before Tax (after exceptional items)	<b>1,081</b>	1,086
<b>107</b>	108	Profit After Tax	<b>795</b>	1,100
<b>428</b>	406	Gross Cash Accruals <sup>3</sup>	<b>2,044</b>	2,128
<b>0.65</b>	0.66	Diluted EPS <sup>4</sup> (₹)	<b>4.84</b>	6.70

1- Including Job work impact

2- Exceptional gain related to JPVL loan restructuring in FY20

3- Computed as PAT+ Depreciation+ Deferred Taxes+ Exceptional items; 4 - Not Annualized

# Entity-wise Financial Results

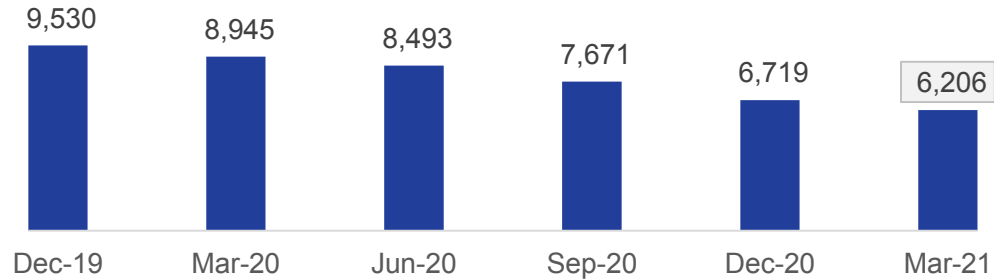
Entity-wise Revenue from Operations				
Particulars in ₹ Crore	Q4FY21	Q4FY20	FY21	FY20
Standalone <sup>1</sup>	729	1,016	2,898	4,314
JSW Energy (Barmer)	625	604	2,665	2,597
JSW Hydro Energy	123	148	1,223	1,264
JPTL	18	21	72	80
<b>Consolidated*</b>	<b>1,570</b>	<b>1,793</b>	<b>6,922</b>	<b>8,273</b>

Entity-wise EBITDA				
Particulars in ₹ Crore	Q4FY21	Q4FY20	FY21	FY20
Standalone	269	268	876	1,092
JSW Energy (Barmer)	243	242	1,019	1,044
JSW Hydro Energy	74	102	1,102	1,091
JPTL	17	20	68	77
<b>Consolidated*</b>	<b>677</b>	<b>629</b>	<b>3,144</b>	<b>3,244</b>

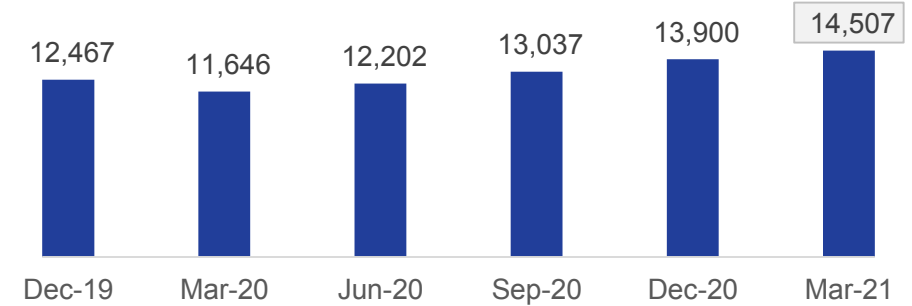


# Balance Sheet

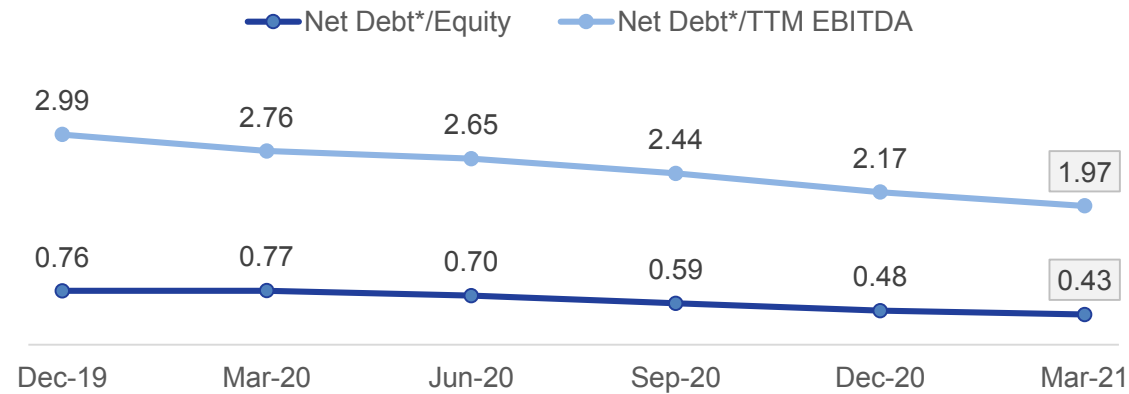
Net Debt (₹ Crore)



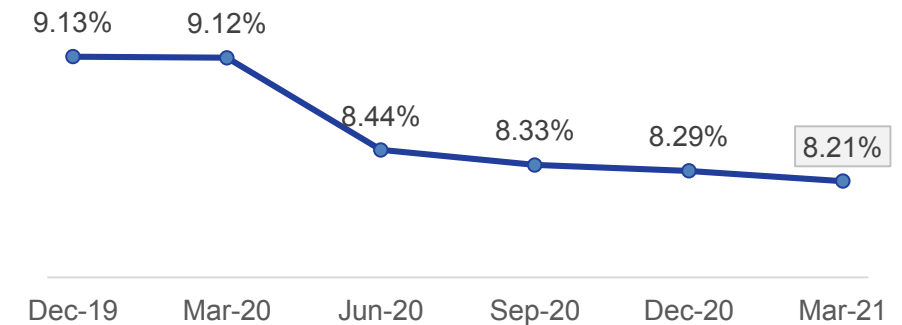
Net Worth (₹ Crore)



