



# Q3 FY23 Results Presentation

January 20, 2023

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# Progressive commissioning of SECI X Wind Project



# Agenda

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**Q3FY23 Highlights**

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**Strategic Updates**

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**Operational & Financial Performance**

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**Sustainability**

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**Business Environment**

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**Appendix**

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## Operational Performance



- Net Renewable Generation: Up 3% YoY driven by contribution from Vijayanagar Solar Power Plant and SECI X Wind Power Plant
- Net Long Term Generation: 4.2 billion units (BUs) flat on a YoY basis
- Overall Net Generation: 4.3 BUs lower by 5% YoY due to lower merchant market sales in the quarter

However, 9M FY23 overall Net Generation was up 2% YoY on the back of higher merchant sales and steady LT generation

## Consolidated Financial Performance



- EBITDA of ₹727 crore down 18% YoY due to lower short term sales, resulting in reported PAT of ₹180 crore. (EBITDA for 9M FY23 is up 5% YoY)
  - Cash PAT of ₹ 489 crore, cash return on Adjusted Net Worth of 20% during Q3 FY23; maintaining track record of >18% cash returns on a sustained basis ([ref. appendix](#))
- Receivables days decline by 8% YoY to 69 days; healthy collection trend sustained
- Best in class Balance Sheet, well-positioned to pursue growth
  - Net Debt to Equity at 0.54x, Net Debt to EBITDA (TTM) at 2.30x
  - Strong Liquidity: Cash & Cash Equivalents<sup>1</sup> at ₹3,029 crore

## Under construction - Utility Scale Projects



- 1.26 GW SECI IX & X Wind projects : Progressive commissioning of **SECI X** project started with part-CoD received for first phase of 27 MW.
  - WTG foundation and balance of plant works in-progress for **SECI IX**.
- 240 MW Kutehr HEP: Project well ahead of timelines with ~90% tunneling completed (up from 84% in Q2 FY23)

## Storage Projects



- Battery Energy Storage System: LoA received for 500MW/1000 MWh SECI project in Jan-23
- Hydro Pumped Storage: Approvals and preparatory works in progress for ~7.6GW (~50 GWh); MoUs/LoI signed. ([ref. appendix](#))
- First project will be a captive PSP at Vijayanagar (Karnataka)
  - Construction expected to commence in CY2023

## Update on Acquisition



- Mytrah RE assets 1,753 MW: Transaction in advance stages with closure expected in Q4 FY23
- Ind-Barath 700 MW: Completed acquisition pursuant to NCLT order under IBC ([ref. appendix](#))
  - Project revival plan in progress, expected commissioning of 700MW in 24 months

## Awards and Recognitions



- FICCI Quality Systems Excellence Award: Barmer Plant was conferred with the Prestigious FICCI Quality Systems Excellence Award for its robust quality systems at workplace
- League of American Communication Professional (LACP): Integrated Annual Report 2022 received a 'Gold Award' in the spotlight competition organised by the LACP
- Council of Enviro Efficiency: Vijayanagar and Barmer Plants won the Award for the 'Best Energy Efficient Units'
- GMF Green Crest Award: Vijayanagar Plant has won the prestigious GMF Green Crest Diamond Award in the Energy Conservation Category

# Strategic Update

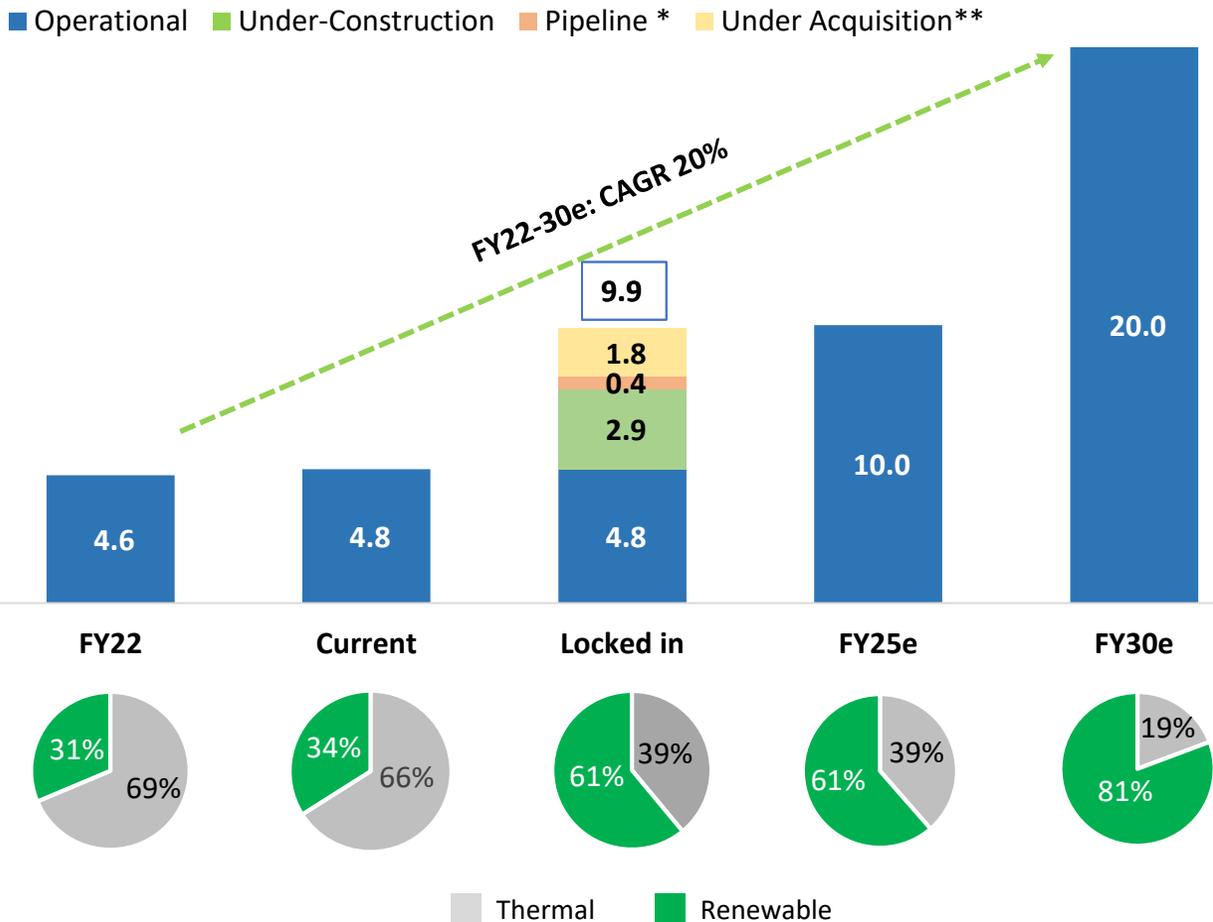


Site Bridge: Karcham Wangtoo (1,091MW)



# Long term vision & strategy

## Scaling towards 20 GW installed capacity by 2030



## Transitioning towards Energy Products and Services



### Energy Storage



#### Hydro Pumped Storage (PSP) - Targeting 10 GW

- Resources tied-up for ~7.6 GW (~50 GWh) PSP in various states



#### Battery Energy Storage System (BESS)

- Received LoA for SECI BESS project of 500MW/1000MWh in Jan-23



### Electrons to Molecules

#### Green Hydrogen /Ammonia

- Intend to foray into production of Green Hydrogen and its derivatives

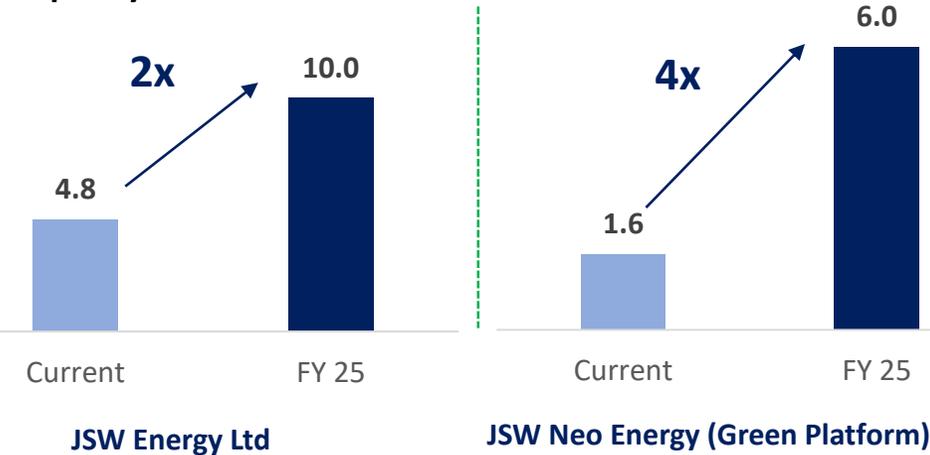
Current locked-in capacity of 9.9 GW; Comprising of 61% Renewable capacity

Net-zero by 2050

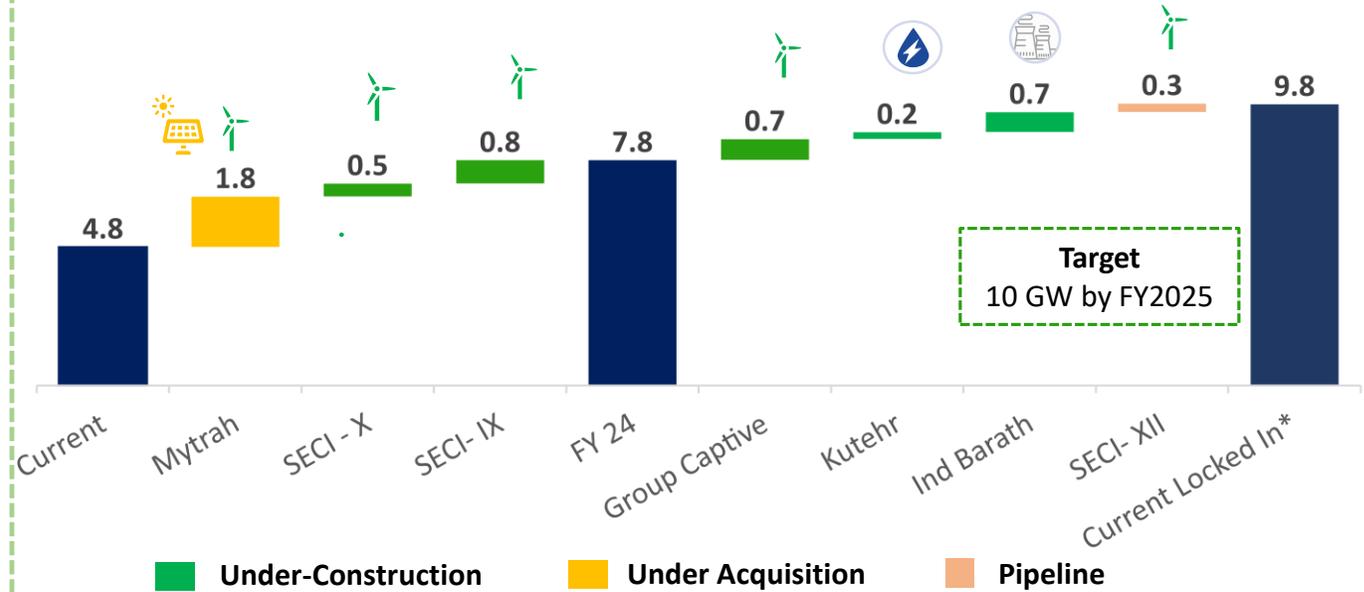
# Near term growth visibility

## Towards 10 GW by 2025

### Capacity Growth....



## JSW Energy - Locked-in Capacity (GW)



### ...underpinned by

#### Strong Balance Sheet to support growth

- ✓ Net debt/EBITDA 2.30x and Net debt/Equity 0.54x as on Dec-22

#### Sufficient internal accruals to drive equity financing

- ✓ **Steady operations:** Track record of strong yearly cash profits of ~₹2,300 Cr
- ✓ **Strong Liquidity with healthy cash balances:** ₹3,029 crore
- ✓ JSW Steel shares worth ₹5,379 crore

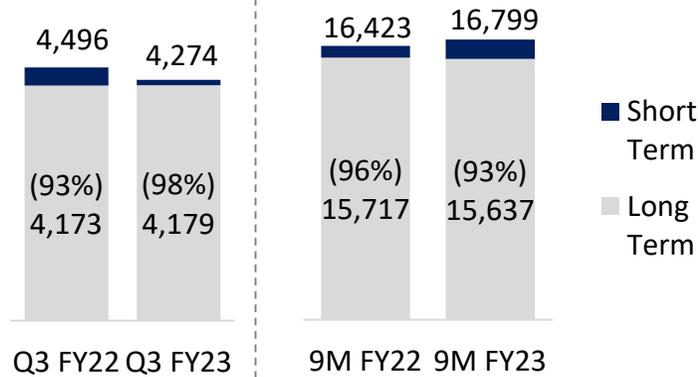
Plant (MW)	Target commissioning	PPA	Capex
SECI IX (810)	Progressively from Q3 FY23	25- year; SECI	Total: ₹16,660 Cr Committed : ~₹11,650 Cr Spent: ~₹5,500 Cr
SECI X (450)		25- year; SECI	
Group Captive - JSW Steel (958) 225MW solar operational	Progressively from Q1 FY24	25- year; JSW Steel	
Kutehr HEP (240)	Sept -2024	35- year; Haryana Discom	

