



# Delivering Promises Realising True Potential

Corporate Presentation | January 2024

# Forward Looking and Cautionary Statement (1/2)



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# JSW Group Overview



Amongst India's leading  
Conglomerates with a  
turnover of US\$23 Bn<sup>1</sup>



## JSW Energy

- Power producer with 9.8 GW of generation portfolio by CY24,
- Targeting 20GW generation + 40GWh of Storage by FY30
- Market Cap: ~US\$ 9.8 Bn



## Infrastructure

- Second largest commercial port operator (as per Crisil Report) with 170 mtpa capacity
- Operates environmental-friendly seaports & terminals
- Equity listing in Oct 2023, Market Cap: ~US\$ 5.6 Bn



## Paints

- India's new age Paints company offering a path-breaking Any Colour at One Price
- State-of-the-art Facilities in Maharashtra and Karnataka



## Sports

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



## Steel

- India's largest steel producer in terms of installed capacity
- Capacity of 29.7 mtpa, growing to 38.5 mtpa by FY25
- Targeting 50 mtpa capacity by FY31
- Market Cap: ~US\$ 24.0 Bn



## Cement

- Current capacity of 18.6mtpa, with a medium term target of 25mtpa
- Product range includes PSC, GGBS, Concrete & Construction Chemicals



## Ventures

- Early-stage, tech-focused, VC fund
- Portfolio: Purple, LimeTray, Homelane, CureSkin and ZvloV



## Foundation

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



# JSW Energy : Transitioning towards green energy

## Mission

Providing Reliable, Affordable and Sustainable power

## Vision

To be a leading integrated power company with presence across value chain

**FY2030** To become a 20 GW company and 40GWh Energy Storage

**FY2050** To become carbon neutral by 2050

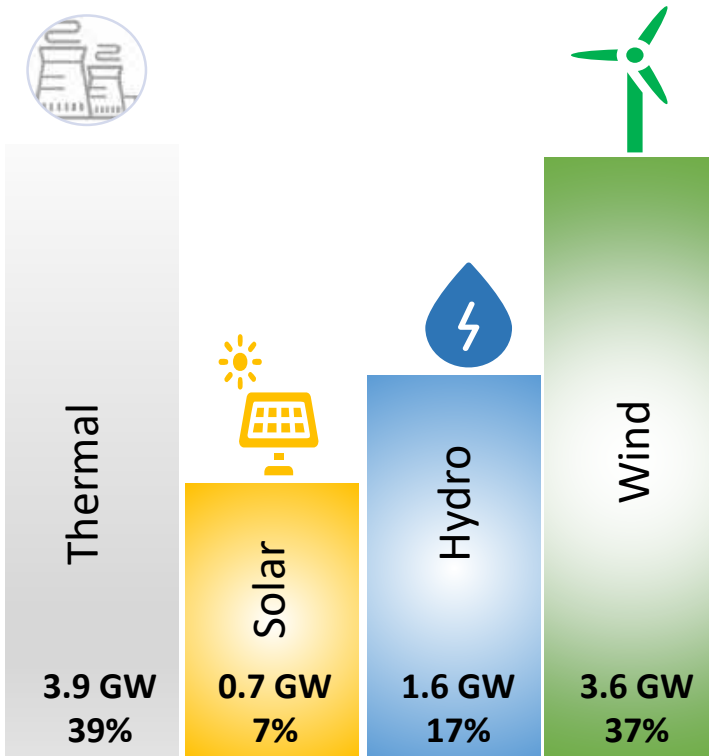
# JSW Energy – Presence across the value chain

Well placed to achieve 10 GW of generation capacity ahead of stated timeline of 2025 with foray into New Age Businesses

## Power Generation

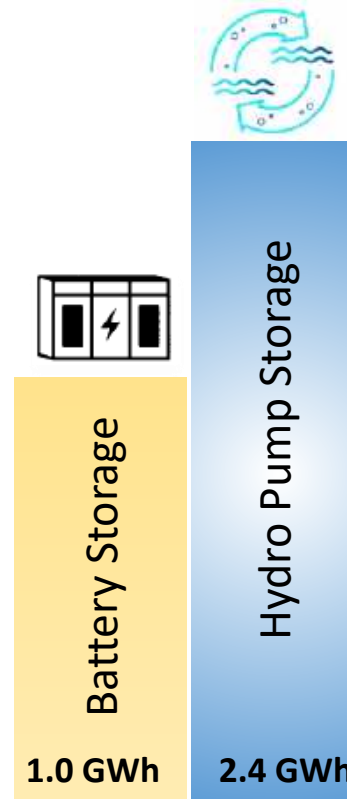
9.8 GW Installed Capacity by CY24

RE 5.9 GW  
Thermal 3.9 GW



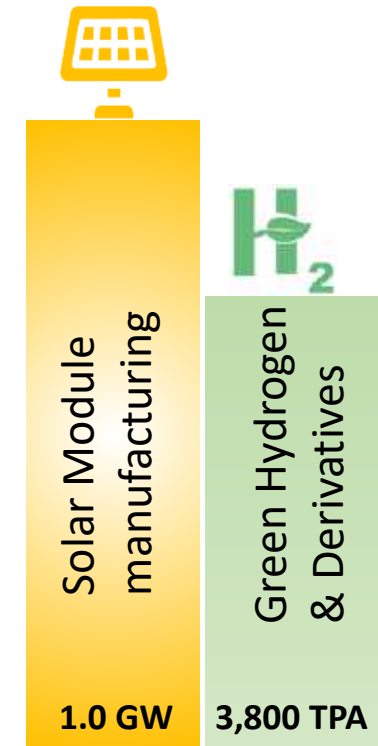
## Energy Storage

3.4 GWh of locked in capacity



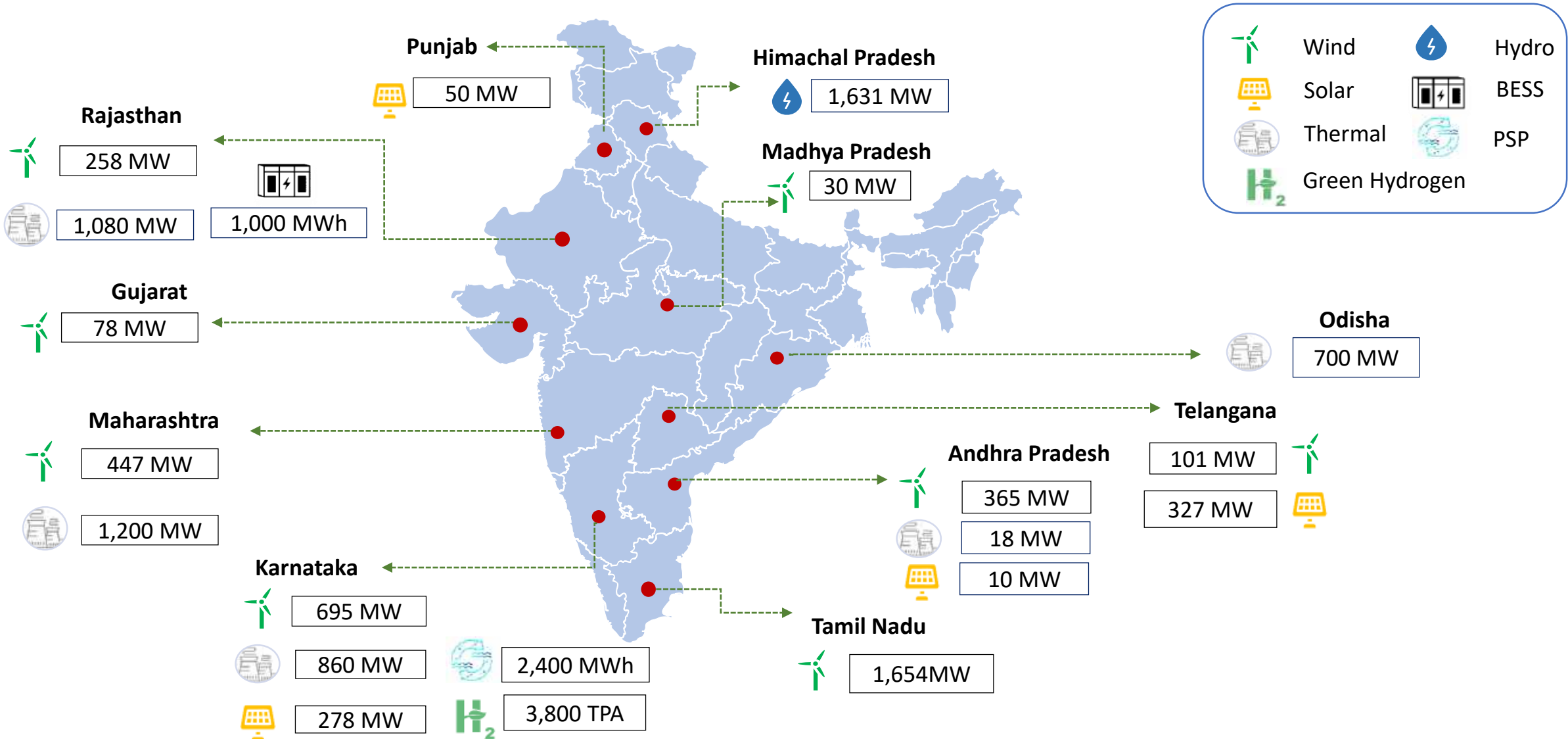
## Energy Products & Services

Solar Module & Green H2



# Pan India Footprint of Diverse Asset Base by CY24

## Operational Capacity by CY 24 (9,792 MW)



• Map of India representation – scaling may not be accurate

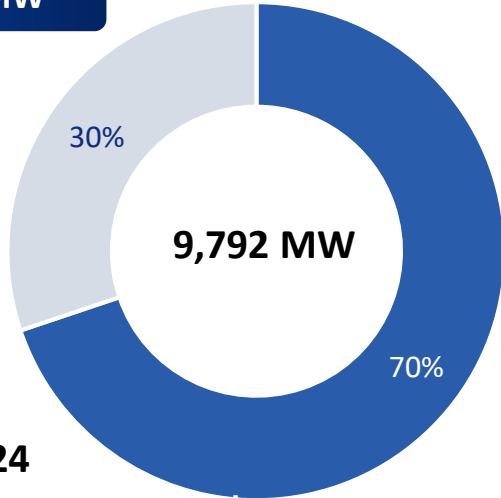
# Well Diversified Portfolio – Focused on Maximising Cash Returns

## Capacity Breakdown

**Generation 9,792 MW**

**Under-construction  
2,603 MW**

Wind 2,013 MW  
Thermal 350 MW\*  
Hydro 240 MW



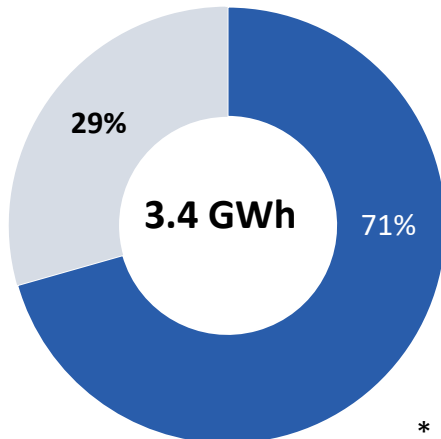
**Installed 7,189 MW**

Thermal 3,508 MW\*  
Wind 1,615 MW  
Hydro 1,391 MW  
Solar 675 MW

**Commissioning by CY24**

**Storage 3.4 GWh locked in**

**BESS  
1.0 GWh**

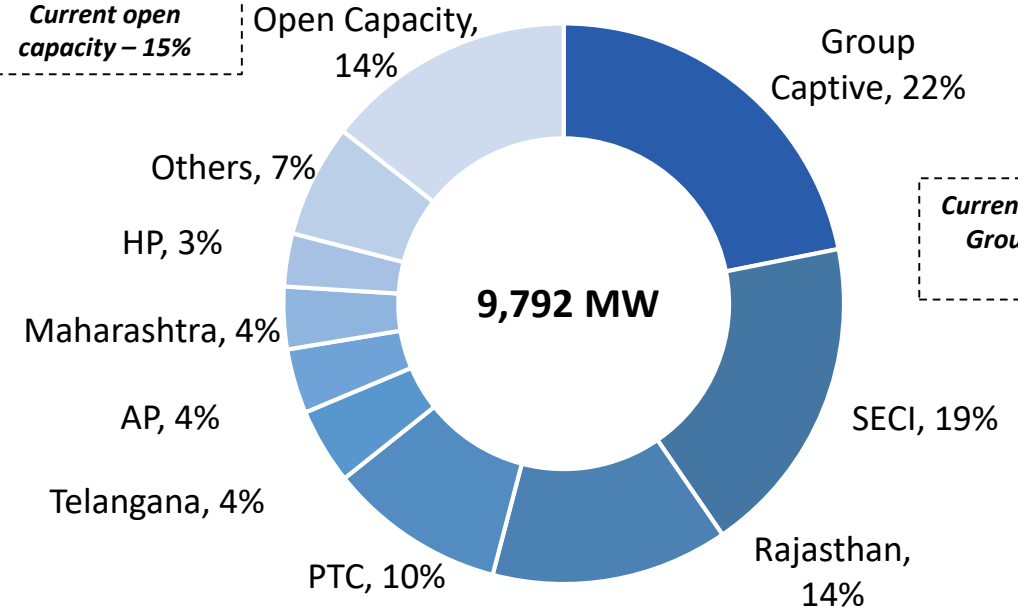


**Hydro PSP  
2.4 GWh**

\* Ind-Barath Unit-1 (350 MW) was commissioned post the quarter ended Q3 FY24

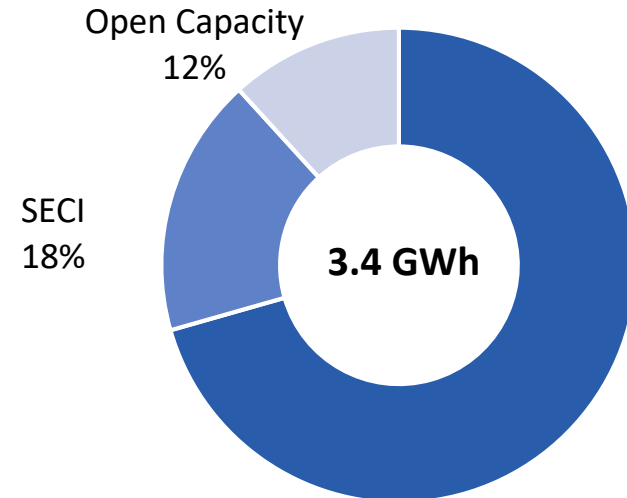
## Diversified Offtakers

*Current open capacity – 15%*



*Current Exposure to Group Captive - 20%*

**Open Capacity  
12%**



**PCKL  
70%**

# Agenda

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**Safety & Sustainability**

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**Healthy Operations and Financials**

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**Why JSW Energy ?**

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**JSW NEO – at a Glance**

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**Appendix**

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# Safety & Sustainability

**JSW SKILLS**  
**SCHOOL**  
BHADRESH  
AN INITIATIVE OF JSW FOUNDATION



# 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>			
<p>Operational Health &amp; Safety</p>	<p>Resources</p>	<p>Social Sustainability</p>	<p>Local Considerations</p>	<p>Indigenous People</p>	<p>Human Rights</p>
<p>Supply Chain Sustainability</p>	<p>Employee Wellbeing</p>	<p>Air Emissions</p>	<p>Business Ethics</p>	<p>Cultural Heritage</p>	<p>Energy</p>

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. Sharad Mahendra

## ESG Ratings – best amongst peers

CDP\* : A- (Leadership Level)

Sustainalytics: 23.9 (Medium Risk)

S & P Global ( DJSI ) : 71/100

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



FY19



FY20



FY21



FY22



FY23

# 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>0.215 *</b>	60%	<ul style="list-style-type: none"> <li>TCFD – Identified associated short term , medium term and Long term risks</li> <li>Supply Chain Sustainability – development of Digital Platform is in progress for value chain partners.</li> <li>Increased share of renewable energy for decarbonization – Total capacity added till Q3 FY24 – 3,681 MW</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 – Ash Management , recycling of waste water , handling hazardous waste through authorized recycler.</li> <li>Utilisation of low ash coal in Ratnagiri and Vijayanagar</li> <li>Re-utilisation of pond ash as well as Bottom ash in Boiler</li> <li>45000 MT Capacity Ash Silo constructed in Ratnagiti to export the Fly Ash through sea route to the prospective buyers in the International Markets.</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)	0.16	<b>0.053</b>	67%	<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>	1.78	<b>0.683</b>	61%	
	<ul style="list-style-type: none"> <li>SO<sub>x</sub></li> </ul>	1.01	<b>0.373</b>	63%	
	<ul style="list-style-type: none"> <li>NO<sub>x</sub></li> </ul>				
<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>Implementation of Biodiversity Assessment plan at our operating plants in a phasewise manner to achieve No Net Loss of Biodiversity by 2030.</li> <li>Increased green cover across operations</li> <li>Implementation of Biodiversity Management plan at Barmer Plant .</li> </ul>

# Sustainability: Q3 FY24 Performance

## Key Highlights



### Climate Change

- Increased share of renewable energy for deep decarbonisation
- Wind Projects – Tuticorin – generation started and commissioned 232.2 MW till Q3 FY 24.
- Continuous focus on process improvements to reduce GHG emission



### Water Security

- Maintained zero liquid discharge across operations
- Optimizing utilization of rain water harvesting system. 44,866 m3 water utilized by Ratnagiri Plant by this method
- Reuse of treated effluent of Sewage Treatment Plant for horticulture



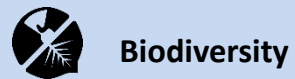
### Waste

- Reutilising pond ash as well as bottom ash in Boiler.
- Continue 100% Ash utilization initiatives at all plants through tie-ups with cement factories & similar businesses
- Over 19,200 MT Fly ash exported by Ratnagiri Plant



### Air Emissions

- Ensuring ESP (Electrostatic Precipitator) Fields availability
- Process efficiency improvements being done in all plant locations
- Lime Dozing system availability and parameters optimization at Barmer to reduced air emissions