Leverage Ratios



Wt. Average Cost of Debt



**Amongst the strongest balance sheets in the sector - Well positioned to pursue growth opportunities**

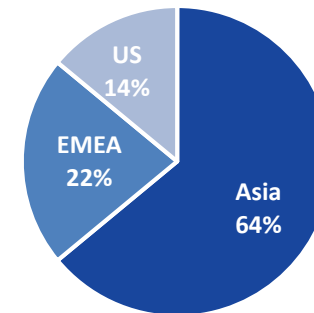
# USD 707 mm Green Notes Issuance by JSW Hydro Energy

## Key Highlights:

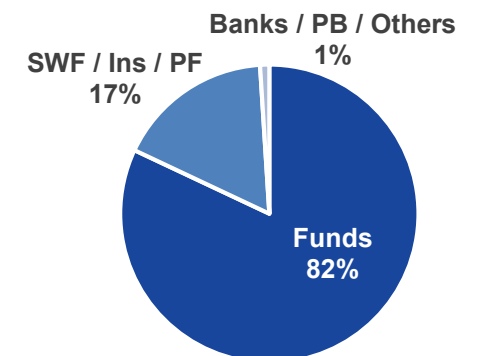
- JSW Hydro Energy Ltd is the largest hydroelectric energy company in India in the private sector in terms of annual power generation capacity, with a stable operational history (track record of average 11.5yrs on two assets)
- JSW Hydro Energy's (& JSW Energy's) first bond in the international capital markets, which is a direct issuance at asset level
- Second Party Opinion on Green Bond Framework obtained from Sustainalytics
- IPG: 4.500% area
- Final Yield: 4.125%
- Final Order book: USD 2.6bn ; 3x Oversubscription

Issuer	JSW Hydro Energy Limited
Issue Rating	Ba1/BB+ (Moody's/Fitch)
Status	Senior Secured Green Notes
Format	USD 144a/RegS
Issue Size	USD 707 million
Tenor	10NC5 (WAL ~7.12Y)
Re-offer / Coupon	4.125%
Maturity Date	18 May 2021
Hedging	FX risk hedged for life of the notes

### Distribution by Geography



### Distribution by Type



# FY21 Performance – JSW Hydro Energy Ltd

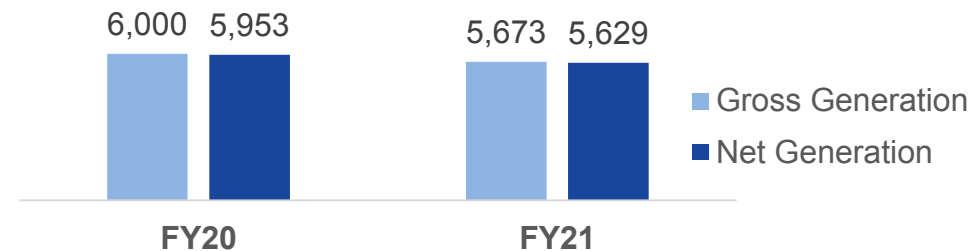


## USD 707 million Green Bond Issued by JSW Hydro Energy

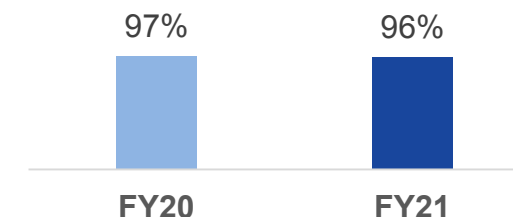
### Key Highlights :

- ✓ Gross Generation 106% of Design Energy
  - Additional income from secondary energy sales
- ✓ PAF maintained above normative level (90%) : eligible for availability based incentives
- ✓ Healthy Revenue and EBITDA generation
- ✓ Receivable days decline to 38 days at the end of Mar'21 from 89 days, a year ago
- ✓ Received CEA approval for uprating of Karcham Wangtoo Capacity by 91 MW to 1,091 MW, in a phased manner
  - 1,045 MW in the first phase for two monsoon seasons in CY 2021 and CY 2022, and to 1,091 MW thereafter
  - Uprating without any additional capex

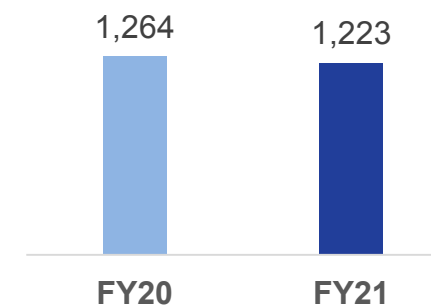
### Generation (MU)



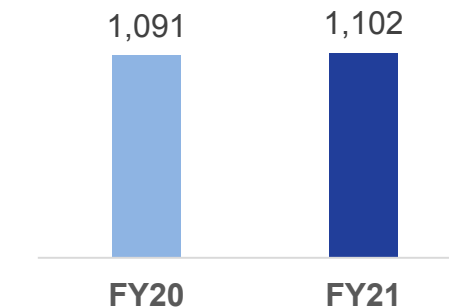
### PAF



### Revenue (₹ Crore)



### EBITDA (₹ Crore)





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BETTER EVERYDAY