# Operational & Financial Performance

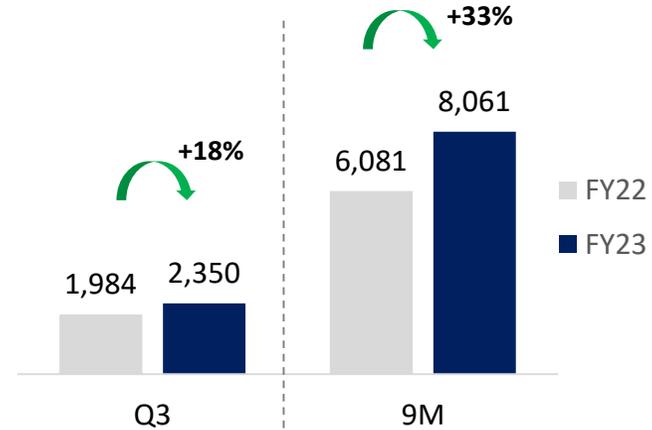


# Consolidated Performance

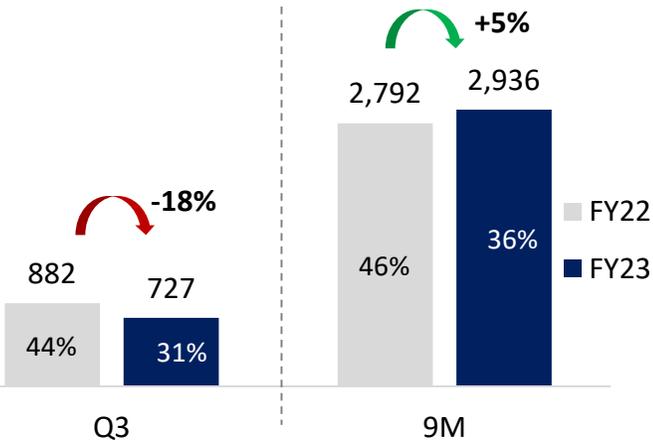
## Net Generation (MUs)



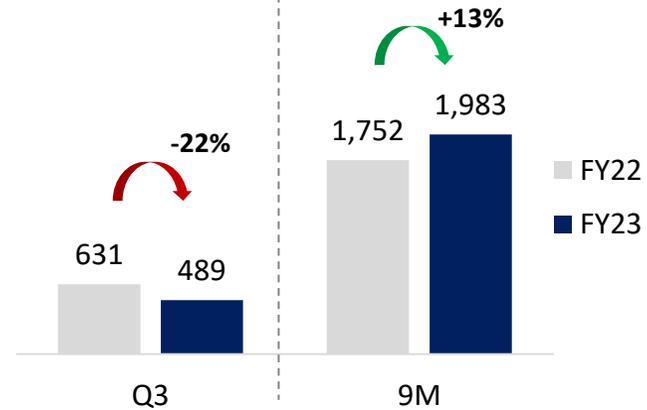
## Total Revenue\* (₹ crore)



## EBITDA\* (₹ crore) and EBITDA Margins (%)



## Cash Profit After Tax\*\* (₹ crore)



**Strong EBITDA and Cashflow generation from Long-term portfolio**

## Operational Highlights Q3 FY23

- Renewable net generation +3% YoY at 816MUs
  - Led by contribution from Solar Power Plant at Vijayanagar and SECI X Wind Project part commissioning of 27 MW capacity
- Total LT generation is flat YoY
- Total Net Generation -5% YoY at 4,274MUs due by lower merchant market sales in Q3 FY23. However, 9M FY23 overall Net Generation was up 2% YoY on the back of higher merchant sales and steady LT generation

## Financial Highlights Q3 FY23

- Total Revenue increased by 18% YoY driven by higher realizations
- EBITDA decreased by 18% YoY on account of lower short term sales
- 9M FY23 Revenue and EBITDA increased 33% and 5% YoY respectively. 90% EBITDA generation is from 85% of capacity tied-up under LT PPA

# Thermal Assets | Q3 FY23 highlights (1/2)

## Total Thermal Assets

**Total Thermal Capacity  
3,858 MW**

**Operational Capacity  
3,158 MW**

**Under Revival  
Ind-Barath  
700 MW**

## Operational Assets - 3,158\* MW



**Ratnagiri**



**Barmer**



**Vijayanagar**



**Ind - Barath**

**Installed Capacity**

1,200 MW

1,080 MW

860 MW

700 MW

**PPA tied**

1,095MW

1,080 MW

338 MW

**Net Generation  
(Mus)**

LT

1,110 MUs (-7% YoY\*\*)

1,609 MUs (-2% YoY)

652 MUs (+11% YoY)

100%

1,133 MUs (-8% YoY)

1,609 MUs (-2% YoY)

716 MUs (-10% YoY)

**PLF/  
(Deemed PLF)**

LT

51%/(98%)

75%/(77%)

104%/(104%)

100%

47%/(88%)

75%/(77%)

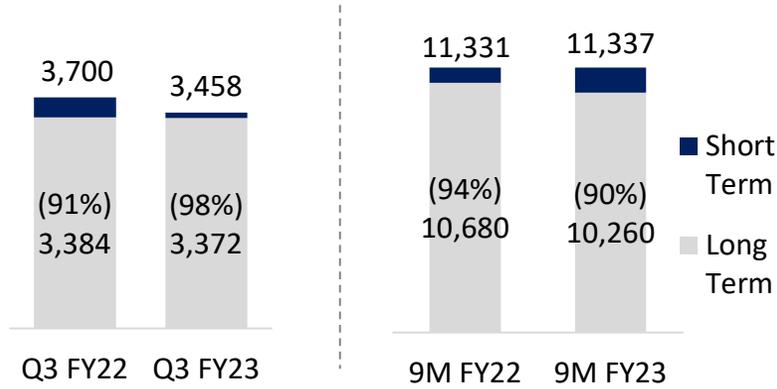
41%/(41%)

Revival plan started, expected commissioning of both units in 24 months

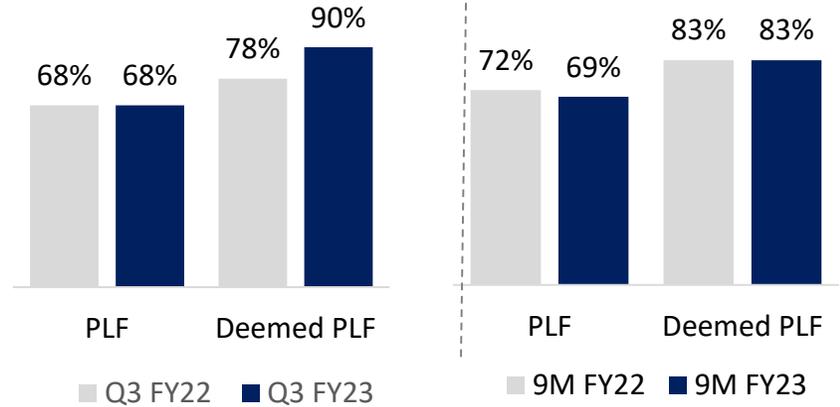
**Ind-Barath (700 MW) acquisition completed on 28th December 2022**

# Thermal Assets | Q3 FY23 highlights (2/2)

## Net Generation (MUs)



## Thermal : PLF – long term



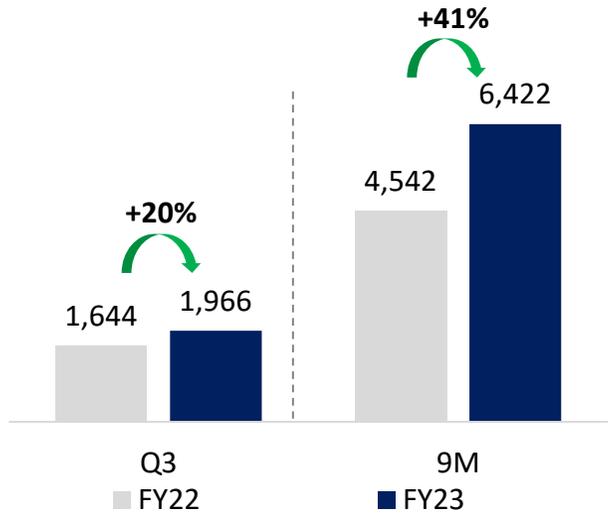
## Operational Highlights Q3 FY23

- Net LT generation flat YoY at 3.4 BUs
  - Vijayanagar higher LT generation (+11% YoY) was offset by lower LT generation at Barmer, Nandyal and Ratnagiri
- Net ST Generation declined YoY; due to lower sales in merchant markets
- Overall Net Generation lower 7% YoY
- PLF (LT) remains healthy at 68%
- Net generation for 9M FY23 is flat YoY

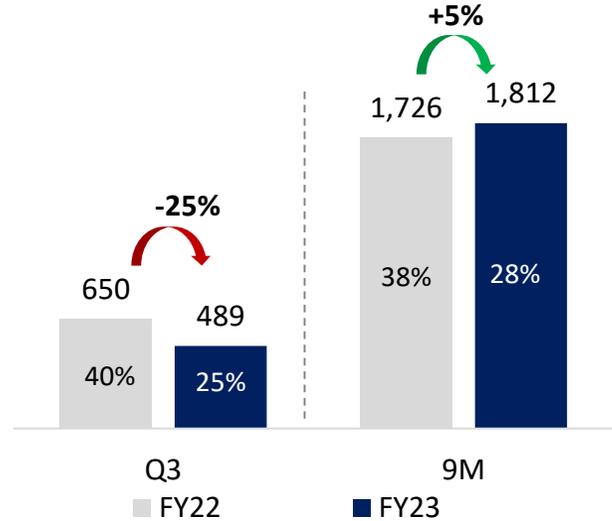
## Financial Highlights Q3 FY23

- Total Revenue increase by 20% YoY on account of higher realizations (fuel cost pass through) offsetting lower net generation
- EBITDA decrease by 25% due to lower sales in merchant market
- 9M FY23 Revenue and EBITDA increased 41% and 5% YoY respectively

## Revenue from Operations<sup>1</sup> (₹ crores)



## EBITDA (₹ crores) and EBITDA Margins (%)



# Green driving the platform capacity

## RE Capacity

JSW Neo Energy: ~6.0 GW



Hydro  
1,757 MW



Wind  
3,624 MW



Solar  
657 MW

## Operational Assets – 1,653 MW



Hydro



Solar



Wind



Hydro



Wind



Mytrah RE



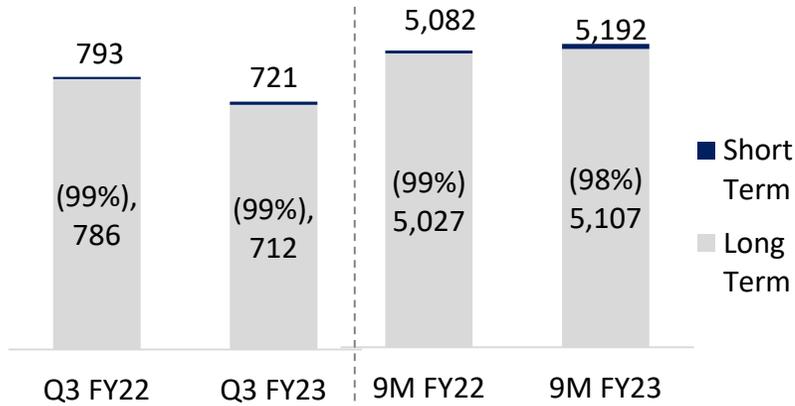
	Hydro	Solar	Wind	Hydro	Wind	Mytrah RE
<b>Total capacity</b>	1,391 MW	235 MW	27 MW	366 MW	2,266 MW	1,753 MW
<b>Plant (MW)</b>	Karcham Wangtoo (1,091) Baspa (300)	Vijaynagar (225) Roof top (10)	SECI X (27)	Kutehr (240) Chhatru (126)	SECI IX (810) SECI X (423) Captive - JSW Steel (733)	
<b>% of total locked-in capacity (9.9 GW)</b>	14%	2%	0%	4%	23%	18%