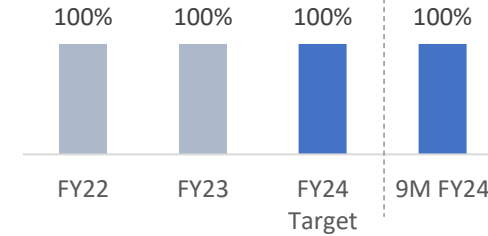


### Biodiversity

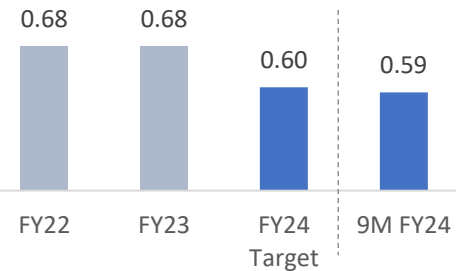
- In Q 3 FY24 2,271 saplings of various native species planted around the operational boundaries of Plants. Mango plantation of 7,800 trees out of 10,000 planned completed at Ratnagiri Plant.
- Biodiversity Assessment – Phase 2 is in process for Ratnagiri Plant

## Performance

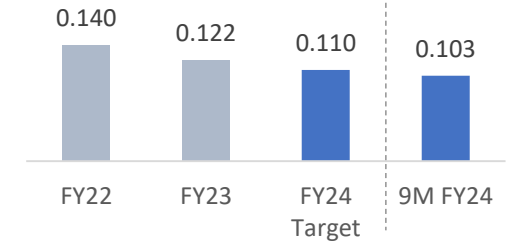
### Ash Utilisation (%)



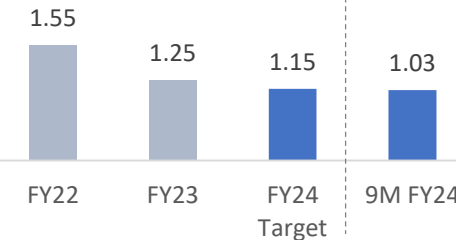
### CO2 intensity (tCO2e/MWh)



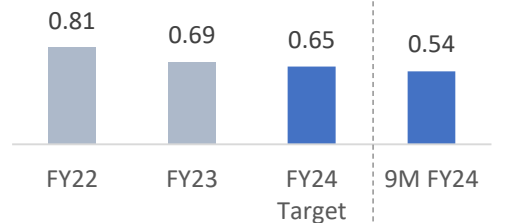
### PM Emissions (kg/MWh)



### SOx Emissions (kg/MWh)



### NOx Emissions (kg/MWh)



# Awards and Recognition



**JSW Energy Limited, Vijayanagar received CEE Best Energy Efficient Award for CPP-4 unit in Dec 23**



**Received Green Maple Foundation Wellness at work Diamond Award in Nov 23**



**Vijayanagar Plant Received British Safety Council Sword of Honor at London in Nov 23**



**“Platinum Award in the Power generation sector for outstanding achievement in Occupational Health and safety” Organized by Sustainability Development Foundation**



**Ratnagiri Plant received 23rd Greentech Environment award-2023 for Environment Excellence at Sonmarg- J & K .**



**“Horticulture Development Award” Organized by Green Maple Foundation**

# Strong Board Oversight and Leadership



**Mr. Sajjan Jindal**  
Chairman & Managing Director



**Mr. Parth Jindal**  
Non-Executive, Non-Independent Director



**Mr. Sharad Mahendra**  
Joint Managing Director & CEO



**Mr. Pritesh Vinay**  
Director (Finance)



**Mr. Ashok Ramachandran**  
Whole time Director & COO



**Ms. Rupa Devi Singh**  
Independent Director



**Mr. Sunil Goyal**  
Independent Director



**Mr. Munesh Khanna**  
Independent Director



**Mr. Rajeev Sharma**  
Independent Director



**Mr. Desh Deepak Verma**  
Independent Director



**Mr. Rajiv Chaudhri**  
Independent Director

- Audit Committee
- Compensation & nomination & remuneration Committee
- Risk management Committee
- Stakeholder's relationship Committee
- Corporate social responsibility Committee
- Sustainability Committee
- Permanent invitees to Sustainability Committee

- ✓ Majority Independent Board: 6/11 Directors are Independent
- ✓ Fully Independent Audit and Compensation and Remuneration Committees

## Our Core Principles



Accountability



Social Responsibility



Transparency



Environment



Integrity



Regulatory Compliance

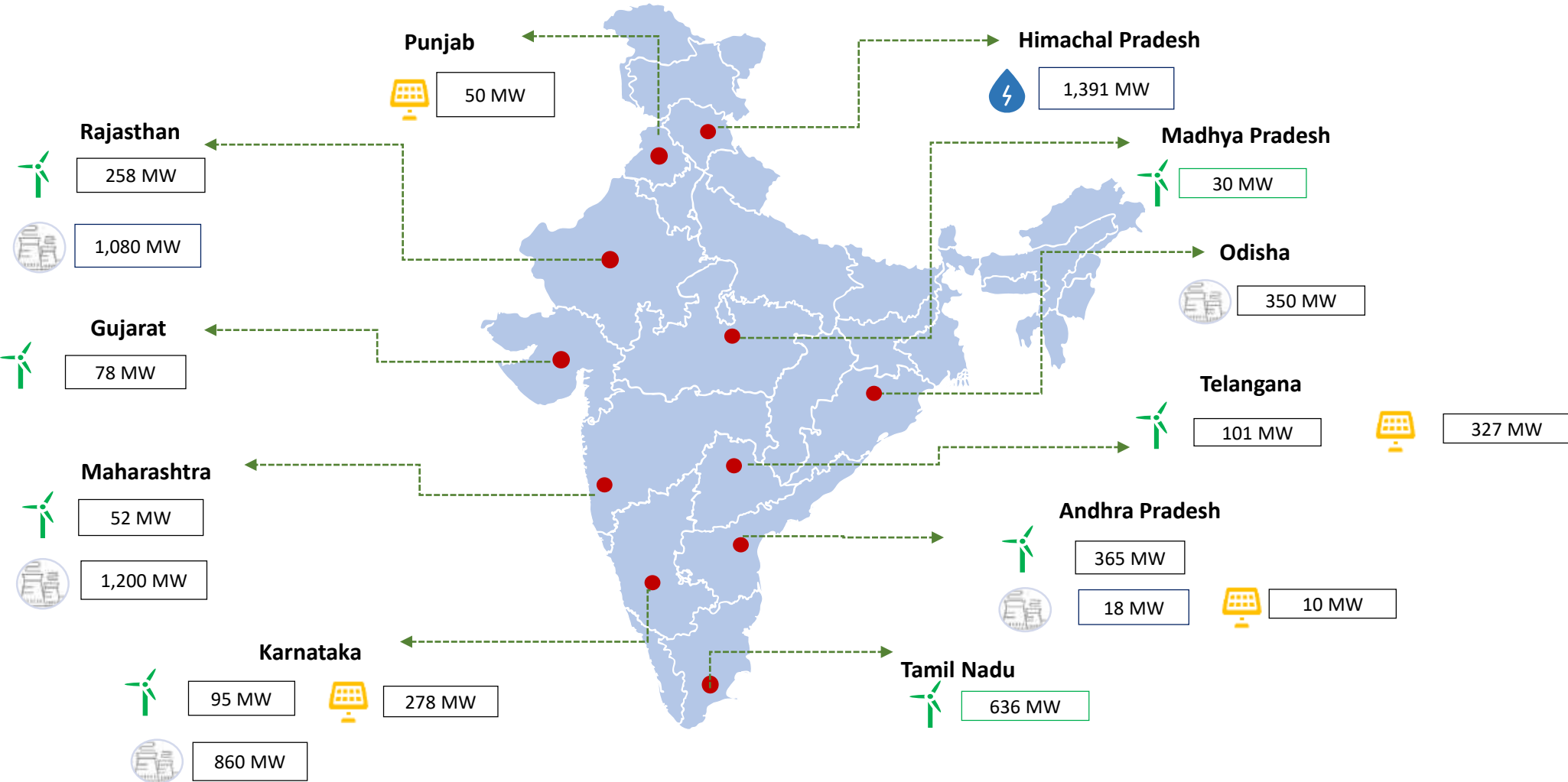
# Healthy Operations and Financials



Sholtu Hydro Power Plant - Turbine

# Operating Locations: Pan India presence as of Jan-24

Current Operational Capacity (7,189 MW)



**Operating Plants across 11 states**

10 MW Rooftop distributed across various sites

Map of India representation – scaling may not be accurate

# Healthy Operations and Financials

**85%**

Capacity under LT PPA<sup>1</sup>

**~90%**

EBITDA contribution from LT

**~22BUs**

Net Generation

**₹ 3,138Cr**

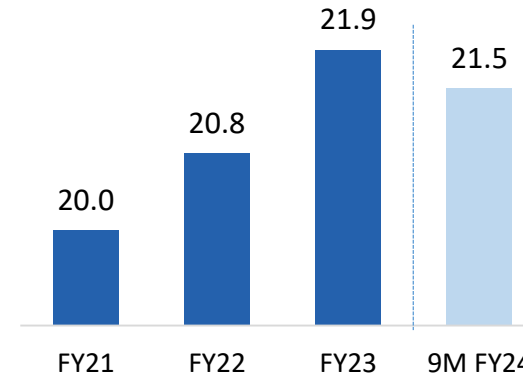
Cash PAT<sup>2</sup>

Figures are for FY23

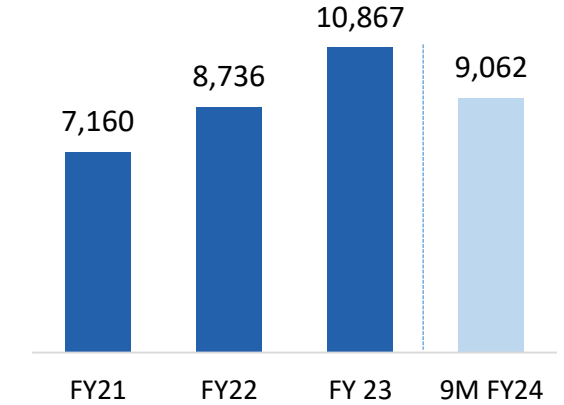
- Steady operations and robust financial: Track record of strong yearly cash profits of ~₹3,138 Crores.
- High LT PPA tie-up rendering high cash flow visibility
  - Almost all LT PPA under two-part tariff (imported/domestic fuel cost/forex pass through)
  - Remaining Avg. Life of PPA: ~18 years
  - Remaining Avg. Life of Assets: ~24 years
- Diversified off-takers
  - All plants placed favorably in Merit Order Despatch
  - Hydro projects under 'must-run' status
  - Trade receivables (excl. Acquired RE Portfolio) at ₹ 1,857 Cr equaling to 69 receivable days as on Dec'31, 2023

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

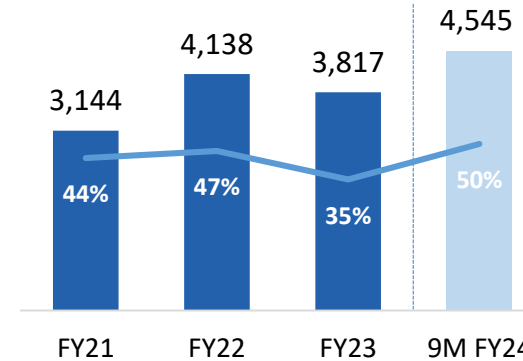
**Net Generation (BUs)**



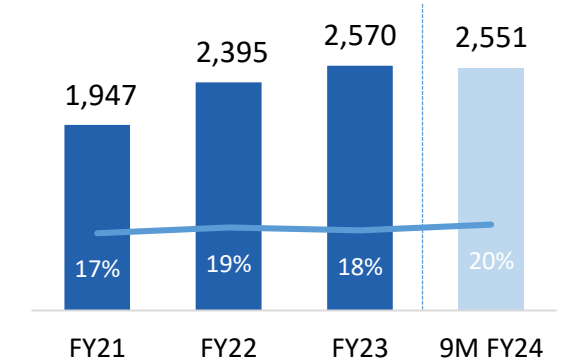
**Total Income<sup>3</sup> (₹ Crore)**



**EBITDA & EBITDA Margin (₹ Crore)**



**Cash PAT<sup>2</sup> (₹ Crore) and Return on Adj.Net Worth**



# Robust balance sheet to support renewable-led growth

**4.6x**

Net Debt/EBITDA

**1.3x**

Net Debt/Equity

**8.58%**

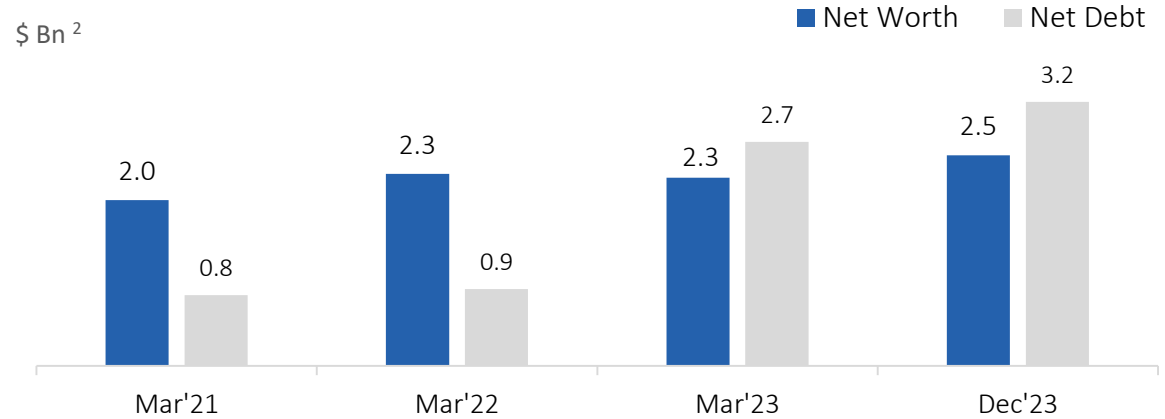
Wt. average cost of debt \*

**69**

Receivable Days\*\*

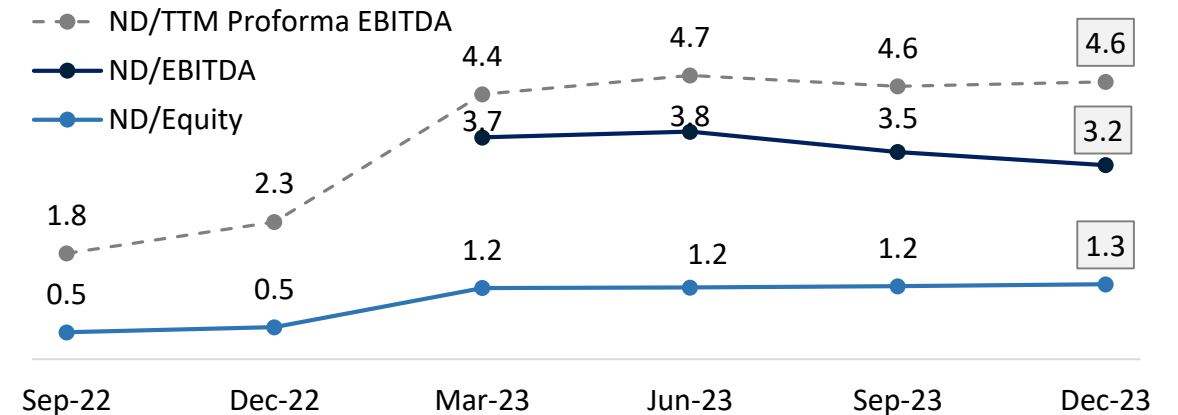
Figures as of December 31, 2023

**Robust balance sheet & strong cashflow available to pursue growth**



- ✓ Strong Liquidity with healthy cash balances: ₹ 2,867 Crore as of Dec 31, 2023
- ✓ Financial flexibility enhanced by equity investments:
  - Holding 7Cr (70mn) JSW Steel shares of Value<sup>1</sup>: ₹ 5,640 Cr
- ✓ Healthy Credit Ratings:
  - India Rating & Research: AA (Stable outlook)
  - ICRA Ltd: ICRA AA (Stable)
- ✓ Access to diverse pools of liquidity
- ✓ Operating portfolio generating healthy CF & mid-teen equity IRR
- ✓ Weighted average cost of debt\* is 8.58% as of Dec 31, 2023

**ND/EBITDA for Operational Projects at 3.2x (Dec-23)<sup>3</sup>**



1 Value of JSW Steel Share holdings as on Dec 31 2023

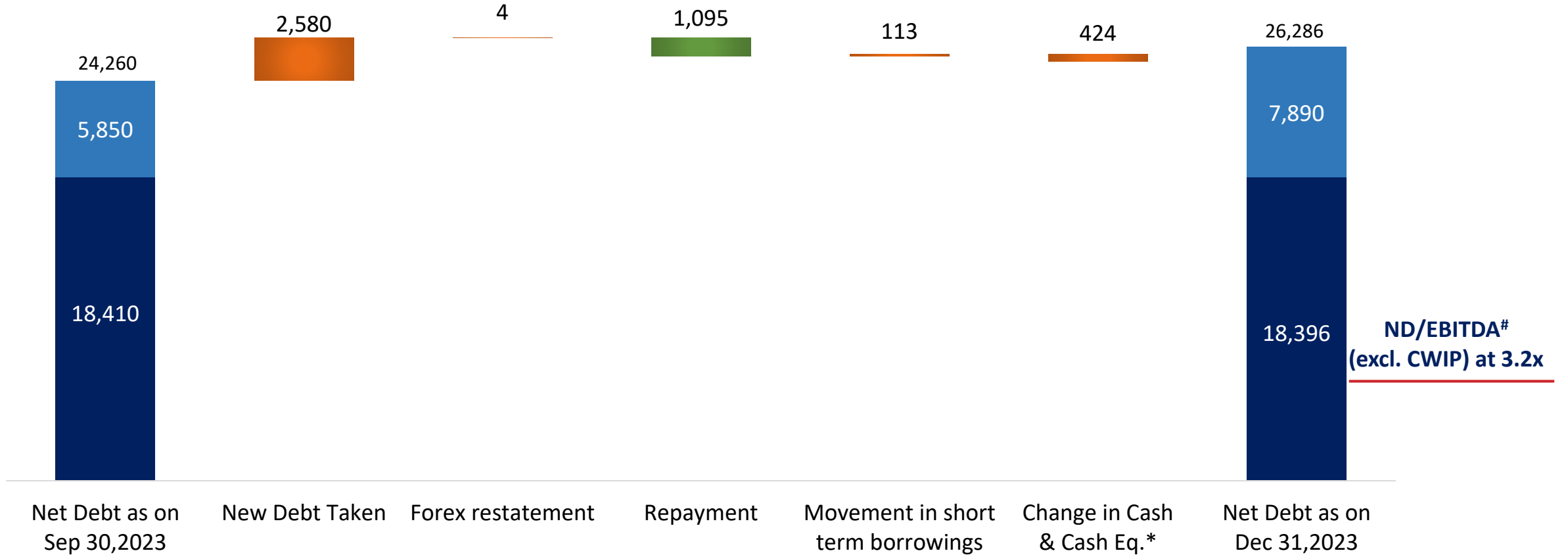
2 Conversion based on USD = INR spot rate as of respective date