**Total locked-in renewable capacity of 6,038 MW**

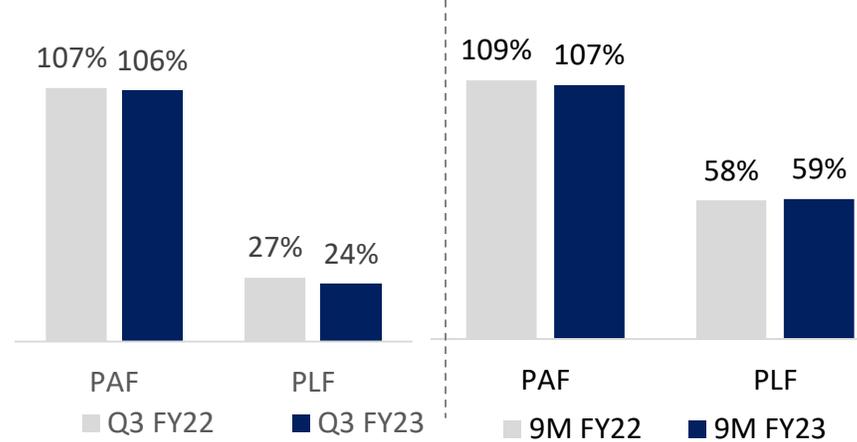
**Green Portfolio constitutes 61% of total locked-in capacity**

# Green Assets | Hydro: Q3 FY23 highlights

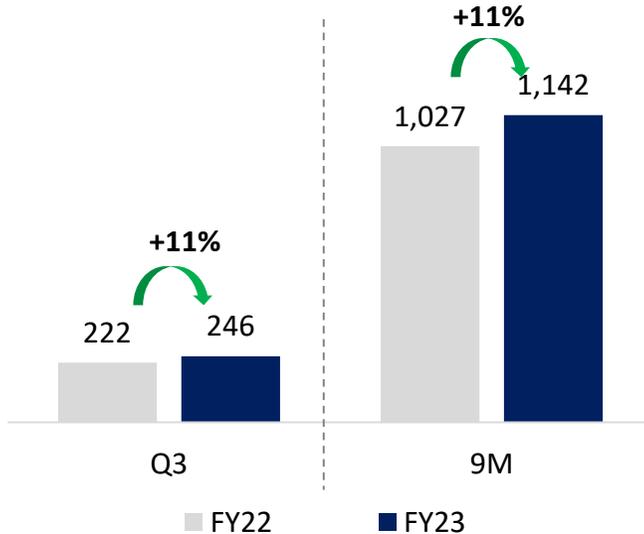
## Net Generation (MUs)



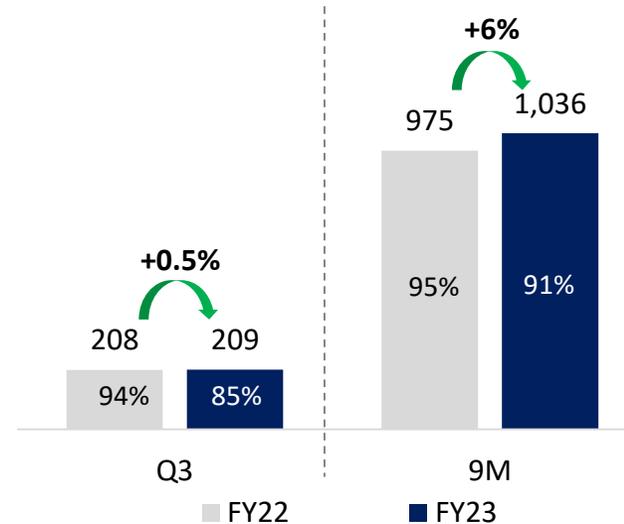
## Hydro : PAF and PLF



## Revenue from Operations<sup>1</sup> (₹ crores)



## EBITDA (₹ crores) and EBITDA Margins (%)



## Operational Highlights Q3 FY23

- Net generation at Hydro Assets (Karcham-Wangtoo and Baspa) down 9% YoY due to lower water flow in Q3 FY23. Net Generation for 9MFY23 up 2% YoY
- Plant availability factor came at 106% in Q3FY23 (107% for 9MFY23)

## Financial Highlights Q3 FY23

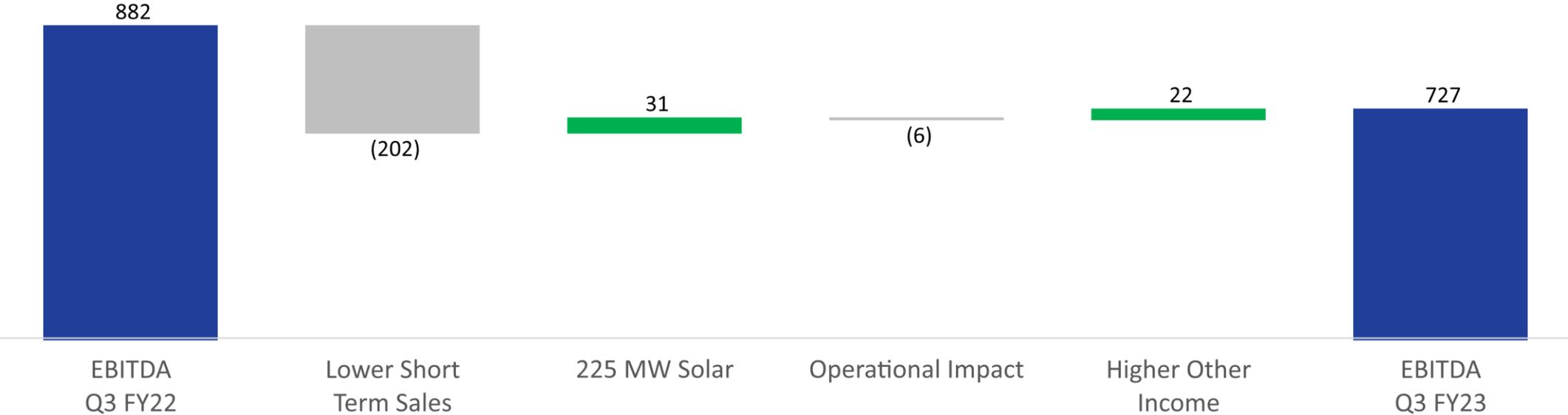
- Total Revenue increased 11% YoY while EBITDA was flat YoY during the quarter
- 9M FY23 Revenue and EBITDA increased 11% and 6% YoY respectively

# Consolidated Financial Results

9M FY23	9M FY22	Particulars in ₹ crore	Q3 FY23	Q3 FY22
8,061	6,081	Total Revenue	2,350	1,984
2,936	2,792	EBITDA	727	882
36%	46%	EBITDA Margin(%)	31%	44%
611	676	Finance Cost	214	195
878	854	Depreciation	295	281
1,567	1,262	Profit Before Tax	218	405
1,206	864	Profit After Tax	180	324
1,983	1,752	Cash Profit After Tax <sup>1</sup>	489	631
7.33	5.26	Diluted EPS <sup>2</sup> (₹)	1.09	1.94

# EBITDA Bridge

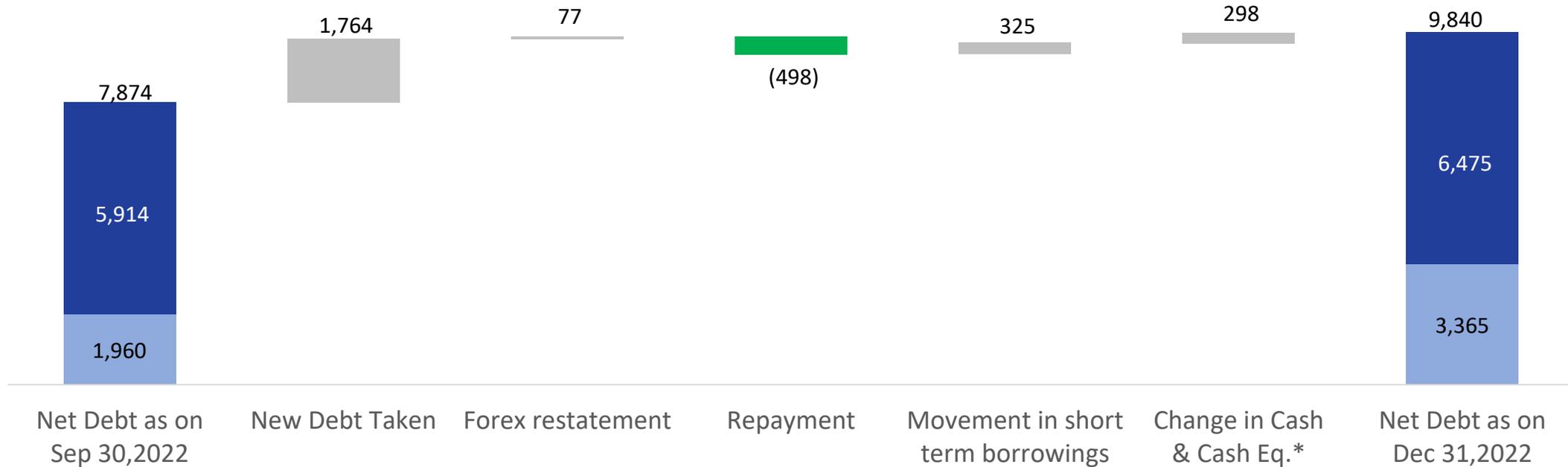
Particulars in ₹ crore



# Net Debt Movement

Particulars in ₹ crore

- Operational Projects
- Under-Construction/Under-Acquisition



## Increase in Net Debt led by Ongoing Growth Capex

## Large balance sheet headroom to pursue growth opportunities

- **Strong credit metrics :**

Figures in ₹ crore	As on Dec 31, 2022
Networth	18,392
Net Debt	9,840
Net Debt/EBITDA	2.30
Net Debt/Equity	0.54
Wtd. Average Cost of Debt	8.29%

- **Healthy Credit Ratings and access to diverse pools of liquidity**

- India Rating & Research: IND AA (Outlook Stable)
- ICRA Ltd: ICRA AA/ Stable

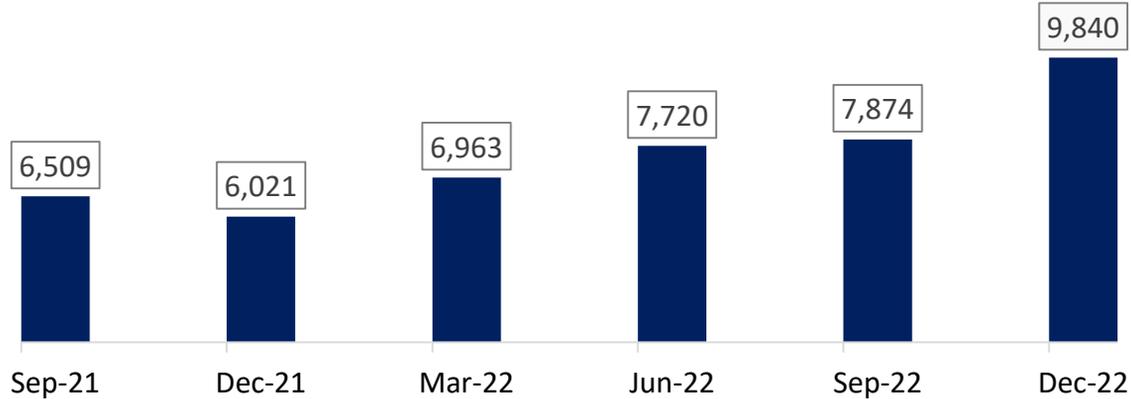
## Healthy internal accruals & financial flexibility to support long term growth

### Operational Portfolio (4.8 GW):

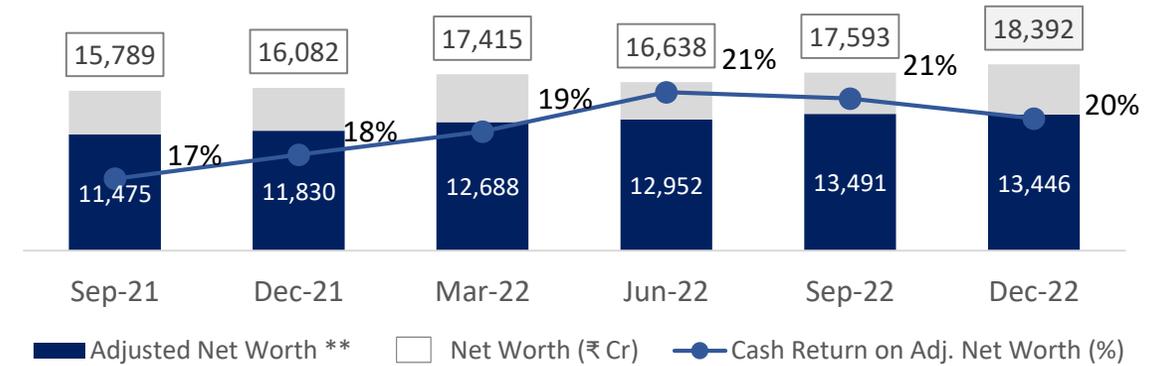
- **Generating healthy cash flow & mid-teen equity returns**
- **Steady operations and robust financial:** Track record of strong yearly cash profits of ~₹2,300 crores.
- 85% of portfolio tied-up under Long Term PPA; generating ~90% of 9MFY23 EBITDA
  - Remaining Avg. Life of PPA: ~19 years
  - Remaining Avg. Life of Assets: ~28 years
- **Strong Liquidity with healthy cash balances<sup>1</sup>:** ₹3,029 crore
- **Financial flexibility** enhanced by equity investments:
  - JSW Steel shares: 7 crore shares held (Value as on Dec 31, 2022: ₹ ~5,379 crore)

# Superior Financial Risk Profile

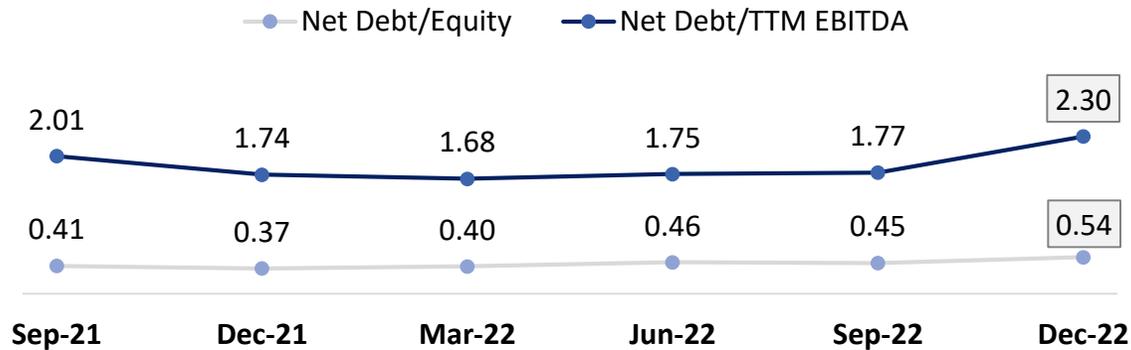
## Net Debt (₹ crore)



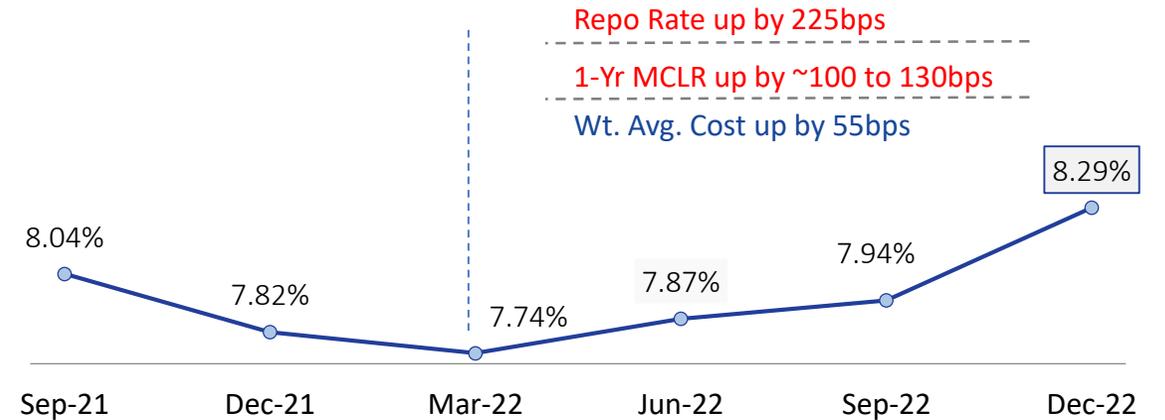
## Net Worth (₹ crore)\* and Cash Returns (%)



## Leverage Ratios



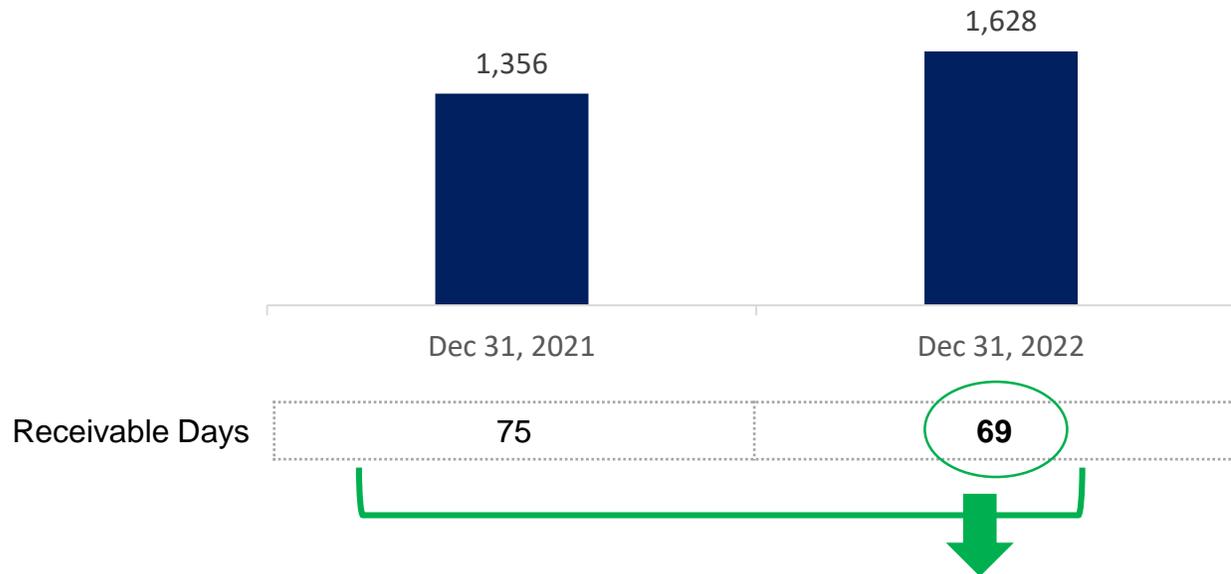
## Wt. Average Cost of Debt



Amongst the strongest balance sheets in the sector & best in-class financial metrics

\* Net Worth is impacted by change in value of listed equity investments through Other Comprehensive Income \*\* Adjusted for value of investments (net of taxes)

## Consolidated Trade Receivables\* (₹ crore )



**Improved receivables days to 69 days on YoY Basis**

- Receivables days decline to 69 days from 75 days in Q3 FY22
  - Receivables (in ₹ crore) increase YoY due to higher fuel costs.
- 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.

# Sustainability



# Continuing our Health & Safety Excellence Journey



**Zero** severe injuries/fatalities (Q3 FY23 & YTD)



**92%** of contractors covered by JSW CARES audit

9 Contractors achieve 5 Star rating & 3 contractors achieve 4 Star in a stringent Internal Safety Assessment



**63,000+** Cumulative Safety Observations Resolved YTD

Influencing 'positive safety behavior' of our workforce by reporting smallest of the safety considerations thereby avoiding any major / minor incident



**474** employees enrolled for 'Safety Champion Program' as per British Safety Council (BSC) Certification

474 employees across all major locations enrolled for Safety Champion Program covering 10 safety high standard eLearning modules with final examination conducted in association with BSC

## Enhancing Safety Understanding of Contractor Employees



- Barmer – Mock drill on fire in lignite conveyor belt and primary crusher conducted. Health and safety training on PPE and 10 critical rules undertaken
- Vijayanagar – On site 'emergency mock drill' conducted
- Ratnagiri – 'Mass tool box talk' on electrical portable tools safety conducted
- Baspa – Conducted a training session on "Fire Safety- Fire Prevention and Fire Fighting"

## Awards & Recognitions



Council of Enviro Excellence



# Sustainability: Framework and Policies

## 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 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>

Operational Health & Safety	Resources	Social Sustainability	Local Considerations	Indigenous People	Human Rights
Supply Chain Sustainability	Employee Wellbeing	Air Emissions	Business Ethics	Cultural Heritage	Energy

**Aligned to National & International Frameworks**

## Governance & Oversight by Sustainability Committee

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

## ESG Ratings – best amongst peers

**MSCI** : BB

**CDP\*** : A- (Leadership Level)

**Sustainalytics**: 27.8 (Medium Risk)

**FTSE4Good** Index constituent

## Carbon Neutrality by 2050

**SCIENCE BASED TARGETS** Committed to set science based targets to keep global warming to 1.5°C under SBTi

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

## Integrated Reporting since FY19



# Sustainability: Targets and Strategy

SD Targets		FY20 Actuals	FY30 Targets	Improvement	Strategic Initiatives and 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>	Specific process emissions(Kg/MWh)				<ul style="list-style-type: none"> <li>Ensuring ESP (Electrostatic Precipitator) Fields availability</li> <li>Optimising Lime dozing system efficiency</li> <li>Process efficiency improvements</li> </ul>
	<ul style="list-style-type: none"> <li>PM</li> </ul>	0.16	<b>0.053</b>	67%	
	<ul style="list-style-type: none"> <li>SOx</li> </ul>	1.78	<b>0.683</b>	61%	
	<ul style="list-style-type: none"> <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 <b>'no net loss'</b> 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> <li>Eco-system studies (all seasons) in progress for finalising a Bio-diversity management plan at Barmer location.</li> </ul>

## Key Highlights



### Climate Change

- TCFD assessment initiated by reputed ESG consultant
- Value Chain survey of suppliers initiated for assessment of supply chain sustainability.
- Increased share of renewable energy for deep decarbonization
- Wind Projects –SECI X – Progressive Commissioning Started



### Water Security

- Maintain zero liquid discharge across operations
- Reuse of treated effluent of Sewage Treatment Plant for horticulture
- Plan to review & improve water monitoring methodology by 3rd party to measure inconsistencies



### Waste

- Ash silo (45000 MT) completed in Ratnagiri. Testing & Commissioning in progress.
- Continue 100% Ash utilization initiatives at all plants through tie-ups with cement factories & similar businesses



### Air Emissions

- Ensuring ESP (Electrostatic Precipitator) Fields availability
- Process efficiency improvements
- Lime Dozing system availability and parameters optimization at Barmer for reduced air emissions



### Biodiversity

- Eco-System Study at Barmer - Summer and monsoon season report submitted by CII team. Winter assessment in progress.
- Biodiversity Assessment and Management Plan - Initiated the process at all the plants

## Performance

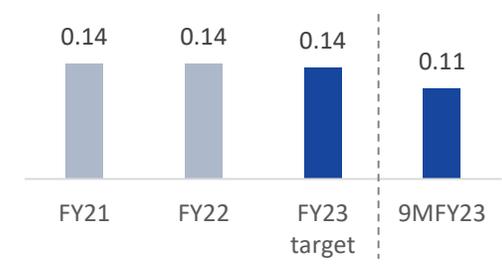
Ash Utilisation (%)



CO2 intensity (tCO2e/MWh)



PM Emissions (kg/MWh)



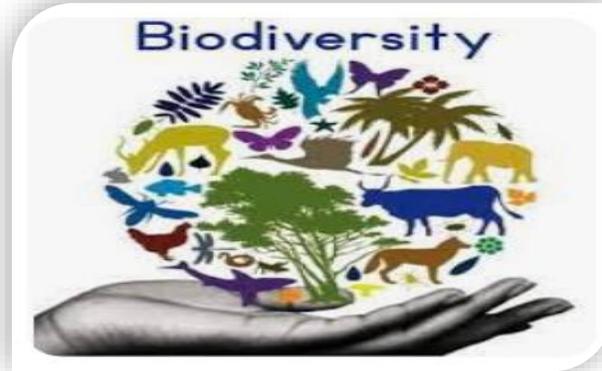
SOx Emissions (kg/MWh)



NOx Emissions (kg/MWh)



# Sustainability: Initiatives and Disclosures



- ✓ Assessment initiated by reputed ESG Consultants.
- ✓ Increased focus on achieving climate change target of 2030 and subsequently of becoming Carbon Neutral by 2050.

Task Force on Climate related Financial Disclosures

Sustainability Assessment for Supply Chain and Biodiversity Assessment for all plants Initiated

Plantation drives spanning across Vijayanagar, Barmer & Hydro Power Plants

Comprehensive ESG Data profile with ~300 factors across 15 sustainability frameworks

[JSW Energy](#)



[JSW Hydro Energy](#)





## Sports Promotion & Development

- **Project Shikhar:** Bringing powerful transformation in the field of sports with Project Shikhar
- Shikharite won the silver medal in the 6th Elite Women's National Boxing Championship, held at Bhopal from 20th to 26th December, 2022



## Health & Nutrition

- Total 3,725 individuals across Dharapuram (TN) and Ratnagiri (MH) screened at camps for eye problems, 634 received eye glasses.
- 2,089 patients benefitted through ambulatory services in Barmer (RJ), Kutehr (HP), Ratnagiri (MH)



## Education

- 15,760 children from Zila Parishad and other schools benefited through various education initiatives in Ratnagiri
- 16 Schools from Zila Parishad and other schools benefited through infrastructure interventions in Ratnagiri



## Community Development & Support

- **Project Margdarshak:** To empower rural India with access to applicable welfare schemes of central and state governments. 5,000 individuals got access via this program.
- **Solar Street Lights:** Installed 236 solar street lights in in Barmer, Kutehr, Dharapuram and Tuticorin.