\* Including Acquired RE Portfolio's debt post refinancing and debt sizing package which is in place | \*\* Excl Acquired RE Portfolio receivables | # ND/Proforma EBITDA excluding debt on under-construction projects

# Net Debt Movement

Particulars in ₹ Cr

- Capital Work- in-Progress (CWIP)
- Operational Projects



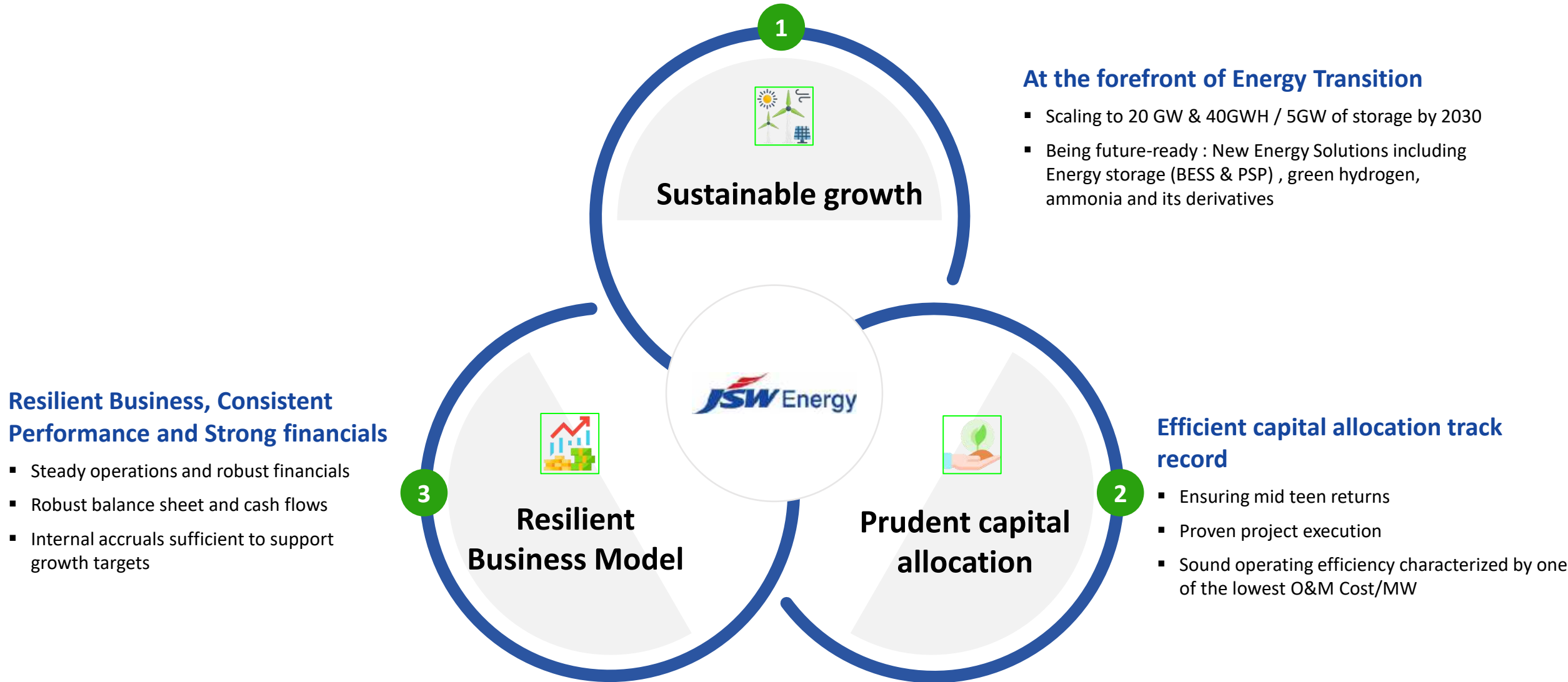
**Sustainable ND/EBITDA is within the guided range of 3.5x-4.0x**

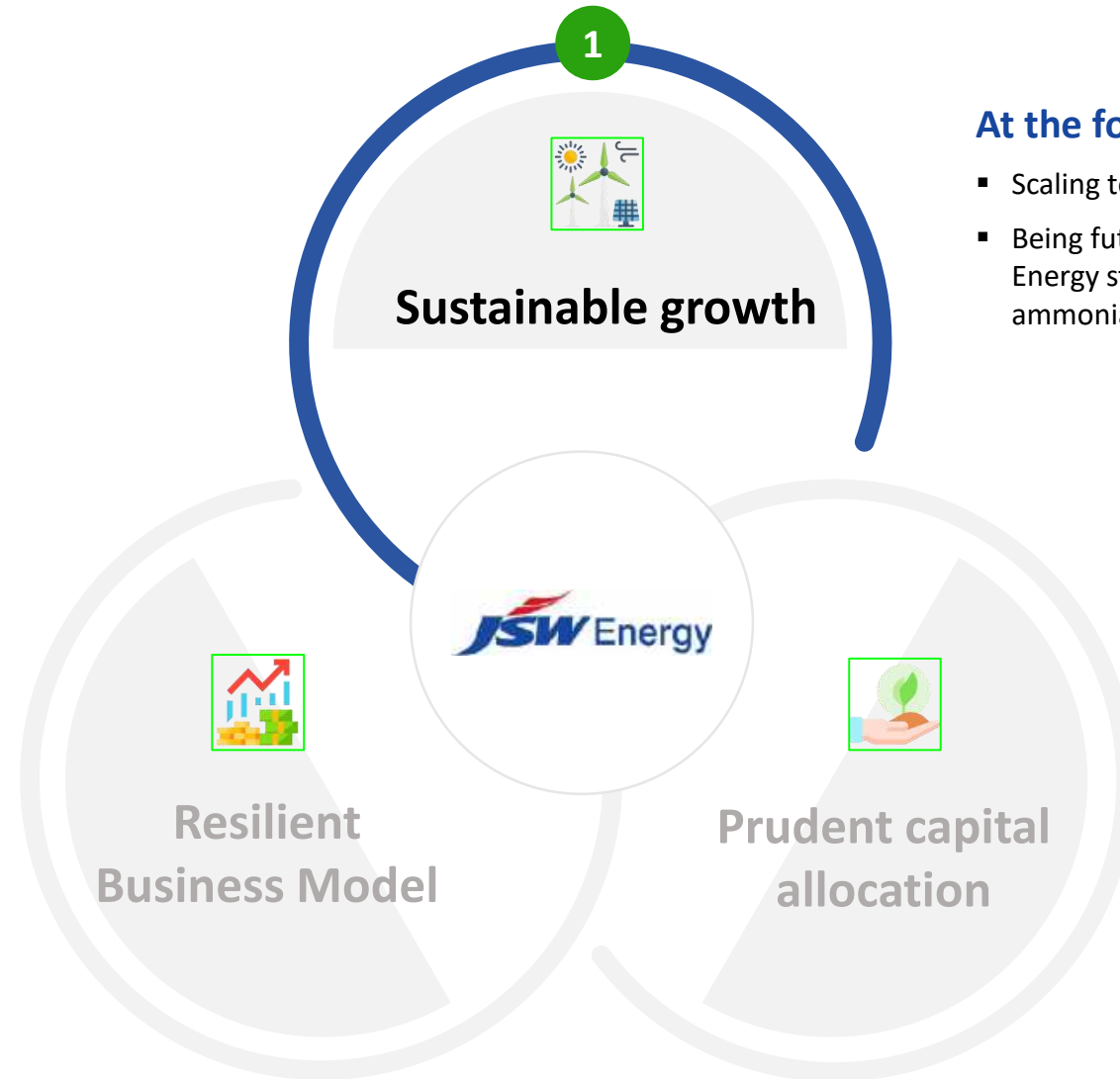
# Why JSW Energy ?

- Investment Story
- Key Highlights



Committed to reaching  
Net Zero emissions by 2050



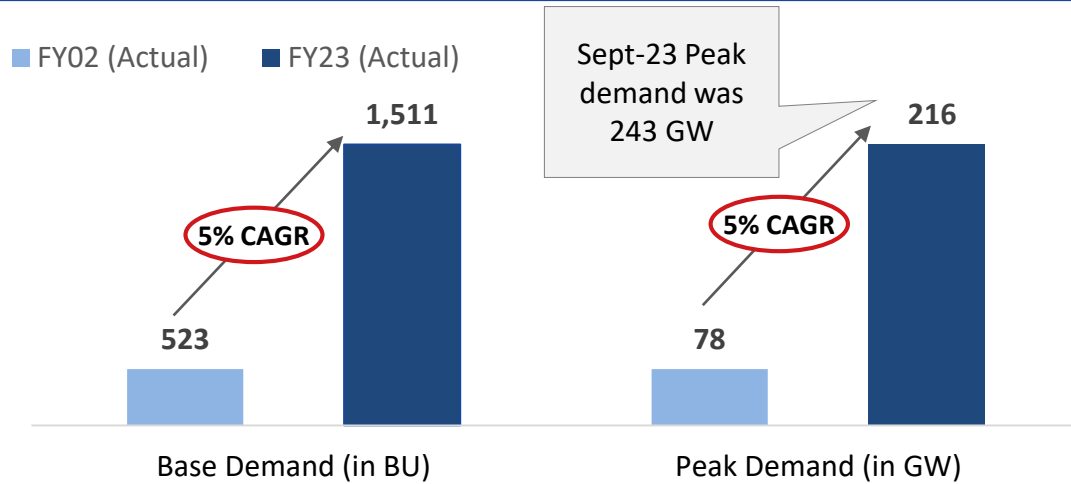


## At the forefront of Energy Transition

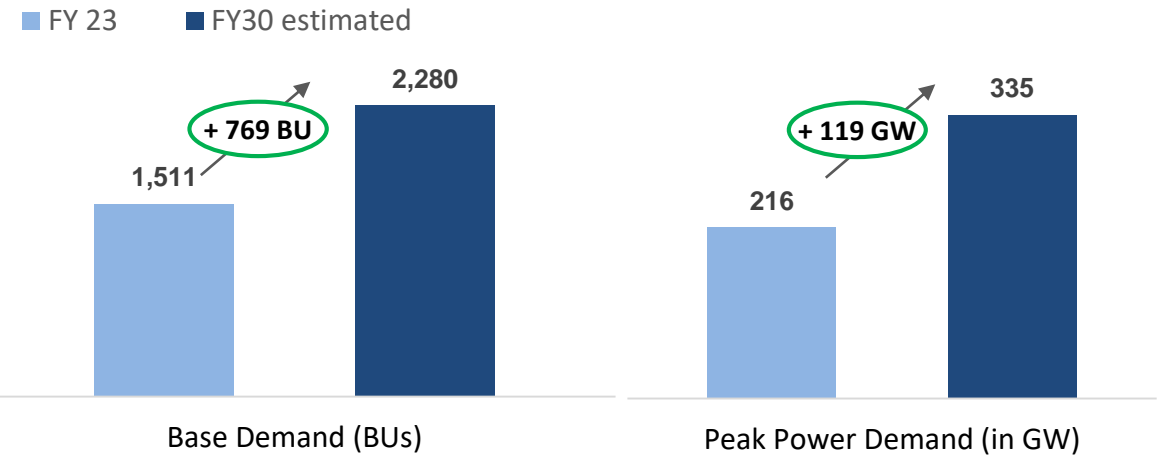
- Scaling to 20 GW & 40GWH / 5GW of storage by 2030
- Being future-ready : New Energy Solutions including Energy storage (BESS & PSP) , green hydrogen, ammonia and its derivatives

# Significant Market Opportunity: Power Demand Growth to be met by RE

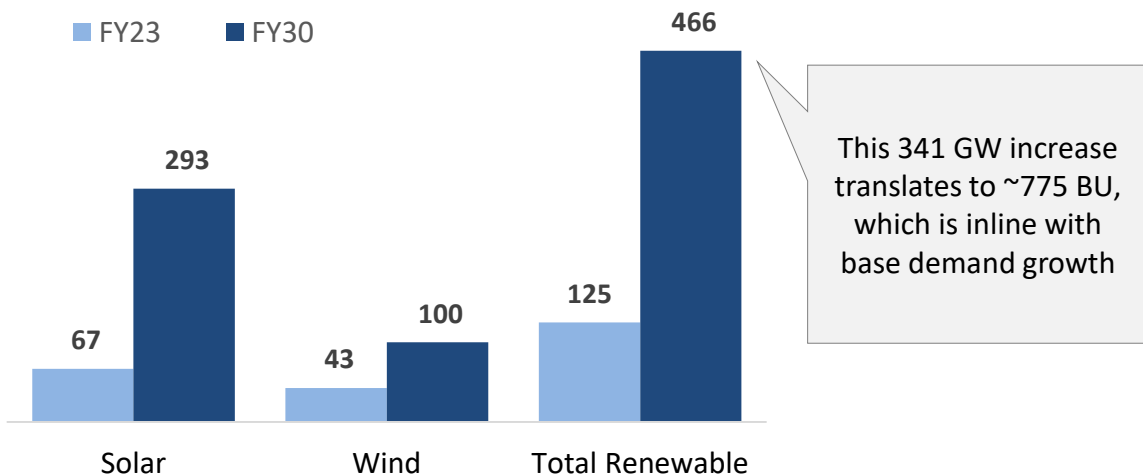
## Historical Power Demand Growth



## Similar growth expected in power demand over next decade



## Demand to be met incrementally with Renewable Energy



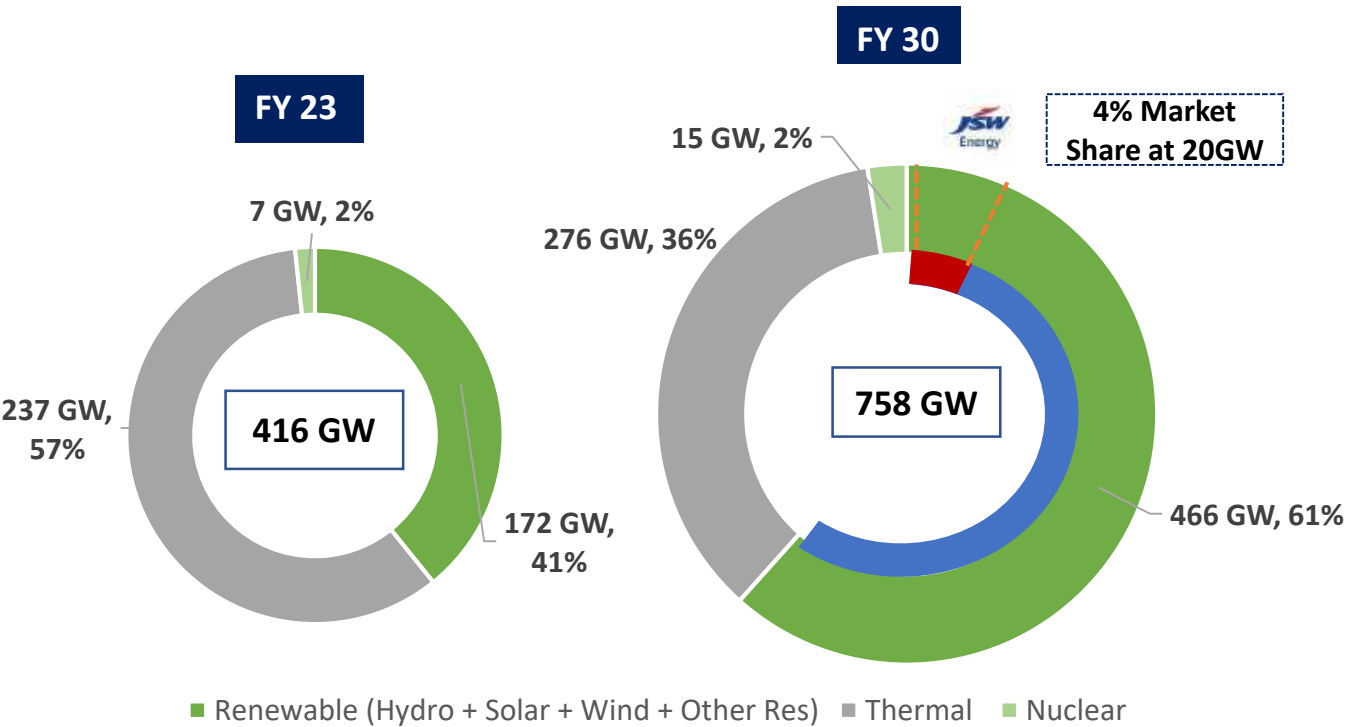
## Rapid Urbanization and universal electrification to drive power demand

- ✓ India is world's third largest power producer, however has a low per capita consumption (~1/3<sup>rd</sup> of world average), this provides huge opportunity for growth
- ✓ Sustained economic growth has driven power demand in India, going forward, unlocking of demand from increased rural electrification and rapid urbanization to drive demand for power

# Participating in India's Green Transition

India's share of Renewables is projected to increase from 41% in FY 23 to 61% in FY 30