[Health & Nutrition](#)



[Water & Environment](#)



[Waste Management](#)



[Agri-livelihoods](#)



[Education](#)



[Women's BPO & Livelihoods](#)



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[Sports](#)

Investor Relations Contact:

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

ESG Data Profile: [Link](#)

# Business Environment



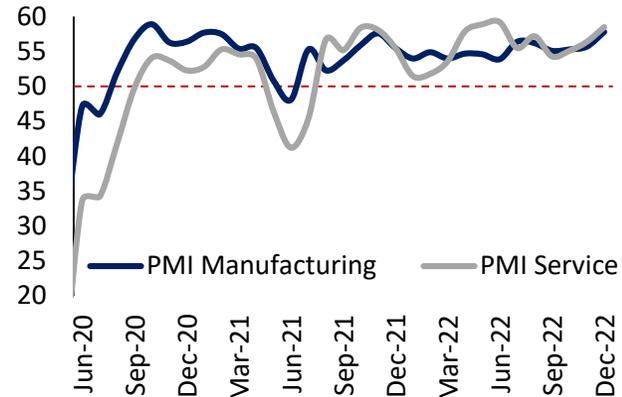
### Real GDP Growth (%)



### GST Collection (₹ Lakh Cr)



### PMI – Manufacturing & Services

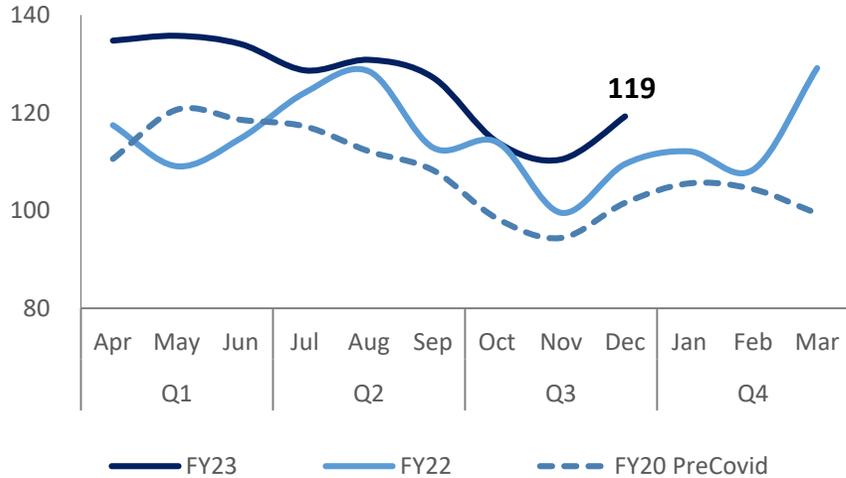


- India continues to see resilient growth amid headwinds from slowing global growth and trade
  - Real GDP growth for quarter Sept-22 stood at 6.3% YoY.
  - PMI: Manufacturing (Dec-22: 57.8) and Services (Dec-22: 58.5) PMI continue to be encouraging
  - Strong GST collections trend with more than ₹ 1.4 lakh crore for 10 months in a row; while Oct-22 witnessed 1.5 lakh crore of GST collection highest post April-22
- Elevated inflation continues to be a risk and weighs on the growth outlook
  - CPI inflation in December came at 12 month low of 5.7%
  - RBI in its recent MPC meet raised repo-rate by 35 bps to 6.25% and has cut GDP growth forecast for FY23 to 6.8% from 7.0%
- Broad-based economic reforms bode well for the economy.
  - Production Linked Incentive (PLI) extended to various sectors to promote high-end and large-scale domestic manufacturing (Solar PLI Tranche II with additional ₹ 19,500 crores outlay)
  - Govt. of India is investing ₹19,744 crores into the National Green Hydrogen Mission for developing green hydrogen production capacity of at least 5 MMT/annum

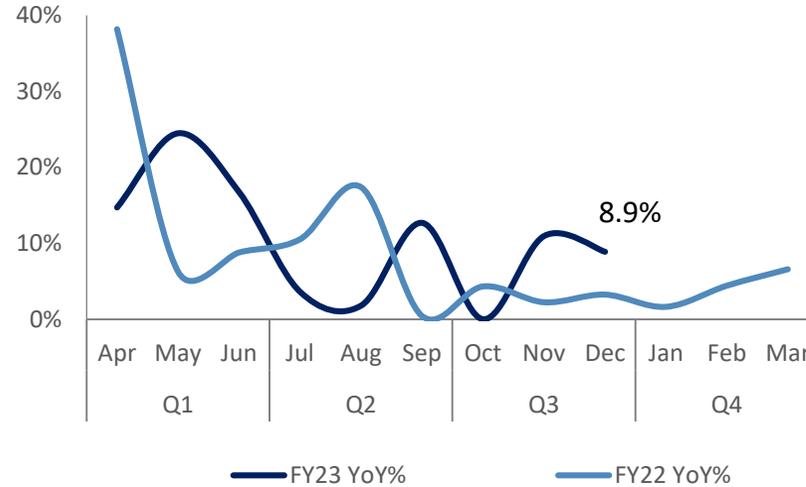
**RBI projects India's GDP growth at 6.8% for FY23**

# Power Demand grew 10% YoY in 9M FY23

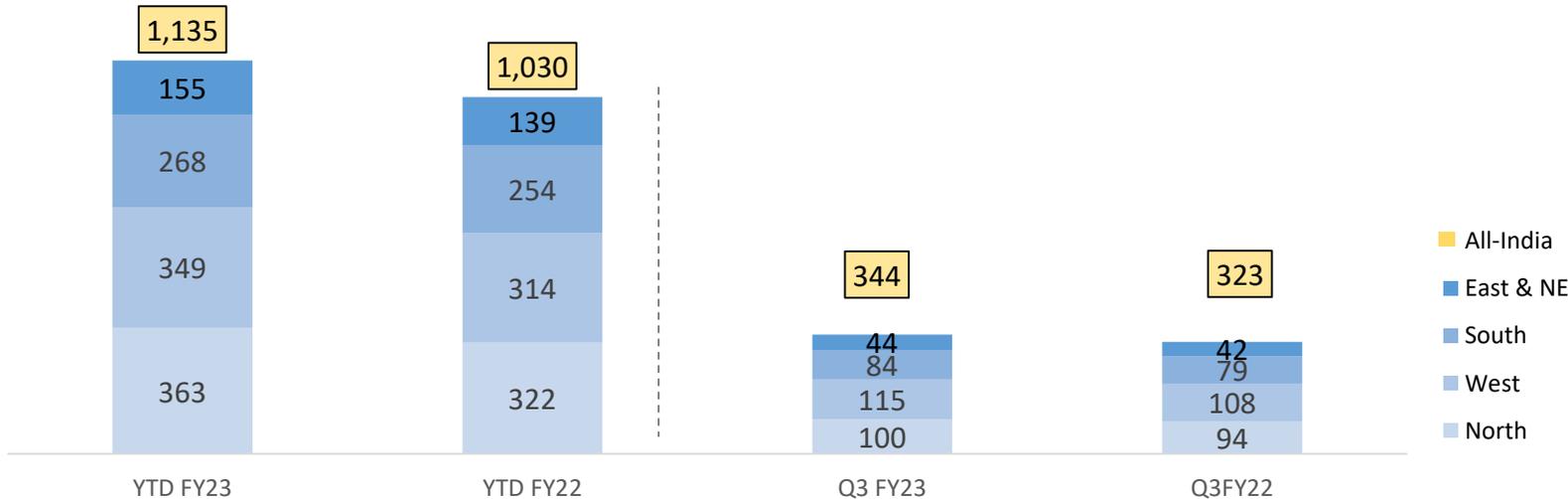
### Power Demand in BUs



### Power Demand Growth YoY



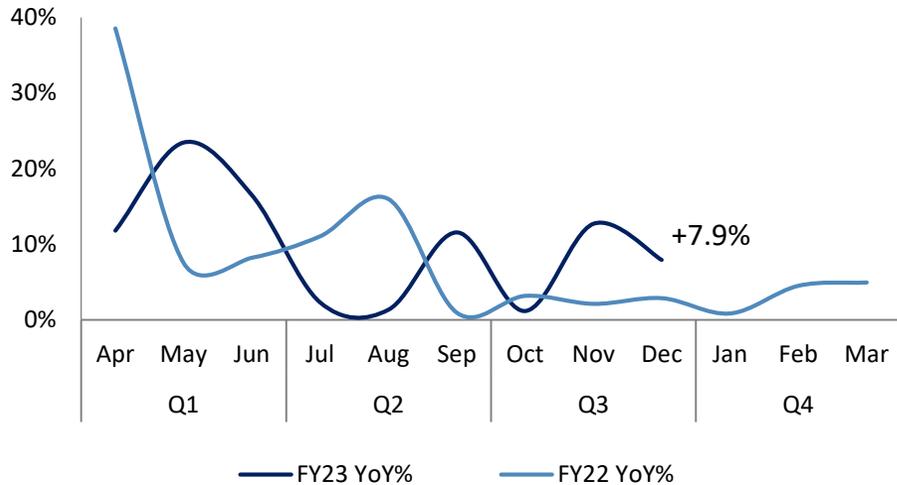
### Power Demand by Region in BU



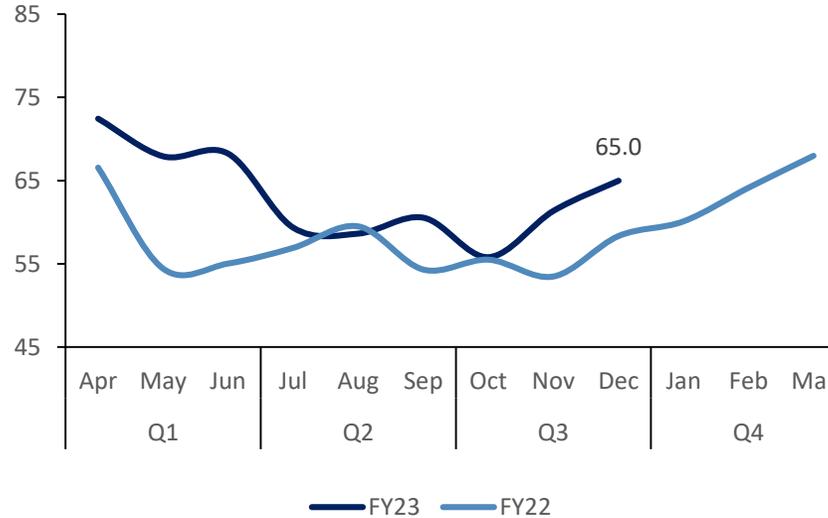
- The total demand recorded in 9M FY23 was 1,135 BUs up 10% YoY.
- On a quarterly basis India witnessed a demand of 344 BUs in Q3 FY23 vs 323 BUs in Q3 FY22 up 6.4% YoY.
- Total demand met (supply) for 9M FY23 was 1,129 BUs implying a shortfall of 6 BUs or 0.5% of the overall demand.
- The peak demand witnessed in Q3 FY23 was 206.2 GW in the month of December
- West Region had the largest share in the overall demand with 33% of the overall volumes in Q3 FY23.

# Overall generation increased by 10% YoY in 9M FY23

### Power Generation growth (%YoY)

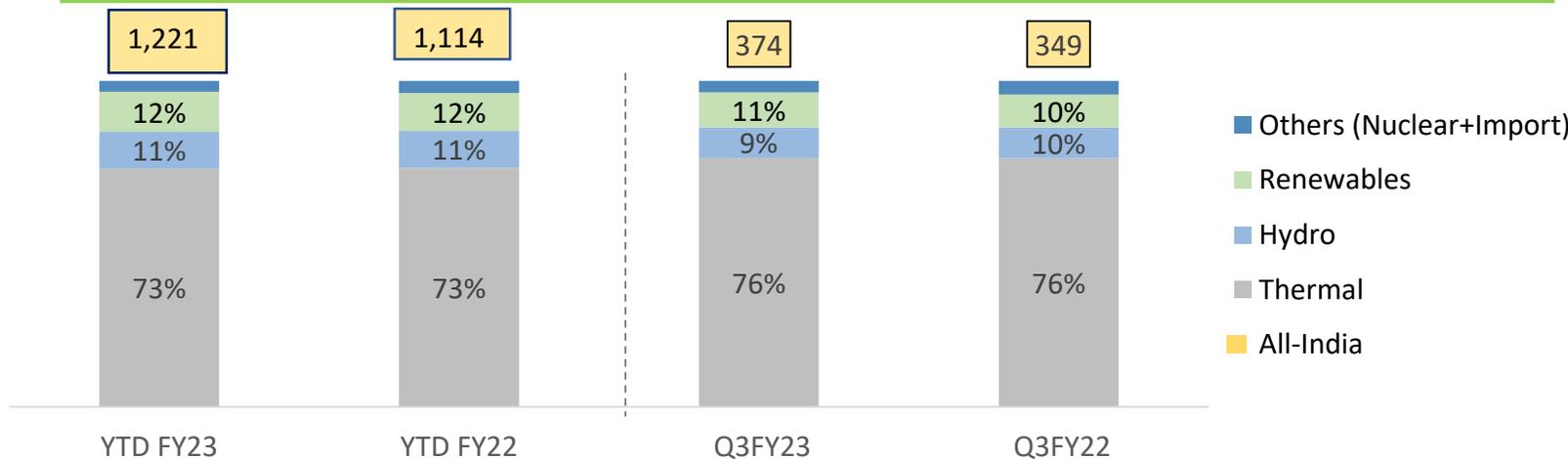


### Thermal PLFs



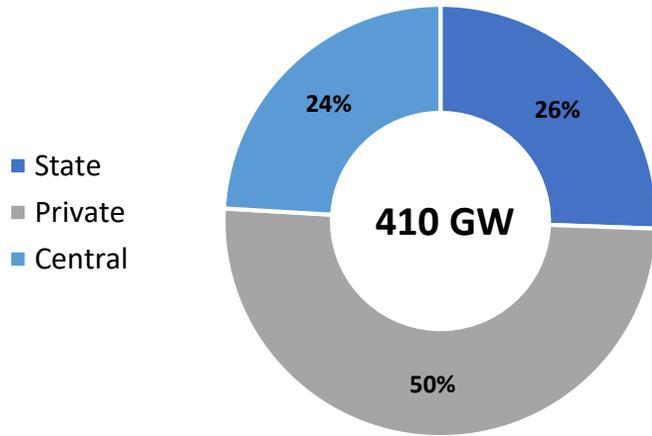
- In 9M FY23 the overall generation increased 10% YoY led by growth in renewable (excluding hydro) and thermal generation
- For 9M FY23 renewable generation increased by 16% YoY while thermal generation increased by 9% YoY
- In Q3 FY23 overall generation grew 7% YoY. The growth was driven by solar and thermal generation (42% and 7% YoY growth respectively). Hydro generation was up 5% whereas wind generation was up 1% YoY in Q3 FY 23
- Average Thermal PLFs improved YoY in the quarter to 60.7%