## Changing Environment and our Approach

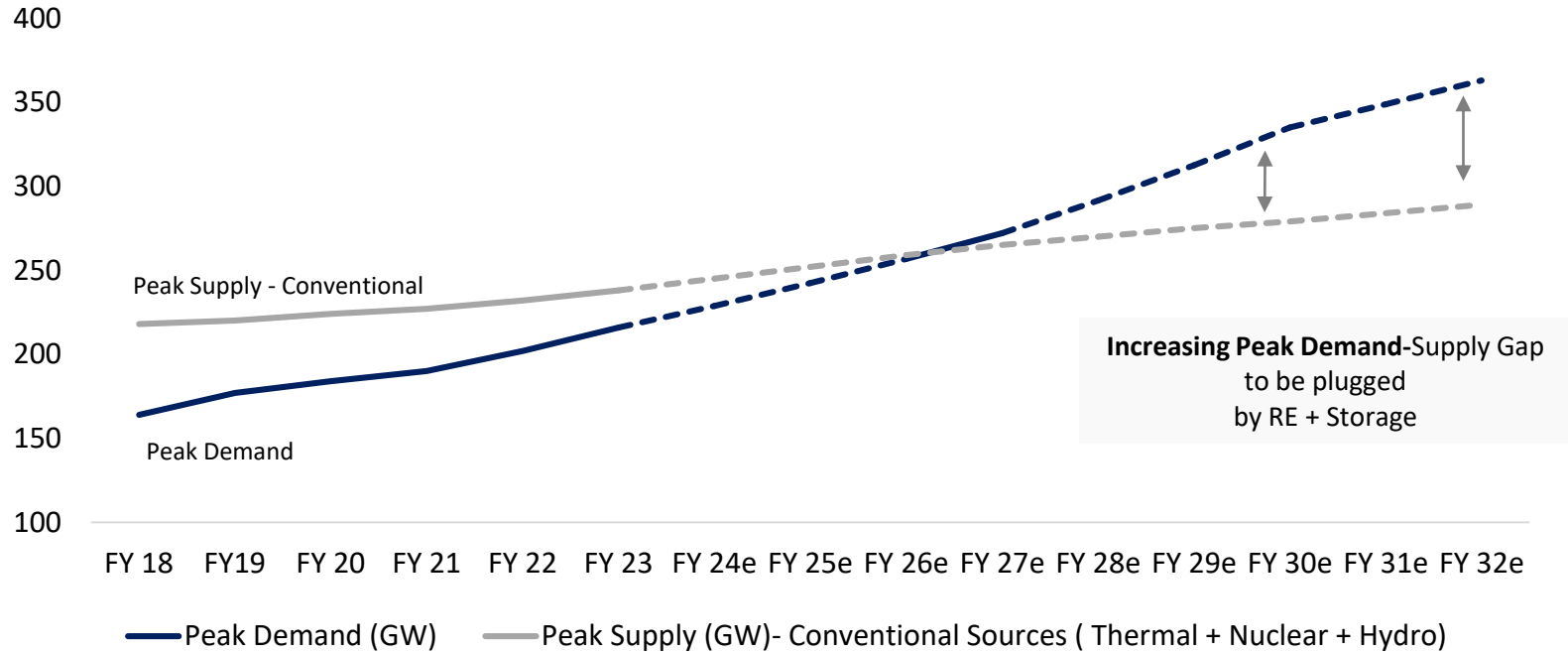


- JSW Energy's strategy is to grow its capacity to 20 GW by FY30 mainly through renewable capacity addition, which is in line with India's renewable energy growth trajectory
- Being part of JSW Group which has its presence across multiple business including steel, cement, infra and paints gives us the opportunity to further grow through group captive

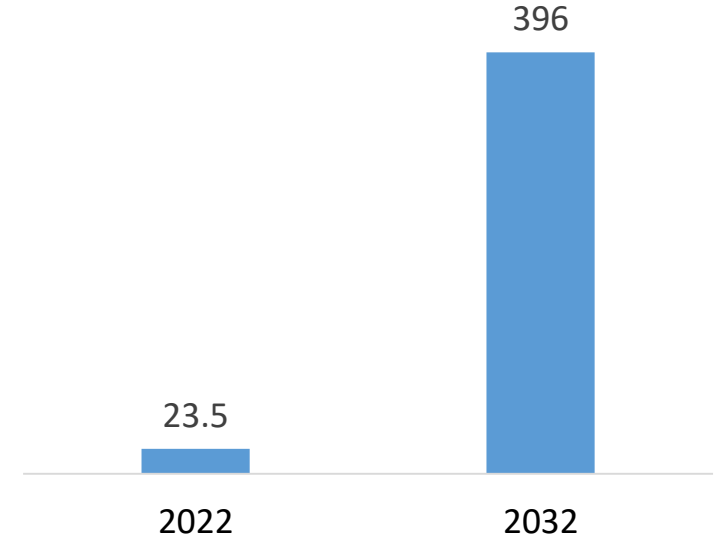
Domain	Environment	Our Approach
<b>Capital</b>	<ul style="list-style-type: none"> <li>• High cost of borrowing due to interest rate hike</li> </ul>	<ul style="list-style-type: none"> <li>• Bidding assumptions take into account interest cycles through life of project</li> </ul>
<b>Supply Chain</b>	<ul style="list-style-type: none"> <li>• BCD on imported Solar Panels/Cells</li> <li>• Uncertainty of supply of Solar panels and WTGs</li> </ul>	<ul style="list-style-type: none"> <li>• De-risking of supply chain through backward integration</li> </ul>
<b>Policy and Fiscal Support</b>	<ul style="list-style-type: none"> <li>• Draft Hydro PSP and Green Hydrogen policy</li> <li>• Budgetary support for Green Transition</li> </ul>	<ul style="list-style-type: none"> <li>• Early Mover in hydro PSP and BESS</li> </ul>
<b>Business Model</b>	<ul style="list-style-type: none"> <li>• Reduced bidding intensity combined with lower tariff discovery</li> </ul>	<ul style="list-style-type: none"> <li>• Bidding discipline with a targeted IRR at P90</li> </ul>

# Energy Storage critical in India's Energy Transition

## Peak Demand vs Supply from Conventional Sources (GW)



## Storage Capacity GWh\*



### Renewable Energy + Storage Solutions required to plug increasing Peak Demand-Supply Gap going forward

- Peak Power Demand is expected to grow at a CAGR of ~6% between FY23-30
- Old & Inefficient thermal capacities to keep on retiring YoY
- Hence, Increasing gap between Peak Demand and Peak Supply from conventional power sources (Thermal+Nuclear+Hydro) will be needed to be plugged by supply from renewable + storage capacities

### National Electricity Plan 2023

- Projections of the order of 396 GWh of energy storage requirement by 2031-32

# Strategy 2.0 (2023-2030) – at glance

1 GW/ annum

## PV Module

Solar Module manufacturing (W-C-M) under PLI scheme

2025



Forward integration of RE generation

20 GW GENERATION CAPACITY

Locked in Sites with Solar / Wind Potential

2030



Backward Integration To PV modules

40 GWh/ 5GW

## ENERGY STORAGE

Pump Hydro Storage  
Battery Energy Storage

2030



~3,800 TPA

## ELECTRONS TO MOLECULES

Green Hydrogen Production, plant to be operational in 2025

2025



Growth driven by internal accruals

Normalised Net Debt/EBITDA to be in the range in 3.5x-4.0x

Balance Sheet Size to grow at 22% CAGR

# Strategy 2.0 – 20 GW Generation + 40 GWh of Storage by FY30

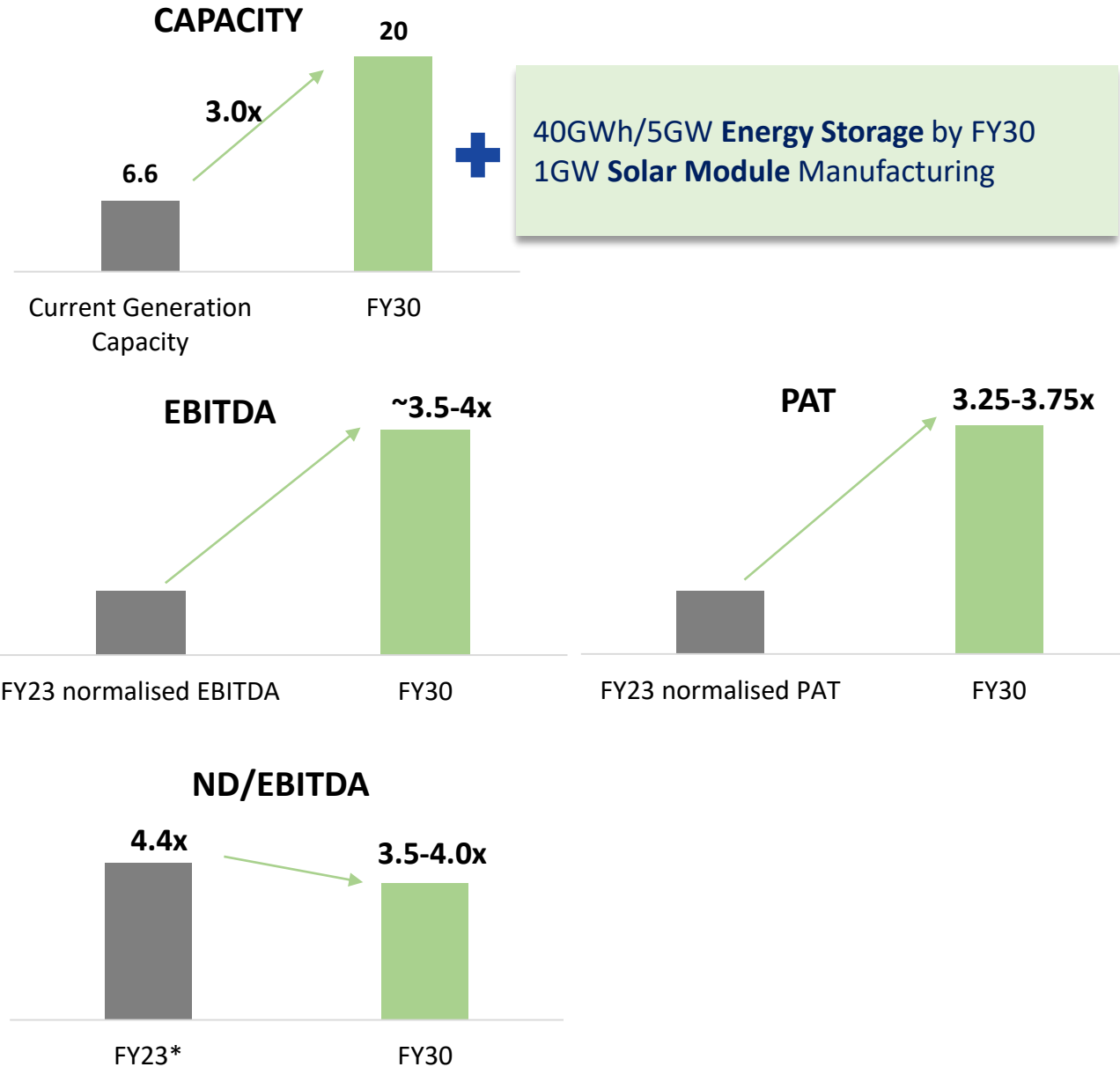
## Pillars for Self sustainable and Integrated road map

- Sustainable value creation focused on Cash Returns
- Internal Accruals and BS Headroom (no external capital)
- Organisational Capability and competency

## Growth Multipliers

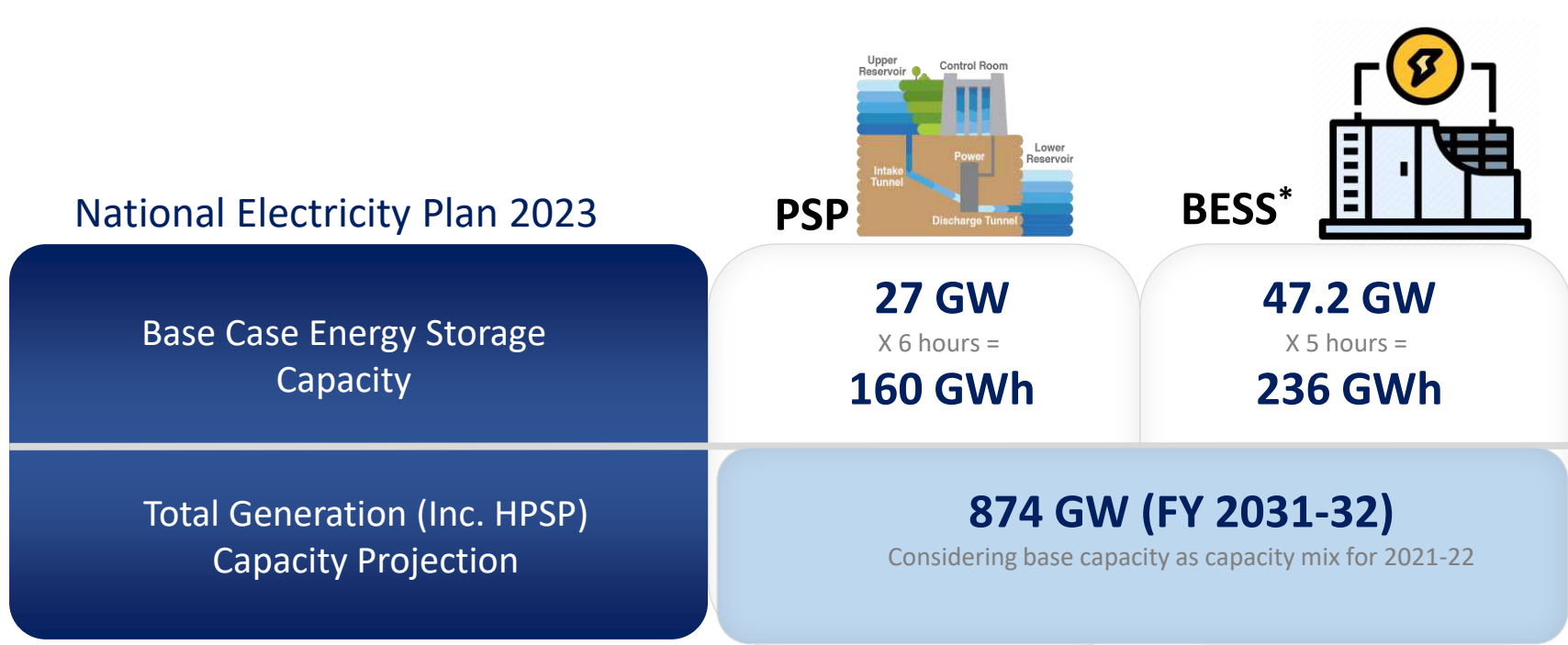
Portfolio generating healthy cash flows & 20% cash return<sup>1</sup>

- ❖ **Steady operations and robust financials**
  - Portfolio TTM Cash PAT of ₹3,138 Crore p.a.
  - Incremental cash accruals from commissioning of Under construction projects and integration of M&A deals
- ❖ **85% of portfolio tied-up under Long Term PPA**
  - 85% of portfolio tied-up under Long Term PPA; Remaining Avg. Life of Assets/PPA: ~24years / ~18 years
- ❖ **Financial flexibility** enhanced by equity investments: JSW Steel shares: 7 Cr shares held (Value as on Dec 31, 2023: ₹ 5,640 Cr)
- ❖ Healthy receivables management and low working capital cycle



# Battery Storage (BESS) and Hydro Pump Storage (HPSP)

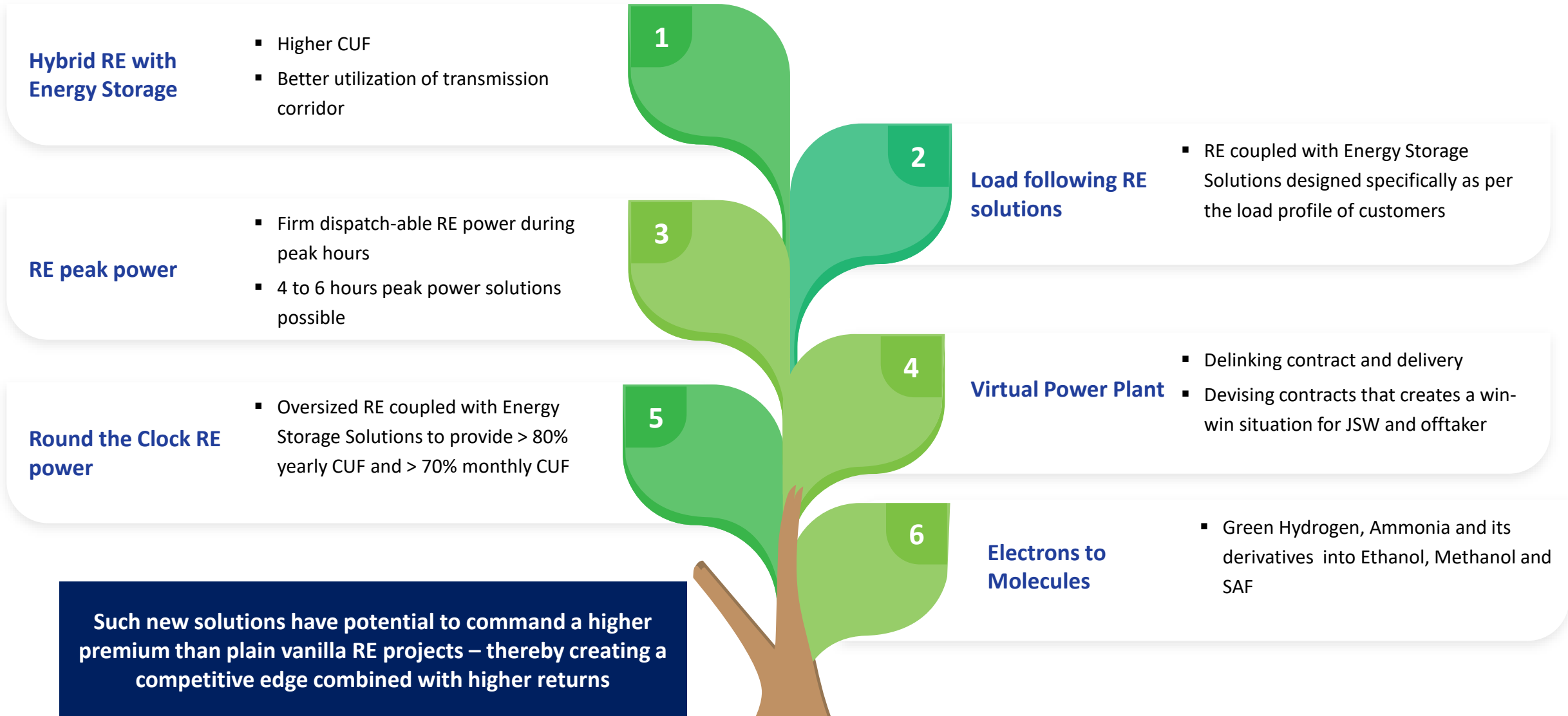
## Capacity Mix for FY 2031-32



### JSW Energy

- ✓ 40GWh/ 5GW of energy storage capacity by FY 2030
- ✓ 3.4GWh of storage locked in ( 1GWh of BESS and 2.4 GWh of HPSP)
- ✓ Large Resources secured for ~80 GWh PSP
- ✓ Growth through internal accrual
- Existing portfolio
- ✓ generating healthy CF & mid-teen equity IRR

# Energy Storage – Enabler for New RE based products and services



# Electrons to Molecules: Green Hydrogen Potential

## Advantage India

### Significant Hydrogen demand

Current demand ~6 MMT expected to grow to ~24 MMT by 2050

### Huge RE potential

Existing RE capacity of ~181 GW (incl. Hydro)  
Target – 50% of capacity share of RE by 2030

### Low Tariffs

RE tariffs in India (INR ~ 2.5-3.0)

### India's Import Bill

India is 3<sup>rd</sup> largest consumer of oil & gas, imports ~85% of oil and ~50% of Gas

### Clean energy Commitment

GH adoption contributes to emission reduction & meet energy demand

### Infrastructure build

Large part of India's infrastructure needs to be built out, allows better integration



## JSW Energy

- Contracted India's largest Commercial Scale Plant for production of Green H<sub>2</sub> (Capacity- 3,800 TPA). This is towards production of Green Steel
- Signed MoU with JSW Steel for 85-90 KTPA of Green Hydrogen & 720 KTPA of Green Oxygen by 2030.