### Power Generation by Source

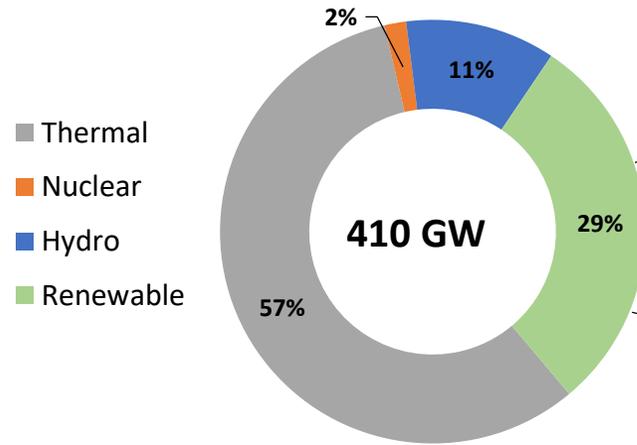


# India's installed capacity stands at 410 GW as on Dec-22

### Sector-wise Installed Capacity



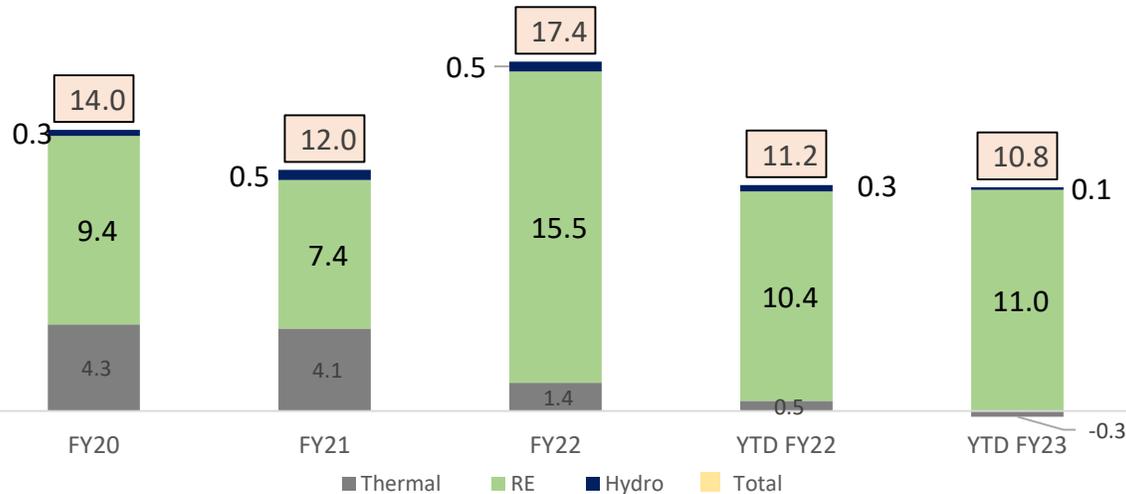
### Segment-wise Installed Capacity



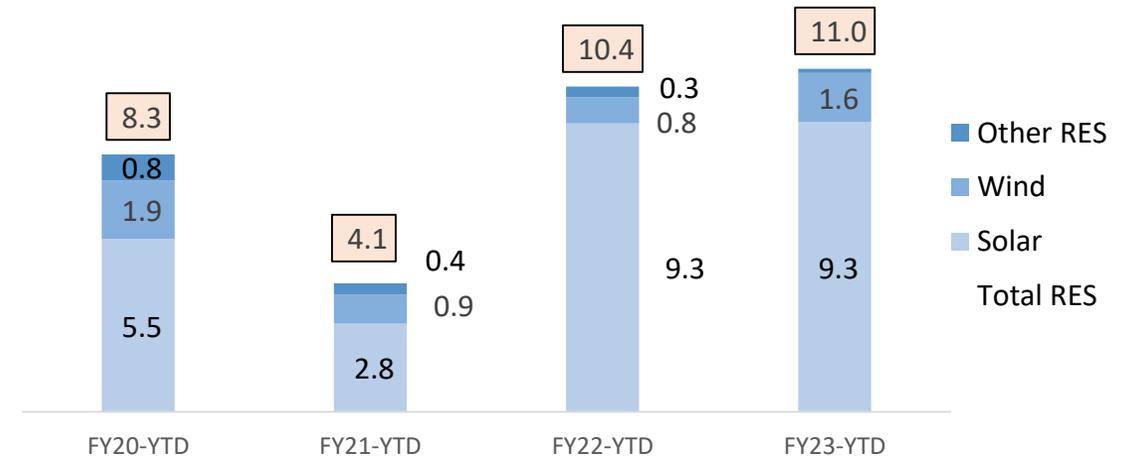
### Renewable Capacity Breakdown



### Overall segment wise net capacity additions (GW)

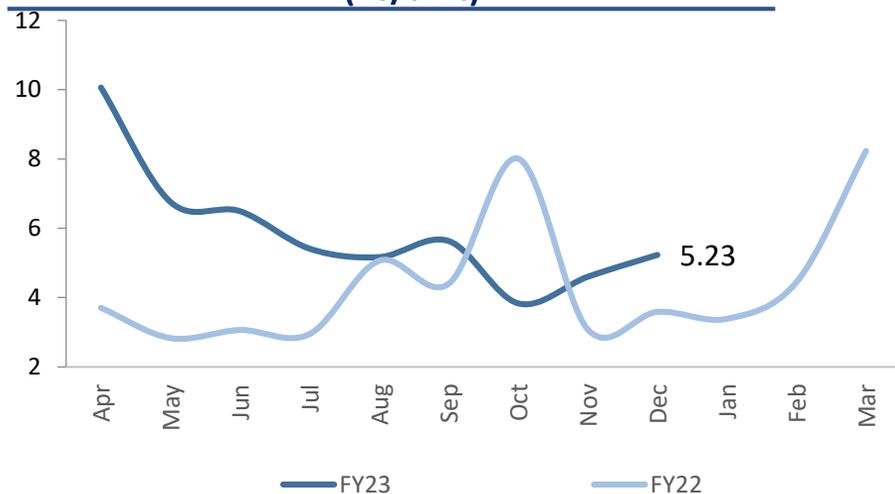


### Renewable Capacity Additions (excl. Hydro) GW

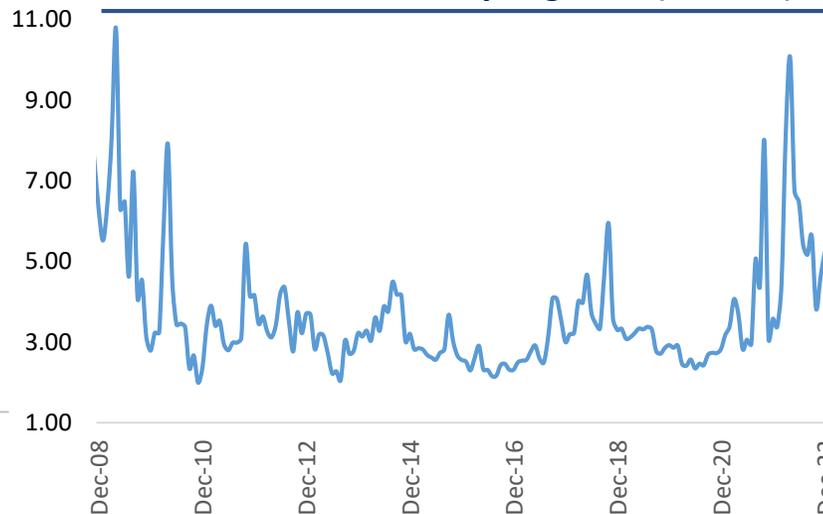


# Merchant Power – Day Ahead Market

**YoY Trend: Monthly Average Merchant Tariff (Rs/unit)**



**Linear Trend - Monthly Avg Price (Rs/kwh)**



**Cleared Volume DAM (MUs)**



**Cleared Volume Total Volume (MUs)**



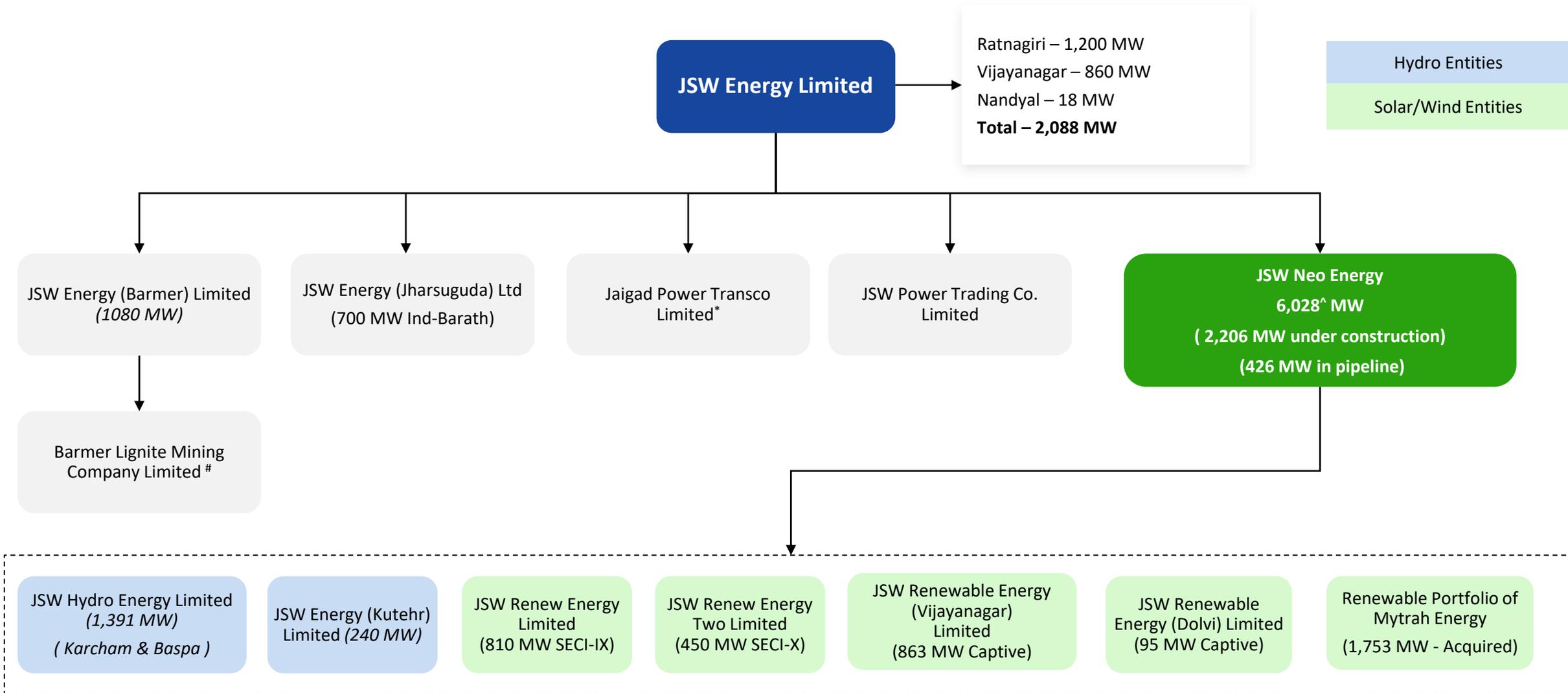
## Q3 FY23

- Day Ahead Market (DAM) prices were down 7% YoY as the average tariff recorded for the period was ₹ 4.55/KWh vs ₹4.89/KWh in the corresponding period
- The prices trended upwards consistently during the quarter with December average price at ₹5.23/unit
- The cleared volume in DAM was 14,413 MUs, down 14% YoY in the quarter and the total cleared volume were 21,836 MUs down 3%

# Appendix



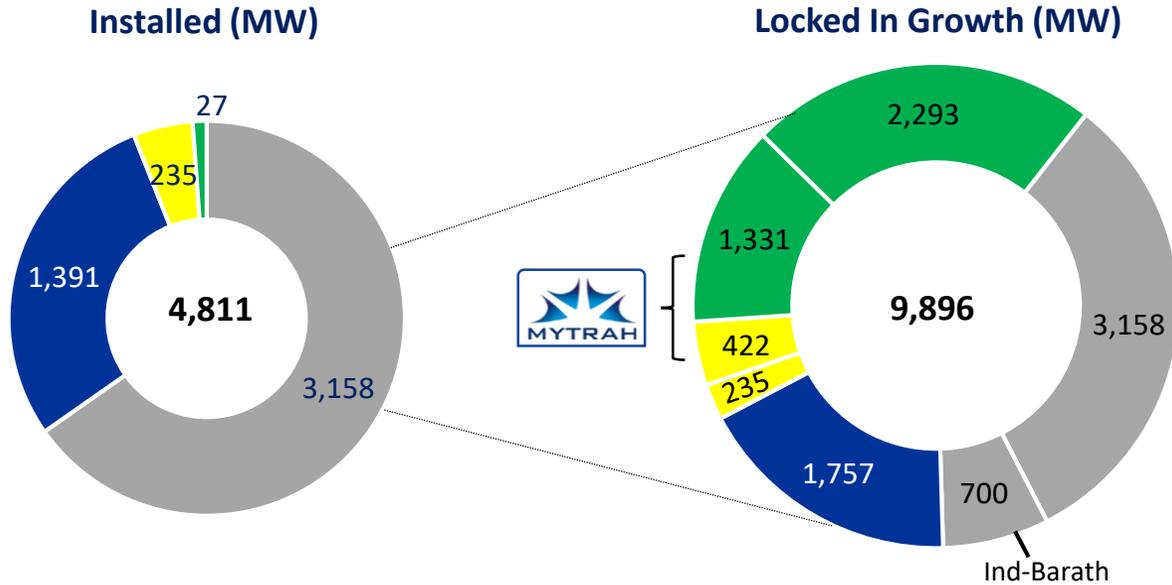
# Broad Corporate Structure : Post re-organisation



All subsidiaries shown are WOS except the following - \* JPTL is a 74:26 JV between JSWEL and Maharashtra State Electricity Transmission Company Limited (MSETCL) # BLMCL is a 51:49 JV between Rajasthan State Mines and Minerals Limited (RSMML) and JSWE(B)L, ^ includes in-pipeline projects of SECI XII 300 MW and Chhatru 126 MW HEP

# Asset Overview – 9.9 GW Locked-In

## Green portfolio driving capacity growth



Group Captive 28%

Group Captive 21%

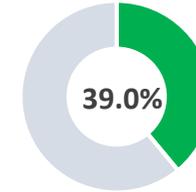
■ Hydro ■ Thermal ■ Wind ■ Solar

**Total locked-in capacity (9,896) MW**  
Renewable constitutes 61% of total locked-in capacity

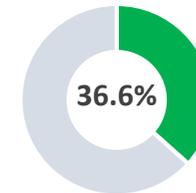
## Division of locked-in capacity (9,896) MW



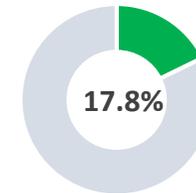
Thermal



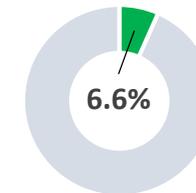
Wind



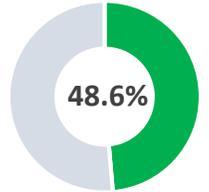
Hydro



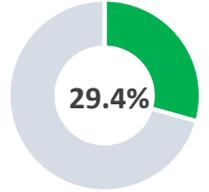
Solar



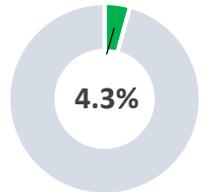
Installed



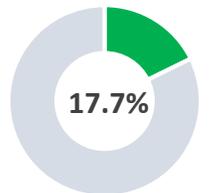
Under-construction



Pipeline



Under-acquisition



Corporate Structure

Projects

Acquisitions

Operational & Financial

# Update on Under Construction Projects (1/2)

## SECI-IX & X Wind, Tamil Nadu (1,260 MW)



**Blades and WTG erection followed by progressive commissioning (27MW commissioned)**

# Update on Under Construction Projects (2/2)

## Kutehr HEP, Himachal Pradesh (240MW)



Completed ~90% (19.0 km) tunneling work (up from ~84% in Q2) well ahead of timelines

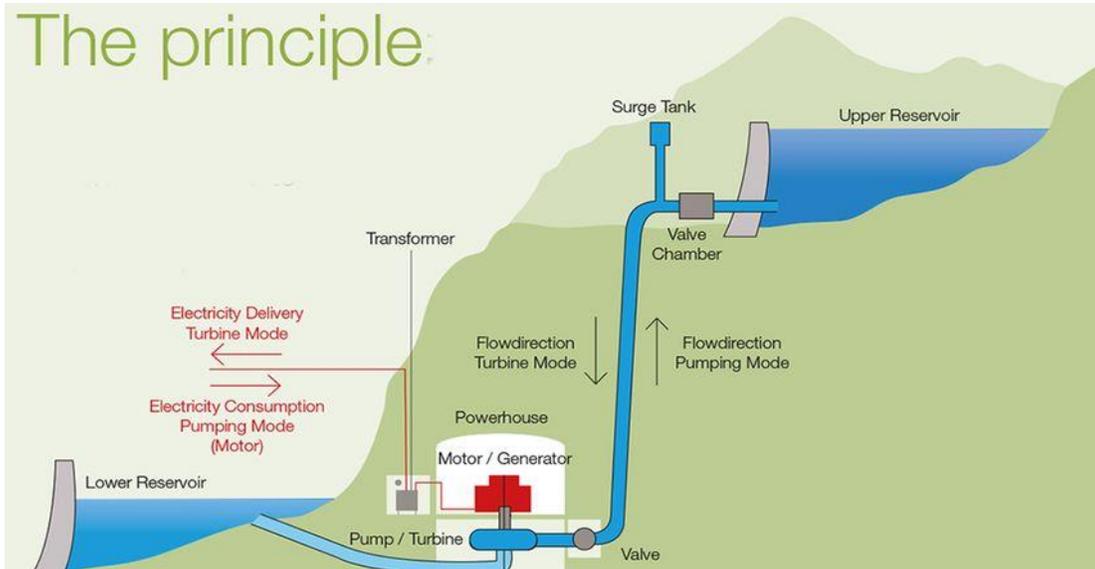
**Downstream Left Half Barrage**

**DC Chamber lining in progress**

**HRT concrete lining**

# Pipeline Project : Pumped Hydro Storage

## Overview of Pump Hydro Storage



## Benefits of Pumped Hydro Storage



An established, proven and cost-effective technology



Quick ramp up and better PLF



4-8 hours of storage



Balancing volatile renewable energy generation with demand



Supporting grid stability with attractive tariffs



Long asset life

## JSW Energy Secured Resources in Various States

State	MoU/LoI Dates	Capacity (GW)
Maharashtra	Sep-21 Sep-22	2.5
Telangana	Apr-22	1.5
Uttar Pradesh	Nov-22	1.2
Rajasthan	Dec-21	1.0
Chhattisgarh	Aug-22	1.0
Karnataka	Jun-22 Nov-22	0.4
Resources Secured		7.6
Target (by 2030)		10.0

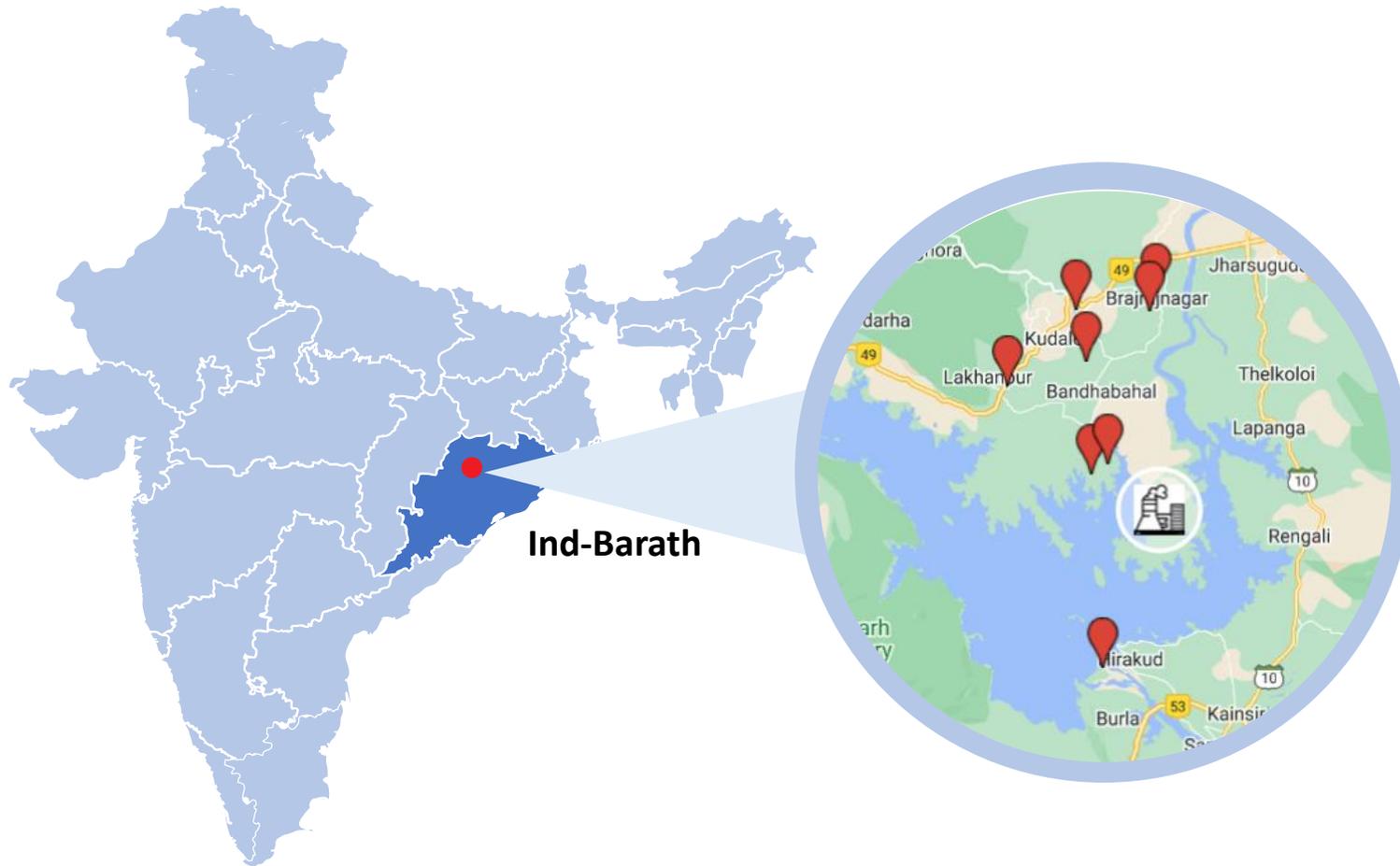
- ✓ **Expected Timeline:**
  - Project Clearances : 3 Years
  - Project Construction: 3 Years
- ✓ First project will be a captive PSP at Vijayanagar (Karnataka), construction expected to commence in CY23

Corporate Structure

**Projects**

Acquisitions

Operational & Financial



## Ind-Barath: Asset Overview

- **Location:** Jharsuguda, Odisha
- **Configuration:** 2 x 350 MW | Thermal Power Plant
- **Technology:** Sub-critical TPP
- **Fuel Source:** Domestic coal
- Transaction completed in Dec-22

## Acquisition Rationale

- Attractive purchase consideration of ₹1,048 crore; further capex envisaged
- Located near the coal rich belt of IB Valley of Mahanadi Coalfields
- Ease of water access, from Hirakud Dam
- Optionality of varied offtake arrangements
- Accessibility: Rail: (Belpahar), Airport: (Raipur) and Port: (Paradip)