**Grey Hydrogen:** Currently, more than 95% of hydrogen is produced from fossil fuels via carbon intensive processes.

**Blue Hydrogen:** Grey hydrogen whose CO<sub>2</sub> emitted during production is sequestered via carbon capture and storage (CCS)

**Green Hydrogen:** Low or zero-emission hydrogen produced using clean energy sources

### Main production route

- Steam Methane Reforming (SMR)
- Coal Gasification

### Characteristics

↑ Intense CO<sub>2</sub>  
↓ Low Cost

### Main production route

- SMR + CCS
- Coal Gasification + CCS

### Characteristics

↓ Low CO<sub>2</sub>  
↑ High Cost

### Main production route

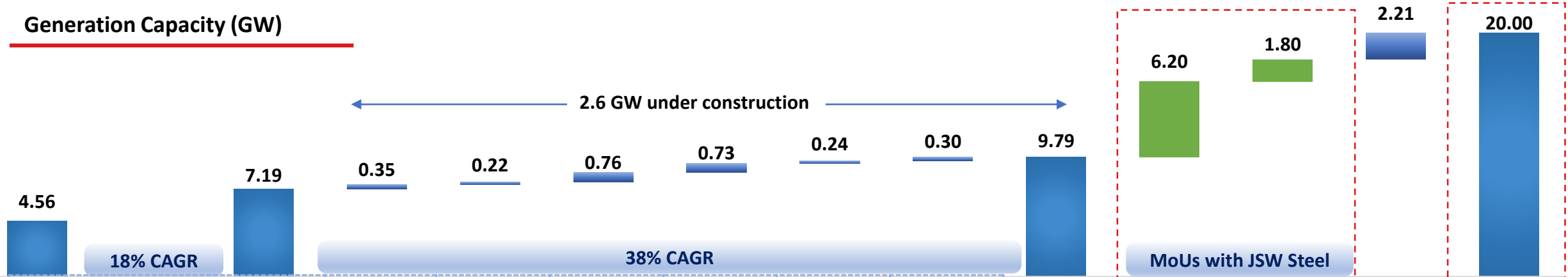
- Electrolysis using renewables

### Characteristics

↓ Zero CO<sub>2</sub>  
↑ High Cost

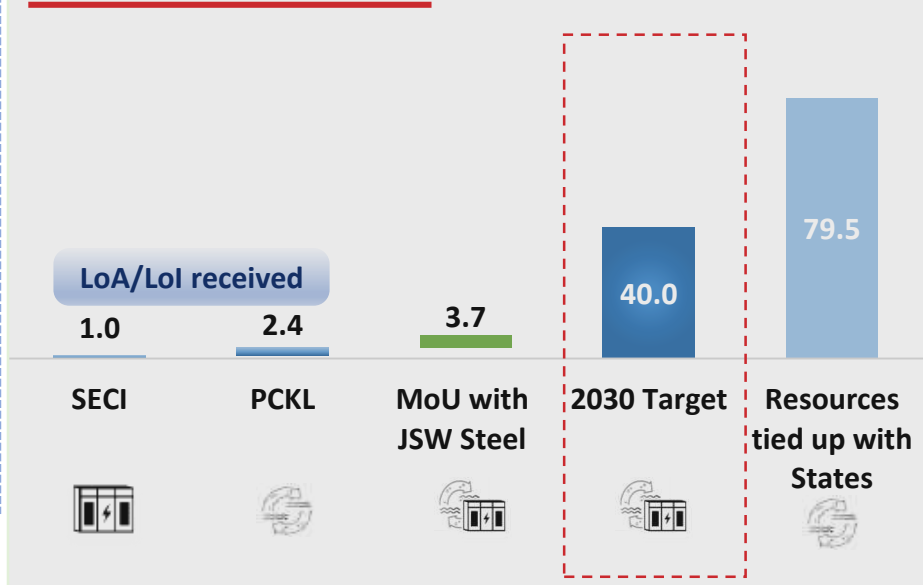
# Progress on Strategy 2.0

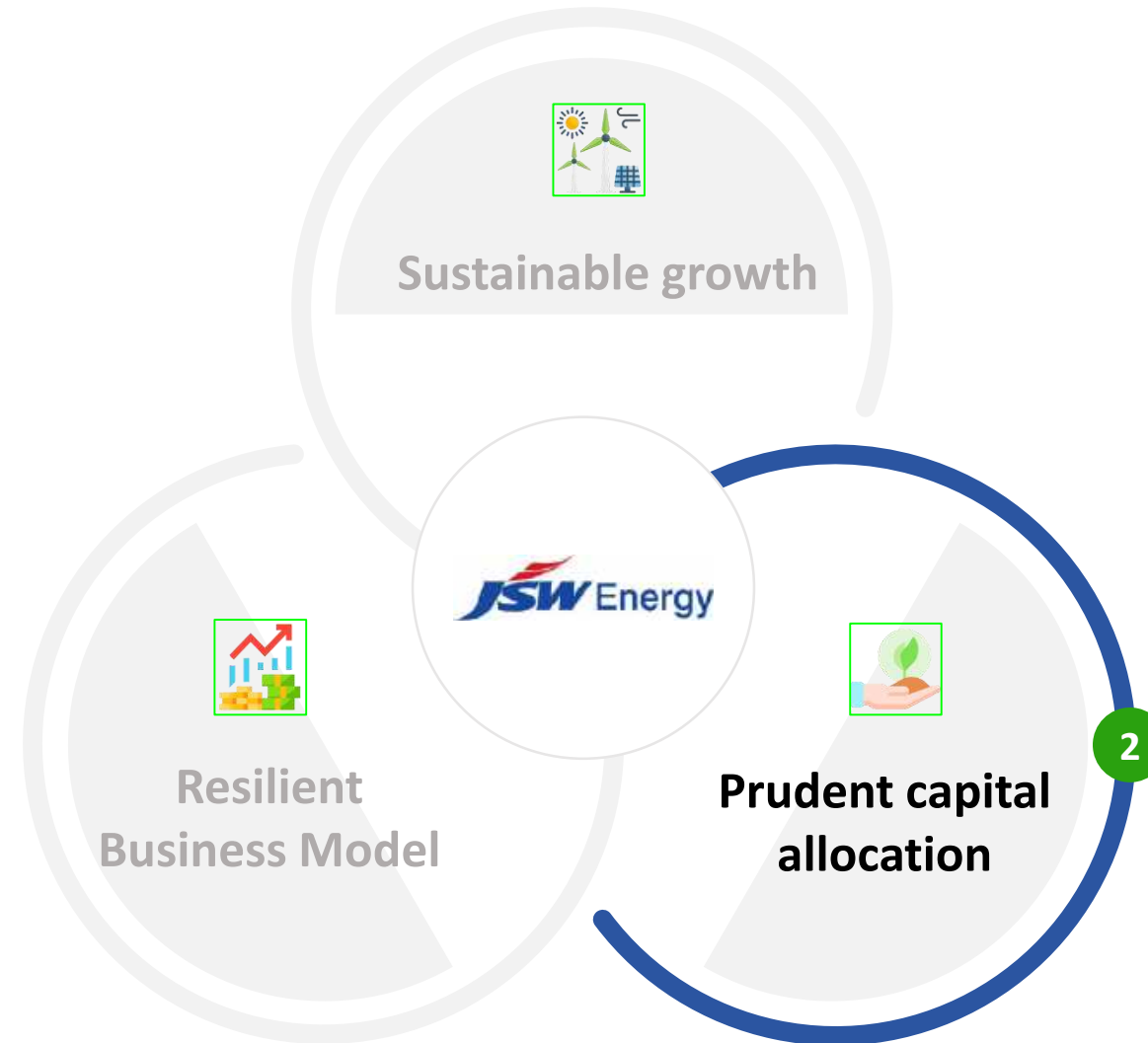
## Generation Capacity (GW)



FY21	Current Operational	Ind-Barath	SECI X Wind	SECI IX Wind	Group Captive Wind	Kutehr	SECI XII Wind	Operational by CY24
Commissioning		-Unit 2 in Q4 FY24	Progressive Commissioning			Sept 2024	March 2025	
PPA		-	25 Years	25 Years	25 Years	35 Years	25 Years	
Offtaker		Open	SECI	SECI	JSW Steel	Haryana Discom	SECI	
Capital Expenditure		Total: ₹ 19,360 Cr   Committed: ₹17,534 Cr   Spent: ₹13,584 Cr (Including 225 MW Solar Operational)					~₹2,200 Cr	

## Energy Storage (GWh)





## Efficient capital allocation track record

- Ensuring mid teen returns
- Proven project execution
- Sound operating efficiency characterized by one of the lowest O&M Cost/MW

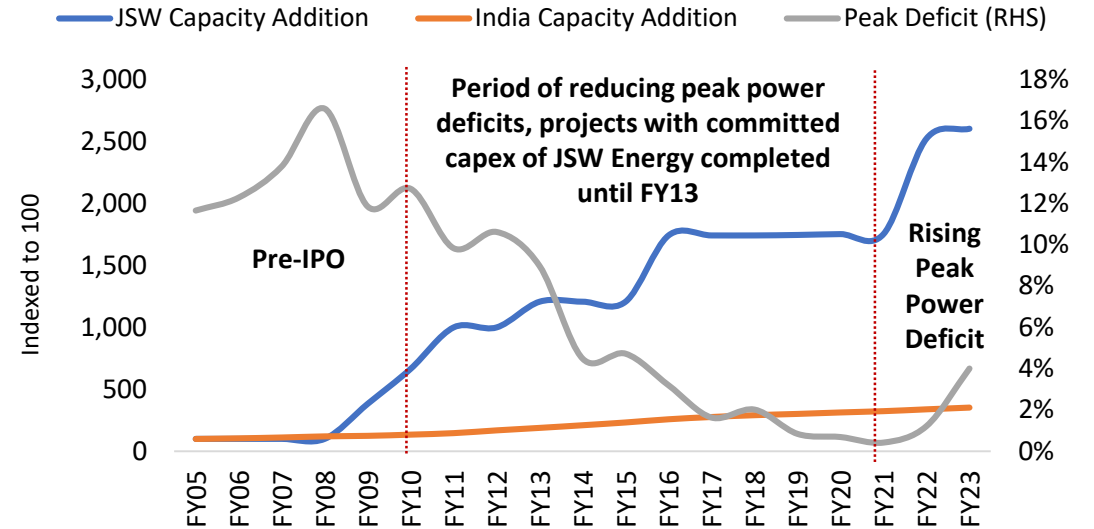
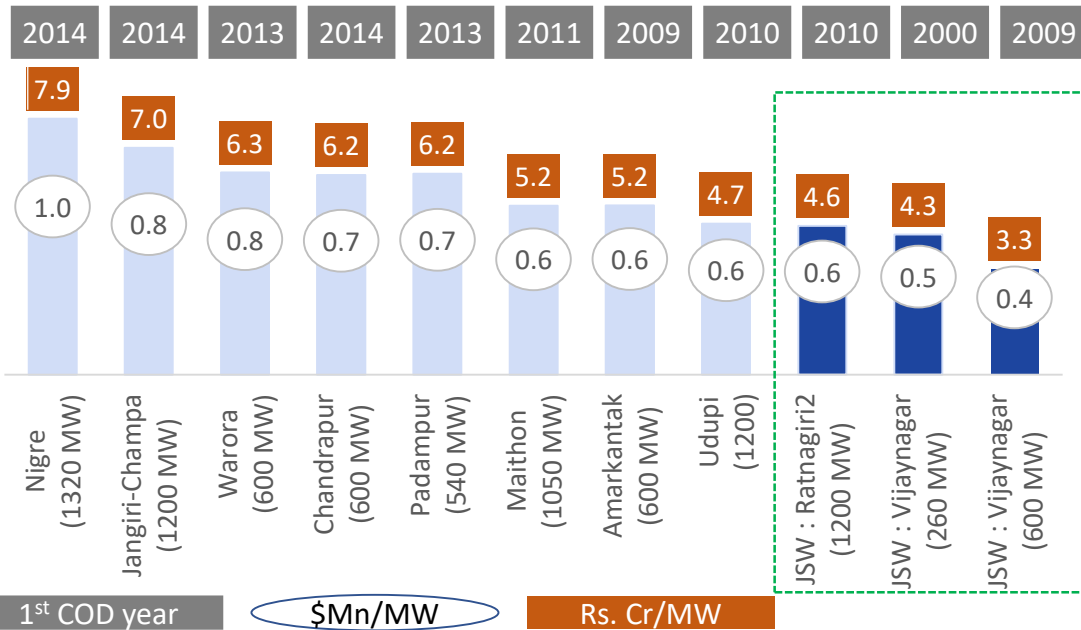
# Proven project execution and operational excellence...

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

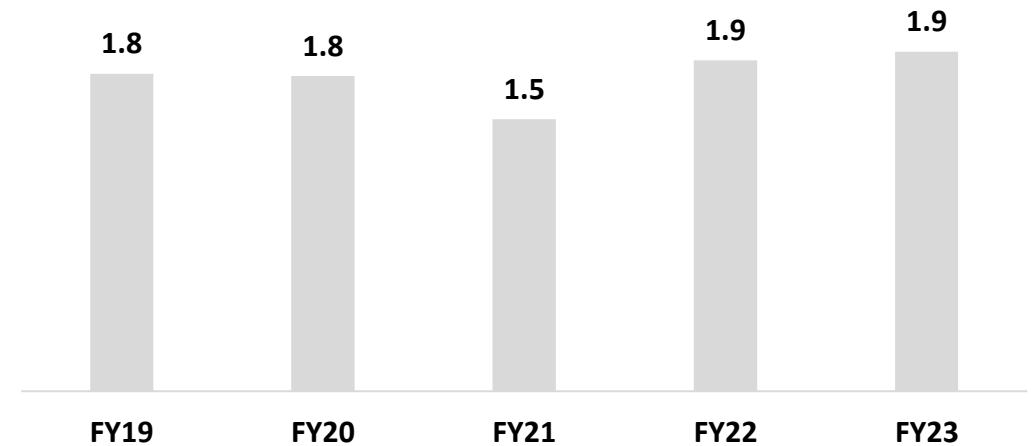
Selective bidding to ensure mid teen returns

Successful integration of inorganic capacities

## One of the lowest project execution cost in the industry

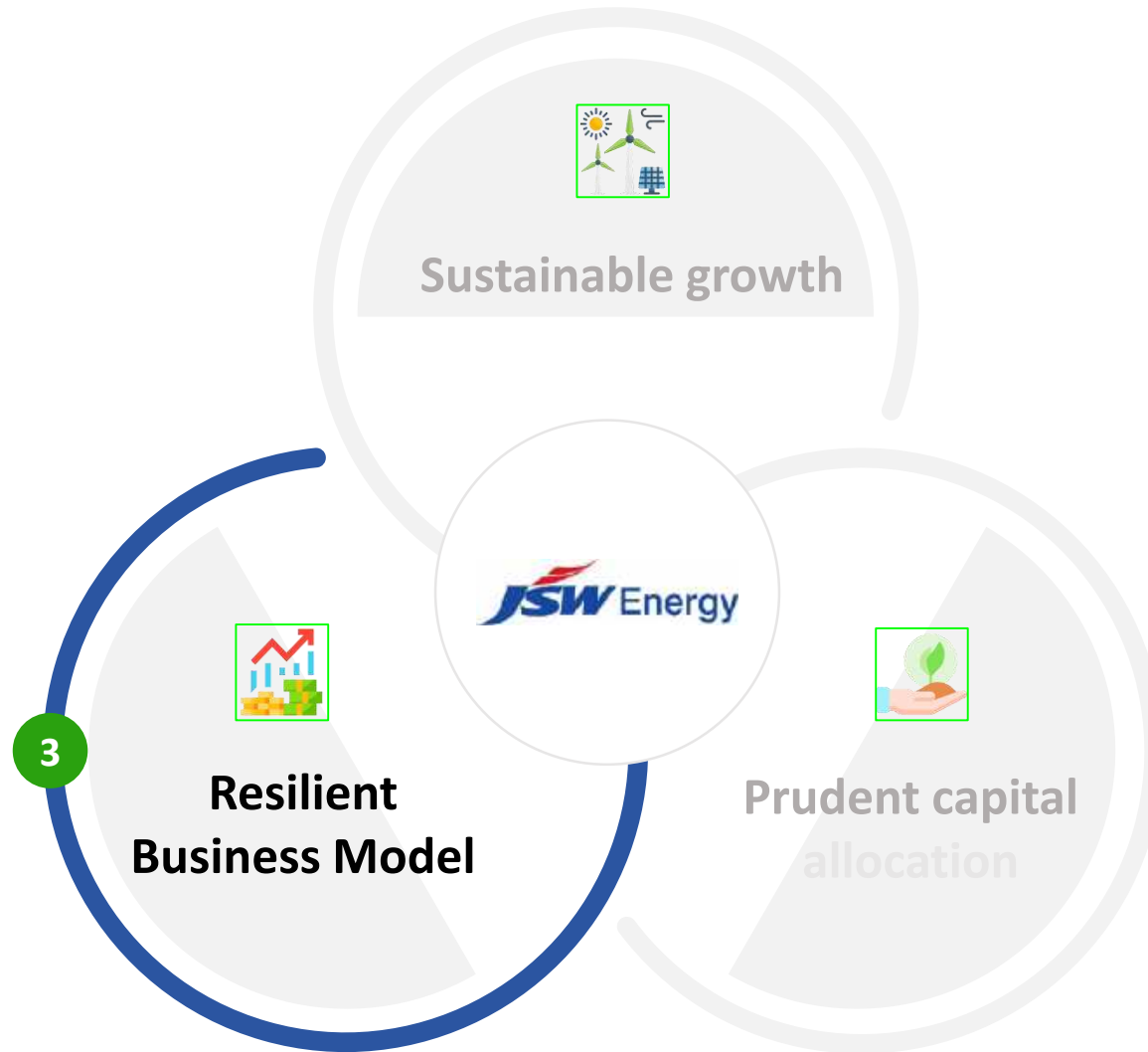


## Sound operating efficiency characterized by one of the lowest O&M Cost/MW (₹ mn)



## Resilient Business, Consistent Performance and Strong financials

- Steady operations and robust financials
- Robust balance sheet and cash flows.
- Internal accruals sufficient to support growth targets



# Robust Balance Sheet & Cashflows

## Balance sheet headroom to pursue growth opportunities

- **Strong Financials**

Particulars	As on December 31, 2023
Networth	₹ 20,976 Cr
Net Debt	₹ 26,286 Cr
Net Debt/TTM Proforma EBITDA	4.6x
Net Debt/TTM Proforma EBITDA (excl. under construction projects)	3.2x
Net Debt/Equity	1.3x
Wtd. Average Cost of Debt	8.58%
Cash PAT TTM	₹ 3,138 Cr

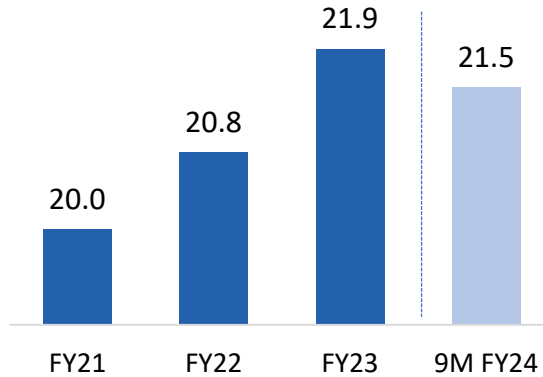
- **Healthy Credit Ratings and access to diverse pools of liquidity**

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

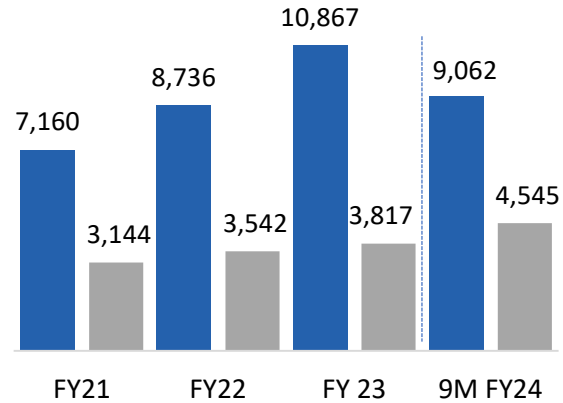
- **Strong Liquidity with healthy cash balances: ₹2,867 Cr\***

# Steady Operations and Robust Financials

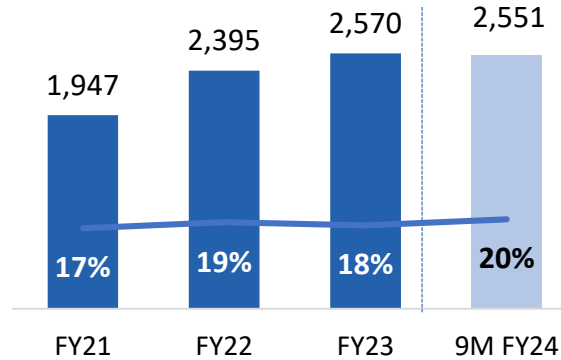
## Net Generation (BUs)



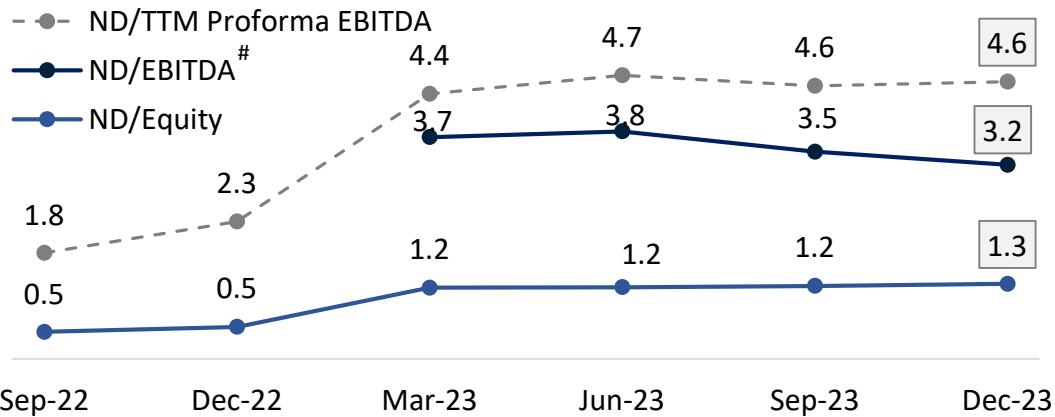
## Total Income<sup>1</sup> and EBITDA (₹ Cr)



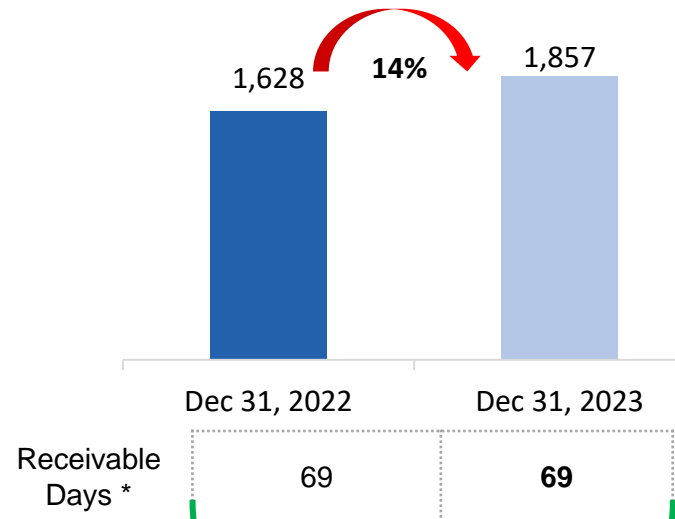
## Cash PAT (₹ Cr) and Cash Returns



## ND/EBITDA for Operational Projects at 3.2x



## Healthy receivables days



### Steady operations and robust financial

- 85% of portfolio tied-up under Long Term PPA; Remaining Avg. Life of Assets/PPA: ~24 years / ~18 years
- Track record of strong yearly cash profits and mid-teen equity returns

### Financial flexibility








- Strong leverage ratio, Net Debt to operating EBITDA of 3.2x
- JSW Steel shares: 7 Cr shares held (Value as on Dec 31, 2023: ₹ 5,640Cr)

### Receivables

- All plants placed favourably in States' Merit Order Dispatch
- Payment security mechanism in force for power tied under long term PPA with discoms

1. Not comparable YoY from FY21 due to Change to Job Work Model Partially  
<sup>#</sup> ND/Proforma EBITDA excluding debt on under-construction projects \* Includes Unbilled Revenue and excluding Acquired RE Portfolio receivables

# JSW Energy : Key Highlights

 <b>Proven Execution Excellence</b>	<ul style="list-style-type: none"><li>✓ Proven project execution skills: Projects set-up in lowest cost &amp; time</li><li>✓ Differentiated business strategy for growth to 20 GW, driven by Renewable</li><li>✓ Foraying in New Energy Platforms: Green Hydrogen, Energy Storage, Energy Products &amp; Services</li></ul>
 <b>Focus on Sustainability</b>	<ul style="list-style-type: none"><li>✓ Strong Focus on ESG – Leadership band with ‘A-’ score in the 2022 CDP Climate Change rating</li><li>✓ Amongst the Highest rated power generation company in India by various independent ESG rating agencies - DJSI 71/100</li><li>✓ To be Carbon Neutral by 2050; Committed to set science based emission reduction targets (SBTi)</li></ul>
 <b>Efficient O&amp;M</b>	<ul style="list-style-type: none"><li>✓ Sound operating efficiency characterized by one of the lowest O&amp;M costs in the sector</li><li>✓ Barmer, Ratnagiri and Vijayanagar Plants awarded ‘SWORD OF HONOUR’ by British Safety Council</li></ul>
 <b>Steady EBITDA and Cash accruals</b>	<ul style="list-style-type: none"><li>✓ 85% of total portfolio tied up with LT PPA providing ~90% EBITDA and Cashflow generation in FY23</li><li>✓ Two-part tariff structure mitigating fuel and forex risk</li></ul>
 <b>Healthy Receivables</b>	<ul style="list-style-type: none"><li>✓ Receivables days at low levels in DSO terms.</li><li>✓ Favorable placement in Merit Order Despatch &amp; diversified off-takers mitigate Receivable risk</li></ul>
 <b>Strong Balance Sheet</b>	<ul style="list-style-type: none"><li>✓ 4.6x, Net Debt/EBITDA; 1.3x Net Debt/Equity - Robust Balance Sheet</li><li>✓ Healthy debt metrics to be maintained while pursuing value accretive growth</li><li>✓ A healthy cash balance of ₹2,867 Cr and financial flexibility with JSW Steel equity shareholding</li></ul>
 <b>Low Cost of Funding</b>	<ul style="list-style-type: none"><li>✓ Weighted average cost of debt at 8.58%</li><li>✓ Executed attractive refinancing and debt sizing package for Acquired RE Portfolio RE assets, cost saving of &gt; ₹240 cr</li><li>✓ Raised a US\$ 707 million green bond to refinance debt for hydro entity in May’21</li></ul>

# JSW Energy – at a glance



# Thermal Assets

**Ratnagiri 1,200 MW**



**Barmer 1,080 MW**



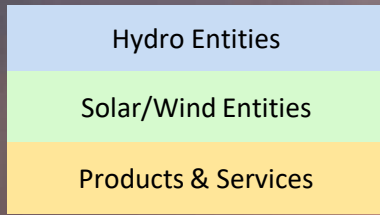
**Ind Barath 700 MW**



**Vijayanagar 860 MW**



# JSW Energy – Broad Corporate Structure



**JSW Energy Limited**  
9,792 MW

## Standalone

Ratnagiri – 1,200 MW  
Vijayanagar – 860 MW  
Nandyal – 18 MW  
Solar – 10MW  
**Total – 2,088 MW**

## Other subsidiaries

JSWEBL – 1,080 MW  
Ind-Barath – 700 MW

**JSW Neo Energy \***  
5,924 MW

## Energy Generation Portfolio

JSW Hydro Energy Limited (1,391 MW)  
(Karcham & Baspa)

JSW Energy (Kutehr) Limited (240 MW)

JSW Renew Energy Limited (810 MW SECI-IX)

JSW Renew Energy Two Limited (454 MW SECI-X)

JSW Renewable Energy (Vijayanagar) Limited (863 MW Captive)

JSW Renewable Energy (Dolvi) Limited (95 MW Captive)

Acquired RE portfolio (1,753 MW - Acquired)

JSW Renew Energy Three Limited SECI XII 300 MW

## Products & Services

**BESS – SECI Pilot**  
(500MW/1000MWh)

**PSP**  
• LoI for 2.4 GWh  
• MOUs signed for 80 GWh

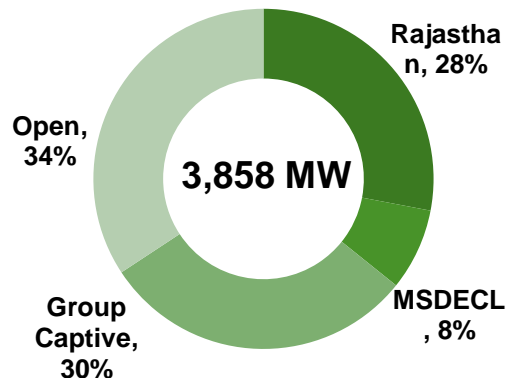
Advanced high efficiency **solar module** (Awarded capacity under PLI)

**Green Hydrogen** (3,800 TPA) & Its Derivatives

# Thermal Assets | Q3 FY24 Highlights

## Overview

**Total Thermal Capacity**  
3,858\* MW



**Installed Capacity**

**PPA tied**

**Fuel Type**

**Operational Capacity**  
3,508\* MW

**Under Construction Ind-Barath**  
350 MW (Unit-2)

**Net Generation Q3 FY24 (MUs)**

LT

Total

**PLF/ (Deemed PLF) Q3 FY24**

LT

Total



**Ratnagiri**



**Barmer**



**Vijayanagar**



**Ind - Barath**

1,200 MW

1,100MW

Imported Coal

1,682 MUs (52% YoY)

2,062 MUs (82% YoY)

76%/(93%)

85%/(100%)

1,080 MW

1,080 MW

Lignite

1,564 MUs (-3% YoY)

1,564 MUs (-3% YoY)

74%/(77%)

74%/(77%)

860 MW

338 MW

Imported Coal

568 MUs (-13% YoY)

1,076 MUs (50% YoY)

89%/(90%)

61%/(62%)

700 MW

Unit 1 (350 MW) operational  
Merchant

Domestic Coal

Located in coal belt

Easy access to water

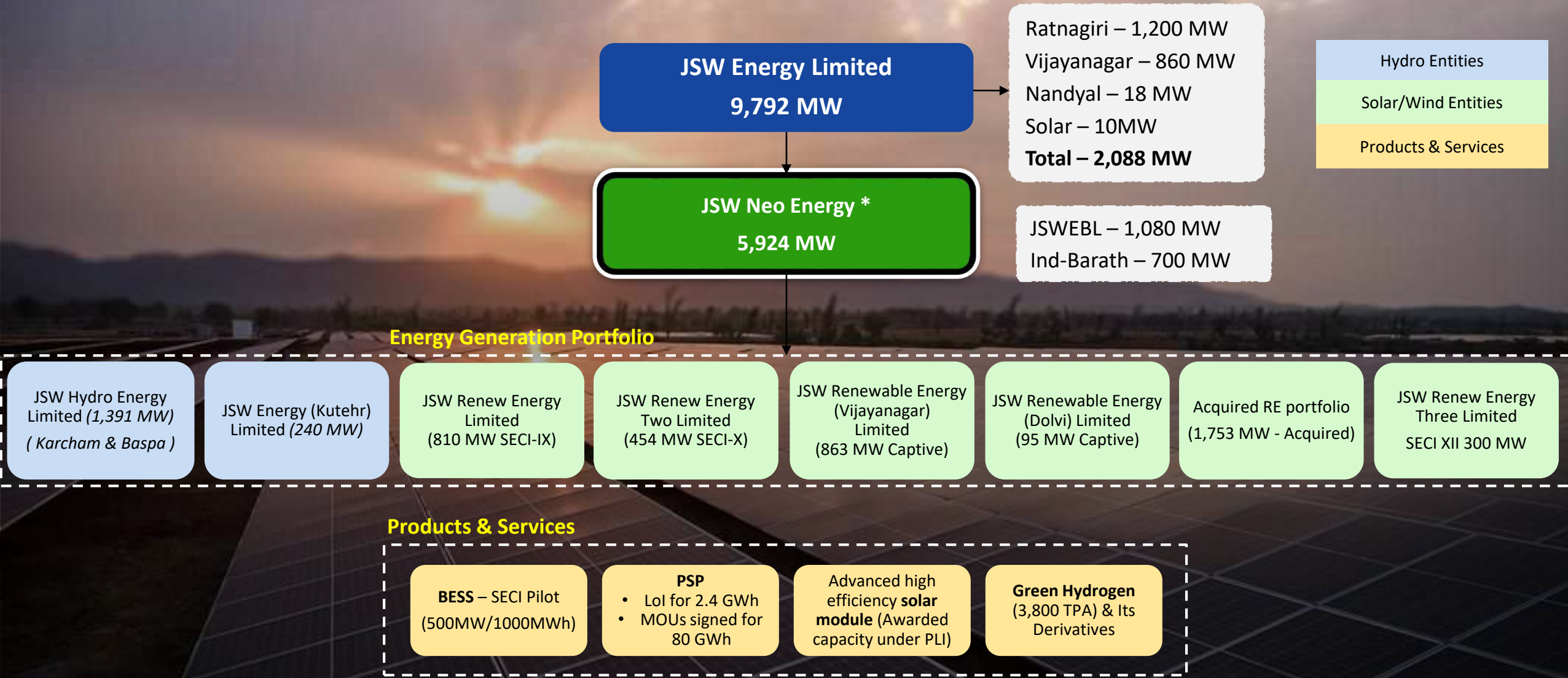
Unit 1 – Synchronised  
Unit 2 – Q4 FY24