Maps for illustrative purposes, showing project locations

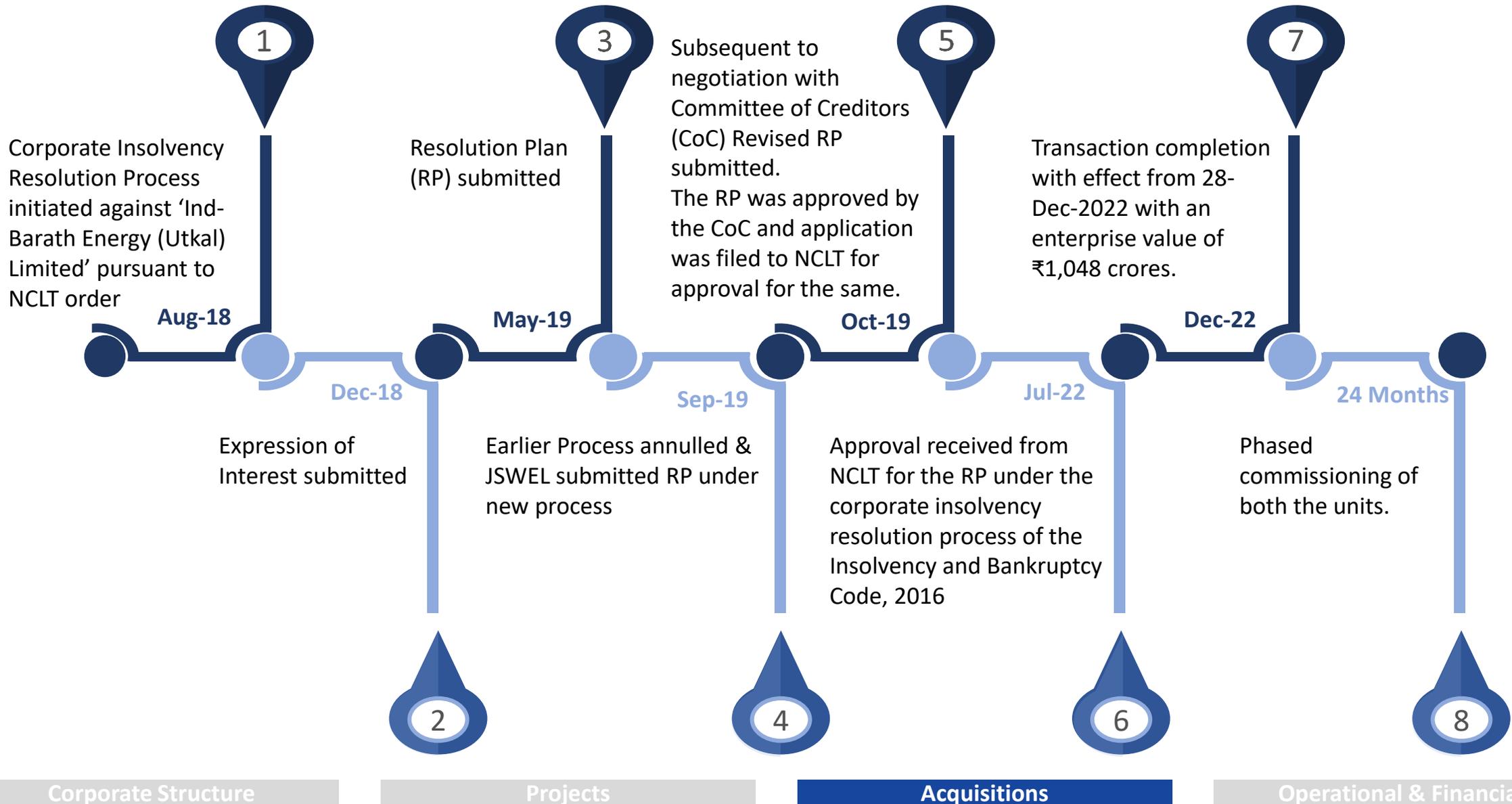
Corporate Structure

Projects

Acquisitions

Operational & Financial

# Ind-Barath: Timeline of Acquisition and Way Forward (2/2)



## Value Accretive Deal

- ✓ Acquired portfolio consists of 422 MW solar and 1,331 MW wind
- ✓ The assets were acquired at an EV of approximately ₹ 10,530 Cr after adjusting for net current assets implying a EV/EBITDA multiple of 6.4x on a normalized EBITDA of ₹ 1,650 Cr

## Progress Update on Acquisition

- ✓ Received CCI approval for acquisition
- ✓ Progressing towards completion of other conditions precedent and expect consummation of the deal in 4QFY23.

Corporate Structure

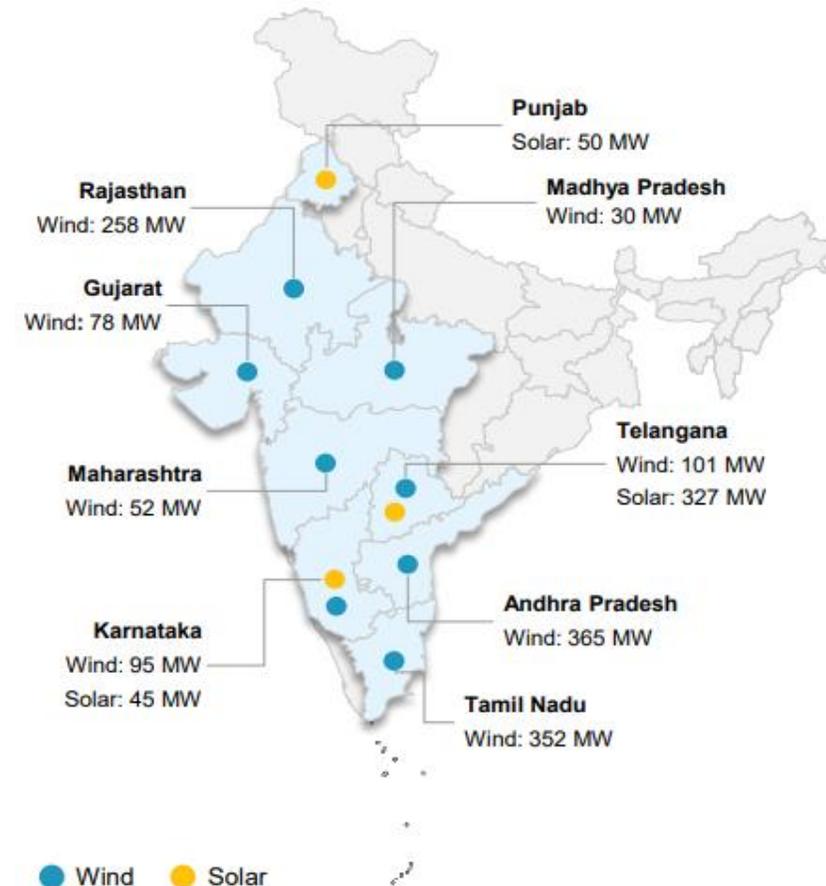
Projects

Acquisitions

Operational & Financial

## Mytrah RE Assets: Geographically diverse

**Total: 1,753 MW**



# Entity-wise Financial Results

Entity-wise Revenue from Operations				
Particulars in ₹ crore	Q3 FY23	Q3 FY22	9M FY23	9M FY22
Standalone	955	1,002	4,093	2,562
JSW Energy (Barmer)	994	625	2,277	1,927
JSW Hydro Energy	246	222	1,142	1,027
JPTL	17	18	52	53
<b>Consolidated*</b>	<b>2,248</b>	<b>1,905</b>	<b>7,662</b>	<b>5,726</b>

Entity-wise EBITDA				
Particulars in ₹ crore	Q3 FY23	Q3 FY22	9M FY23	9M FY22
Standalone	250	394	1,096	974
JSW Energy (Barmer)	220	239	664	701
JSW Hydro Energy	209	208	1,036	975
JPTL	19	17	52	51
<b>Consolidated*</b>	<b>727</b>	<b>882</b>	<b>2,936</b>	<b>2,792</b>

# Operational Performance – Net Generation

Location		Net Generation						
		Capacity	Q3	Q3	Change YoY	9M	9M	Change YoY
		%	FY23	FY22	%	FY23	FY22	%
Ratnagiri (1,200 MW)	LT	89%	<b>1,110</b>	1,133	-2%	<b>3,617</b>	3,980	-9%
	Total	100%	<b>1,133</b>	1,235	-8%	<b>3,961</b>	4,160	-5%
Barmer (1,080 MW)	LT	100%	<b>1,609</b>	1,638	-2%	<b>4,814</b>	4,907	-2%
Vijayanagar (860 MW)	LT	36%	<b>652</b>	587	11%	<b>1818</b>	1712	6%
	Total	100%	<b>716</b>	800	-10%	<b>2552</b>	2183	17%
Nandyal (18 MW)	LT	100%	<b>1</b>	26	-98%	<b>10</b>	81	-87%
<b>Total Thermal (3,158 MW)</b>	LT	79%	<b>3,372</b>	3,384	0%	<b>10,260</b>	10,680	-4%
	Total	100%	<b>3,458</b>	3,700	-7%	<b>11,337</b>	11,331	0%
Hydro (1,345 MW)*	LT	97%	<b>712</b>	786	-9%	<b>5,107</b>	5,027	2%
	Total	100%	<b>721</b>	793	-9%	<b>5,192</b>	5,082	2%
Solar (234 MW)**	LT	100%	<b>89</b>	3	NM	<b>264</b>	11	NM
Wind (27 MW)***	Total	100%	<b>6</b>	NA	NA	<b>6</b>	NA	NA
<b>TOTAL</b>	LT	85%	<b>4,179</b>	4,173	0%	<b>15,637</b>	15,717	-1%
	Total	100%	<b>4,274</b>	4,496	-5%	<b>16,799</b>	16,423	2%

\*Includes free power to HPSEB \*\* Solar capacity at Vijayanagar commencement since Apr-22, thus not included in Q3 FY22 \*\*\*SECI X Wind Capacity where part CoD is received in Dec-22 , thus not included in Q3 FY22;  
 LT : Long Term. NM : Not meaningful Figures rounded off to nearest units digit

# Operational Performance – PLF

Location		PLF				
		Capacity	Q3 FY23	Q3 FY22	9M FY23	9M FY22
		%	%	%	%	%
Ratnagiri (1,200 MW)	LT	89%	<b>51 (*98)</b>	52 (*70)	<b>56 (*83)</b>	62 (*81)
	Total	100%	<b>47 (*88)</b>	51 (*67)	<b>55 (*79)</b>	57 (*75)
Barmer (1,080 MW)	LT	100%	<b>75 (*77)</b>	75 (*81)	<b>75 (*78)</b>	76 (*81)
Vijayanagar (860 MW)	LT	36%	<b>104 (*104)</b>	96 (*96)	<b>98 (*98)</b>	94 (*94)
	Total	100%	<b>41 (*41)</b>	46 (*46)	<b>49 (*49)</b>	42 (*42)
Nandyal (18 MW)	LT	100%	<b>2 (*97)</b>	74 (*100)	<b>10 (*97)</b>	76 (*99)
<b>Total Thermal (3,158 MW)</b>	LT	79%	<b>68 (*90)</b>	68 (*78)	<b>69 (*83)</b>	72 (*83)
	Total	100%	<b>55 (*72)</b>	58 (*66)	<b>60 (*71)</b>	60 (*68)
Hydro (1,345 MW)	LT	97%	<b>25</b>	27	<b>60</b>	58
	Total	100%	<b>24</b>	27	<b>59</b>	58
Solar (234 MW)	LT	100%	<b>18</b>	17	<b>19</b>	18
Wind (27 MW)	Total	100%	<b>30</b>	NA	<b>30</b>	NA

LT : Long Term; ST: Short Term \* denotes Deemed PLF

# Cash Returns on Adjusted Net Worth

₹ crore (Unless mentioned otherwise)

Quarter ended	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22
<b>Reported PAT</b>	<b>107</b>	<b>201</b>	<b>339</b>	<b>324</b>	<b>864</b>	<b>560</b>	<b>466</b>	<b>180</b>
Add: Depreciation	294	288	284	281	277	289	294	295
Add/(less): Deferred Taxes	27	21	32	26	(7)	84	42	14
(Less): Dividend Received	-	-	(46)	-	-	-	(122)	-
Add/(less): One-offs*	(83)	-	-	-	(492)	(120)	0	-
<b>Cash PAT</b>	<b>346</b>	<b>510</b>	<b>610</b>	<b>631</b>	<b>643</b>	<b>813</b>	<b>681</b>	<b>489</b>
<b>Cash PAT (TTM)</b>	<b>1,947</b>	<b>1,940</b>	<b>1,899</b>	<b>2,097</b>	<b>2,395</b>	<b>2,697</b>	<b>2,767</b>	<b>2,625</b>
<b>Adjusted Net Worth**</b>	<b>11,473</b>	<b>11,529</b>	<b>11,475</b>	<b>11,830</b>	<b>12,688</b>	<b>12,952</b>	<b>13,491</b>	<b>13,446</b>
<b>Cash Returns on Net Worth (%)</b>	<b>17%</b>	<b>17%</b>	<b>17%</b>	<b>18%</b>	<b>19%</b>	<b>21%</b>	<b>21%</b>	<b>20%</b>

**Strong cash returns of >18% translates to yearly cash profits of ~₹2,300 crores**

\*Refer note 4 of [Q4FY21](#) release and note 5 of [Q4FY22](#) release for Mar-21 and Mar-22 one-offs, respectively. Jun-22: Exceptional items ₹ 120 crore represents reversal of loss allowance made in earlier years on loan given to a party.

\*\* Adjustment in net worth by excluding the value of shares of JSW Steel