**~72% of Installed Thermal Capacity Tied-up under Long-Term PPA**

# Renewable Assets - 5.9 GW

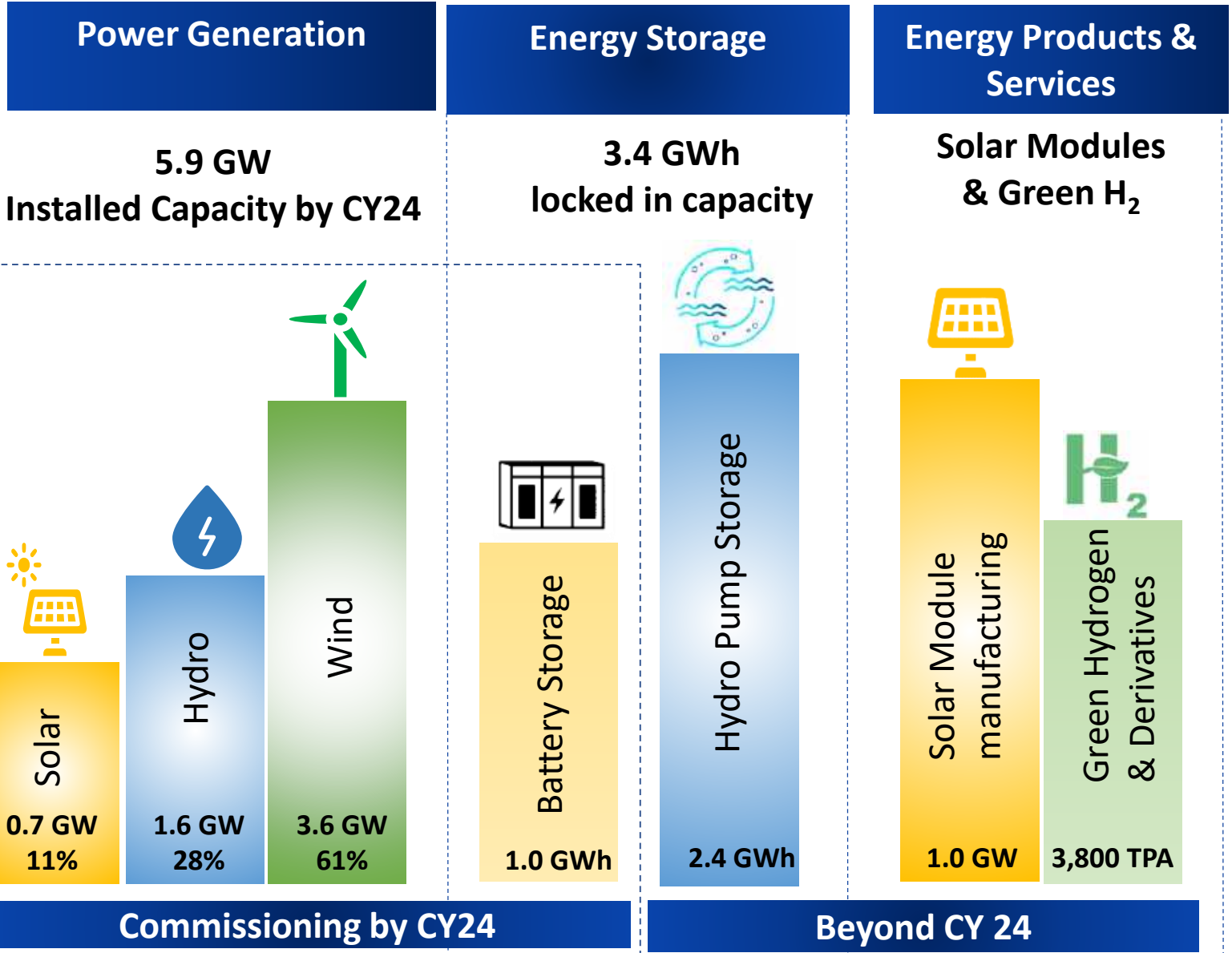


# JSW Energy – Broad Structure

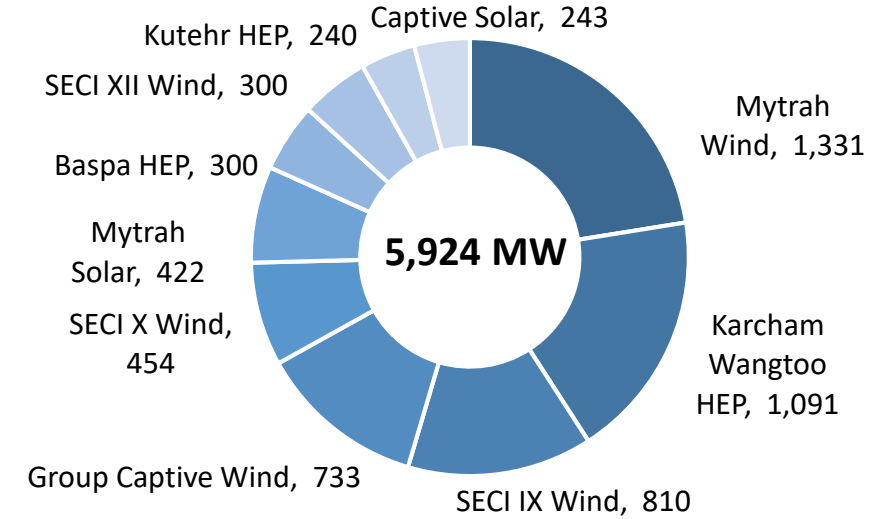


# JSW Neo – Presence across the value chain

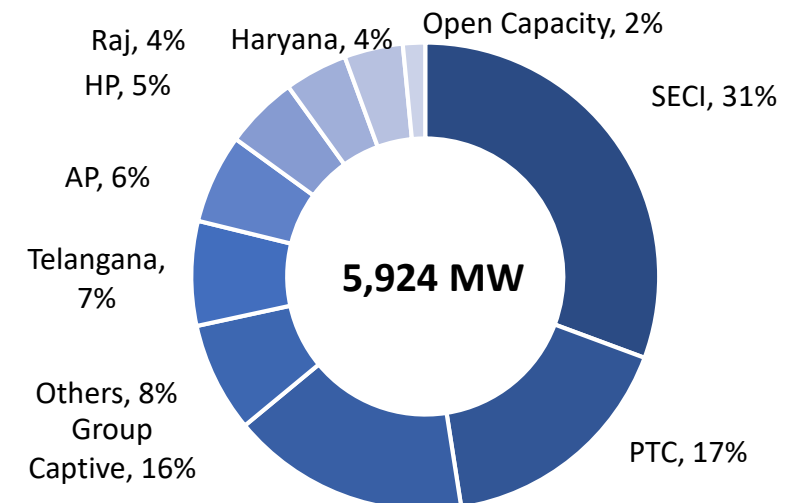
Well placed to achieve 10 GW of generation capacity ahead of stated timeline of 2025 with foray into New Age Businesses



## JSW NEO - Assets



## JSW NEO – PPA Profile



# JSW NEO Energy – At a Glance

## Generation

**5.9 GW**

**Renewable**  
Installed – 3,681 MW  
Under Construction – 2,243 MW

**+**

**MoUs**  
6.2 GW

**Group Captive MoUs**

## Energy Storage

**3.4 GWh**

**Energy Storage**  
BESS – SECI 500MW/1000MWh  
Hydro Pump Storage (HPSP) – PCKL 300 MW/ 2400 MWh

**+**

**MoUs**  
2.7 GWh

**Group Captive MoUs**  
80 GWh

**Across 7 states**

## Energy Products

**Backward Integration**  
Alloted 1 GW of solar wafer, cell and module (W-C-M) capacity under PLI scheme.

**Electrons to Molecules**  
Received NoA for 6,500 TPA under SIGHT Program  
Contracted for 3,800 tonnes of Green Hydrogen.

**+**

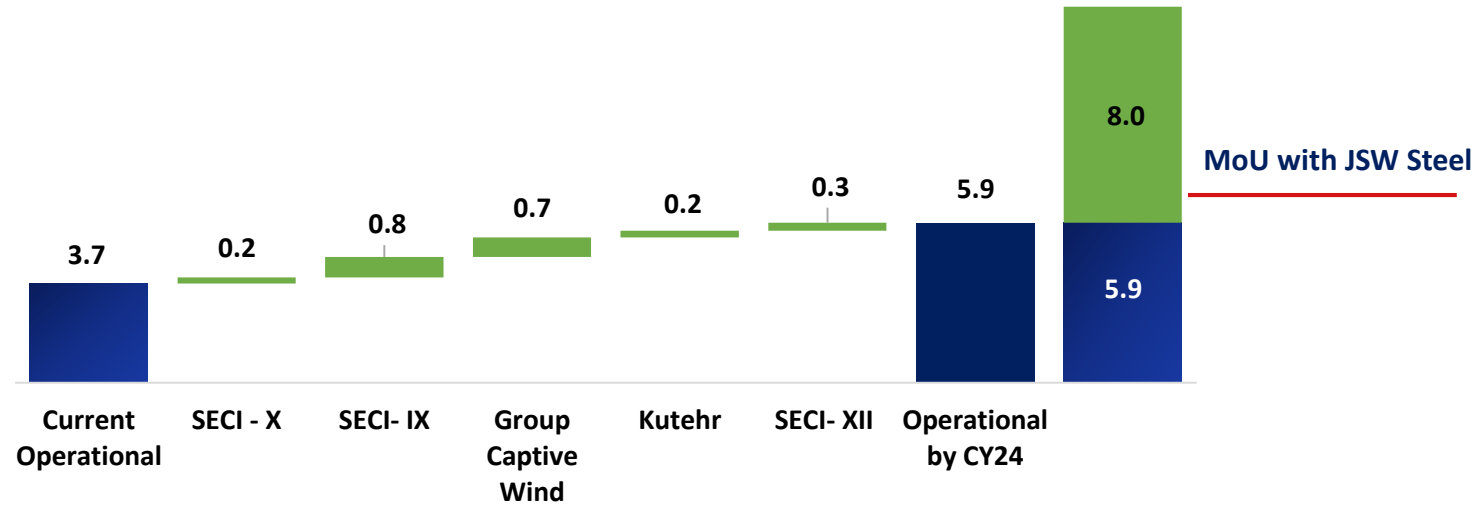
**MoUs**  
Green H<sub>2</sub> - 85-90 KTPA  
Green O<sub>2</sub> - 720 KTPA

**Group Captive MoUs**

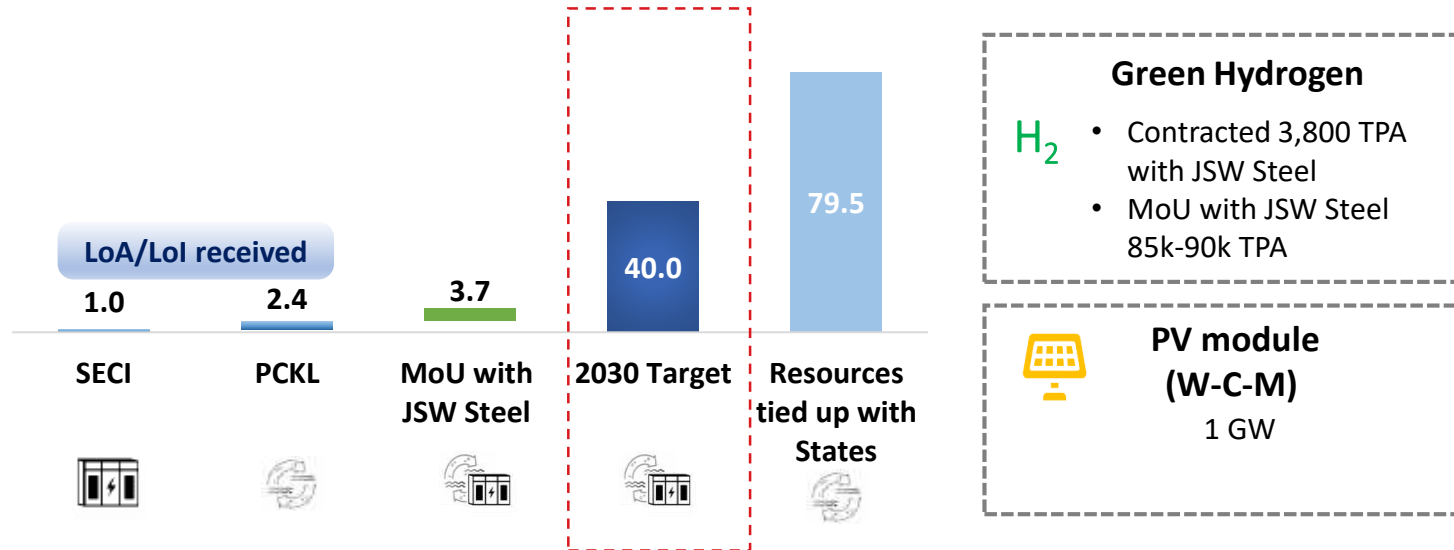
# JSW Neo – Multiple Growth Drivers



## Generation (GW)

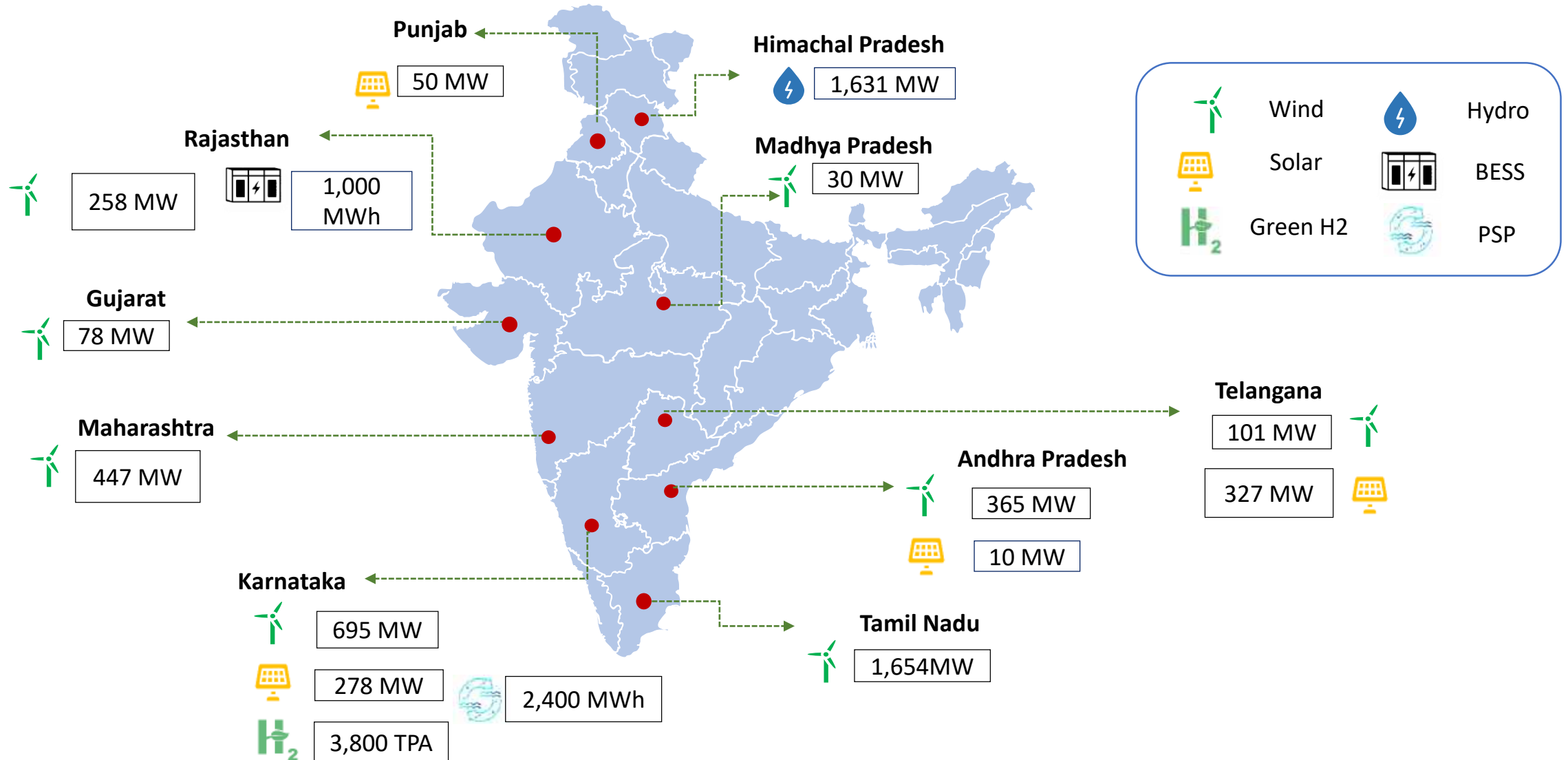


## Energy Products & Services



# JSW Neo - Footprint of Diverse Asset Base by CY24

Operational Capacity by CY 24 (5,924 MW)



Map of India representation – scaling may not be accurate

# Energy Storage – Unique Value Proposition as an Early Mover

## Battery Energy Storage System (BESS)

LoA received for 500MW/1000 MWh SECI project in Jan-23

- Build Own Operate Transfer (BOOT) with tenure of 12 years
- Battery Storage Purchase Agreement for 60% of the capacity with SECI and balance is open for sale
- Identified site is at Fatehgarh, Rajasthan
- Participate in ancillary market with the open capacity
- Expected commissioning by CY24

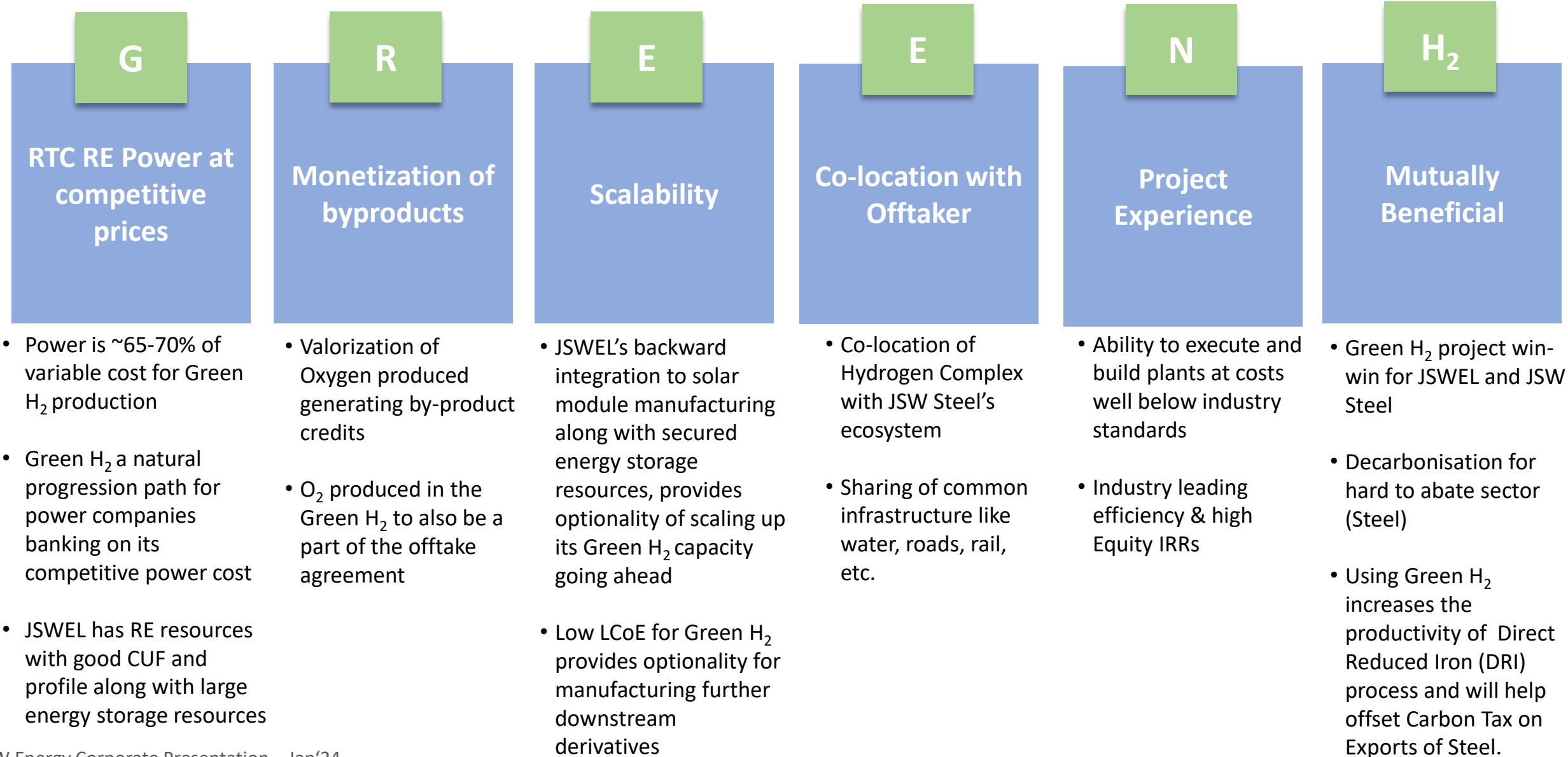
Particulars	SECI (BESS)
Tender capacity	500 MW / 1000 MWh
No. of hours backup	2 hours
Purchase agreement tenure	12 years
RTE	Min 85%
No of cycles per day	2

## Hydro Pump Storage (PSP)

- Received LoI for 2.4GWh (300 MW x 8 hours) PSP from Power Company of Karnataka Ltd (PCKL)
  - Target commissioning : 36 months from signing of PPA
  - PPA Duration: 40 years
  - JSW's proven experience with managing the largest hydro portfolio in the private sector
- Large Resources secured for ~80GWhr PSP/ 12.3 GW

State	Capacity (GW)
Karnataka	0.4
Maharashtra	3.0
Uttar Pradesh	1.7
Rajasthan	1.2
Andhra Pradesh	1.5
Telangana	1.5
Uttarakhand	3.0
<b>Resources Secured</b>	<b>12.3</b>

# Green Hydrogen Opportunity – JSW Energy’s Positioning

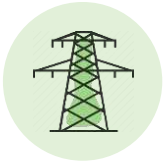


# Contracted Commercial Scale Green Hydrogen Project

## Produce Green Hydrogen for Production of Green Steel



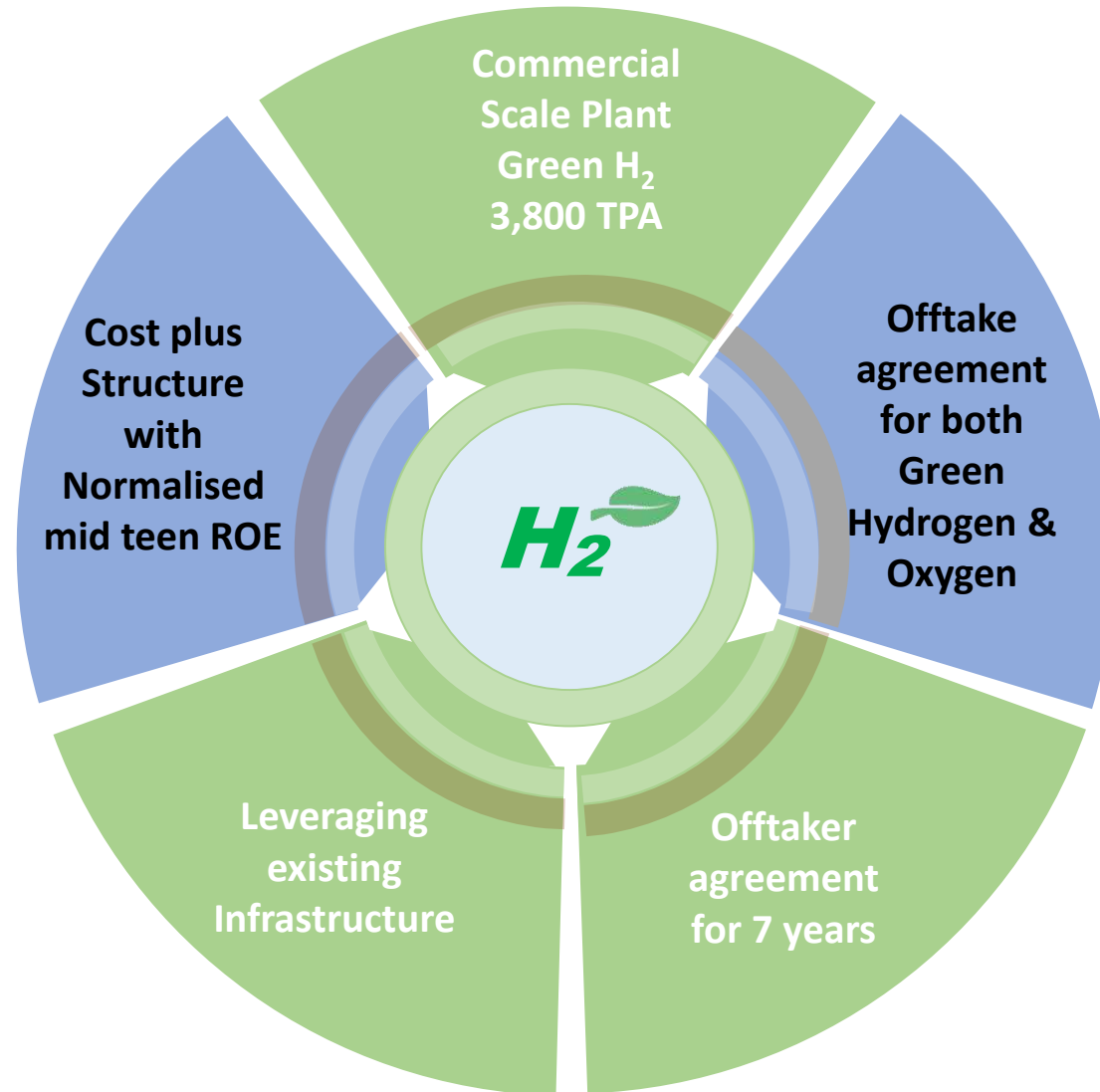
**Green Power**  
25 MW RTC power  
Secured land for plant



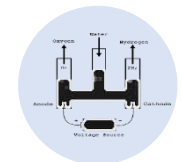
**Power Transmission**  
Existing micro grid - No power banking needed



**Full amortization of capex in 7 years with normative mid-teen RoE**



**Surety of Offtake Green Hydrogen Green Oxygen**



**Commissioning in 2025**

## NEED FOR BACKWARD INTEGRATION

Solar power is critical to transition towards green power

Tariff policy (BCD) restrictive, leading to high landed cost of cells and modules

Grid connected projects must use modules listed in ALMM

Supply reliability issue, limited domestic module capacity vs the requirement

**1 GW under PLI**



**Wafer-Cell- Module**

## BACKWARD INTEGRATION AT JSW ENERGY

Allocated 1 GW of capacity under PLI for W-C-M

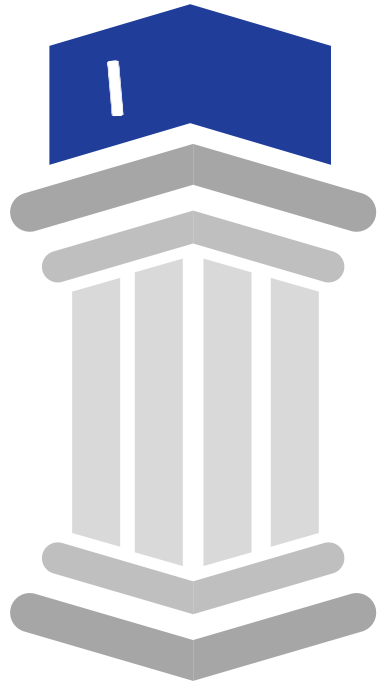
Supply Chain Derisking - strategic intent to utilize solar modules for captive usage

Eligible for ~₹ 320 Cr benefits under PLI scheme. Additional Incentives from State Government are under negotiation

Securing Resources – Location identified in Rajasthan, necessary approvals and ordering are in process

**Capital expenditure of ~₹ 1,600 Cr**

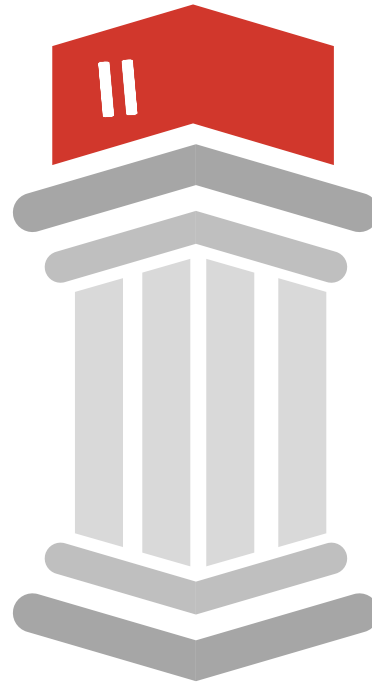
## Value Accretive Business Model



### Prudent selection of growth opportunities

- Bidding based on P90 generation assumption
- Conservative Interest rate assumptions
- Targeted selection- Targeting a niche segment of market offering healthy returns – Mid teen IRRs

## Implementation De-risking



### Life cycle approach

- Land acquisition, De- scoped project construction, power evacuation and O&M
- Power evacuation
- Proactive approach to get the PPA/PSA executed and tariff adoption

## Execution Efficiency



### Group's project execution excellence

- Fast execution while ensuring all safety guidelines

## Protecting Returns



### Value Accretive Business Model

- Bidding based on P90 generation assumption
- Conservative Interest rate assumptions
- Targeted selection- Targeting a niche segment of market offering healthy returns – Mid teen IRRs



### Implementation De-risking

- Land acquisition, De- scoped project construction, power evacuation and in-house O&M
- Proactive approach to get the PPA/PSA executed and tariff adoption



### Execution Efficiency

- Group's project execution: Fast execution while ensuring all safety guidelines

## Enhancing IRRs



### De-scoped Project Execution

- No Turn key EPC contracts: instead creating value with split package approach
- Modular commissioning; Early onset of revenues



### Attractive Financing Solutions

- Debt loading coinciding with revenue generation
- Reducing Interest cost via refinancing



### Operational excellence

- Cost reductions due to Self O&M
- Technology Improvement

## Further Growth Opportunities



### Green Energy Needs of JSW Group and C&I customers

- JSW Group has aggressive growth plans in Steel, Cement and Paints businesses providing opportunities for group captive projects



### Power to X (PtX): Green Chemicals

- Green Hydrogen and Ammonia derivatives
- Green Methanol and derivatives



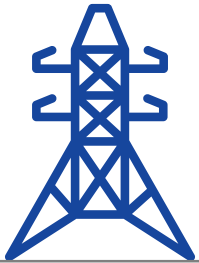
### Energy Storage: Hydro PSP and BESS



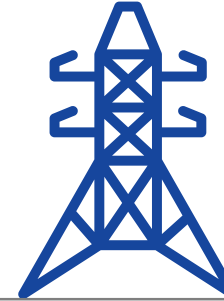
### Value Accretive M&A opportunities

# Growth Framework leading to industry-leading returns

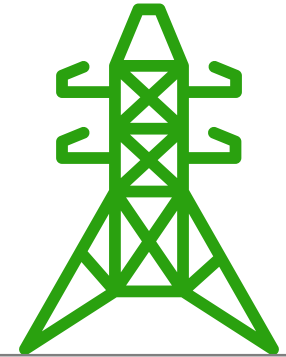
Single digit to lower teen IRR%



Mid-teen IRR %



High-teen Returns Realized



## Equity IRRs

Current market returns due to highly competitive tariffs<sup>1</sup>

## Pre-Bid Preparation

- Bidding with conservative assumptions
- Targeting a niche market segment offering healthy returns
- Pre-bid resources identification to reduce uncertainty on land & connectivity

## Project Execution

- No Turn key EPC contracts: instead creating value with split package approach
- Modular commissioning; Early onset of revenues
- Debt loading coinciding with revenue generation

## JSW Energy Target Returns

Targeting mid-teen post-tax equity IRRs

## Potential Upside Levers Post COD

- Cost reductions due to Self O&M
- Technology Improvement
- Reducing Interest cost via refinancing

## Realized Returns

Enhancement In Returns Realized

1- Company market analysis; COD: Commercial operations date; IRR: Internal Rate of Return

Investor Relations Contact:

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**JSW ENERGY LTD**  
RATNAGIRI



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**Great Place To Work® Certified™**

Recognized by Great Place To Work® India

# Appendix



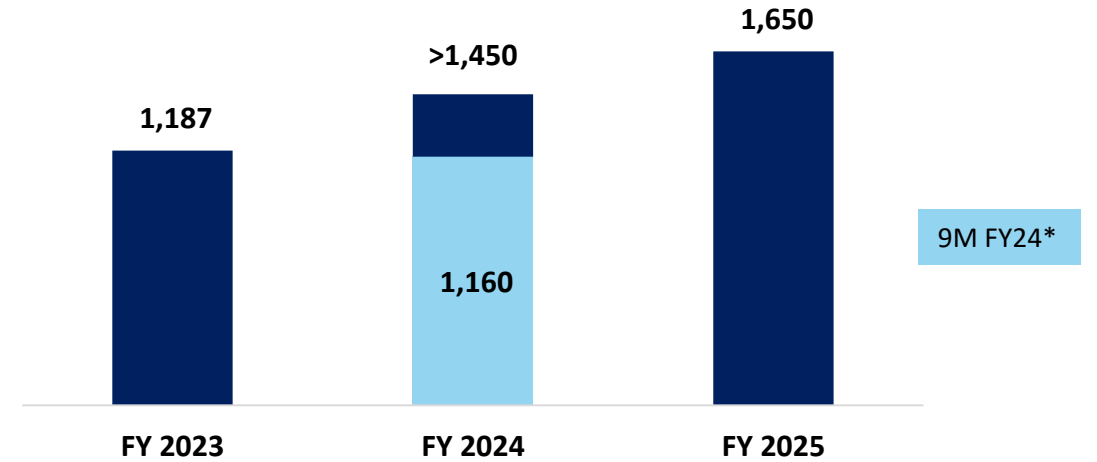
# Acquired RE Portfolio

## Asset Optimisation & Performance Improvement progressing well

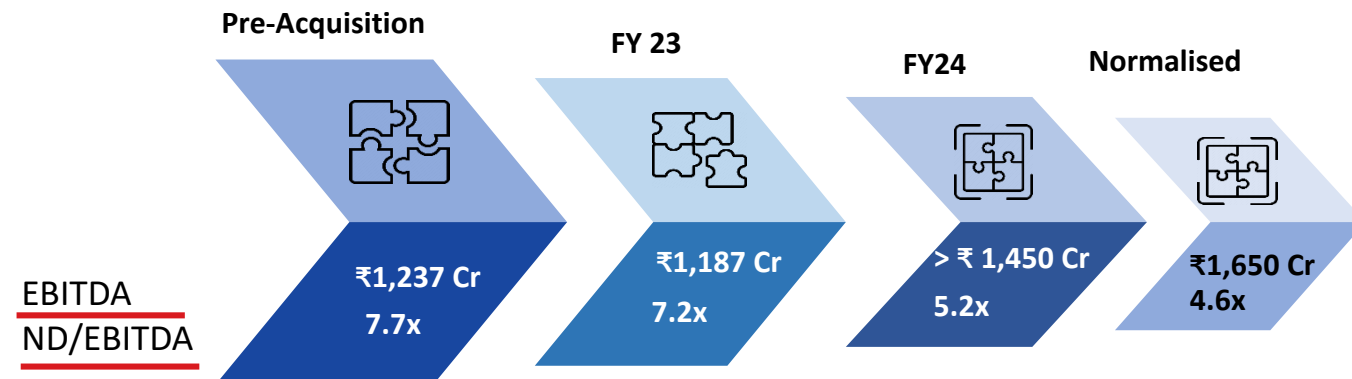


# Acquired RE Portfolio Progress on Track

## Acquired RE Assets EBITDA

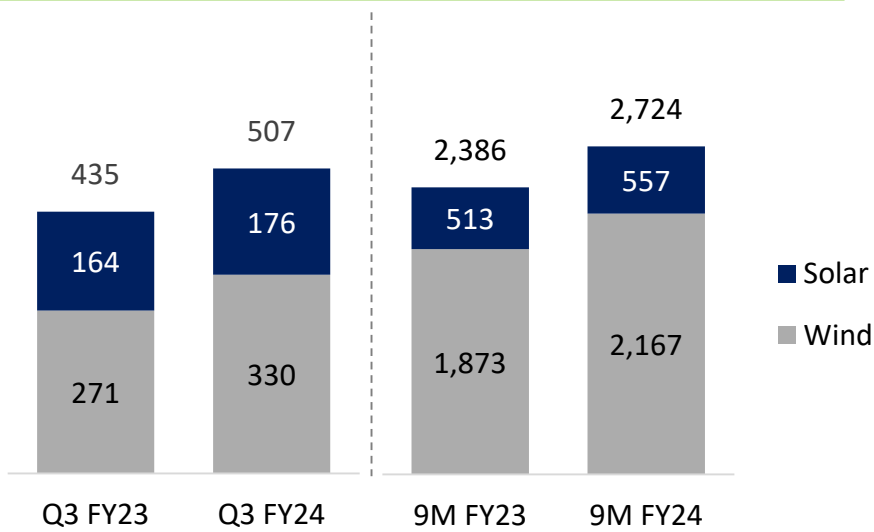


## Acquired RE Portfolio Net Debt/EBITDA

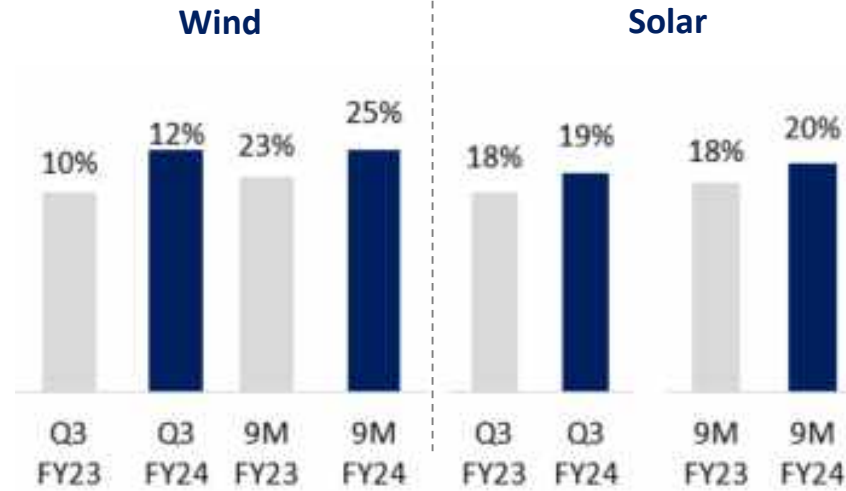


# JSW Neo - Acquired RE Portfolio

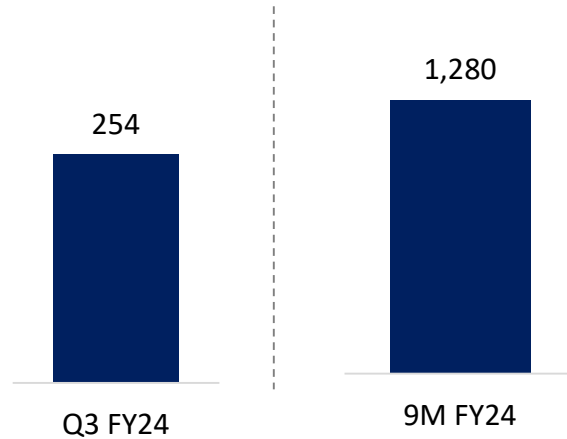
## Net Generation (MUs)



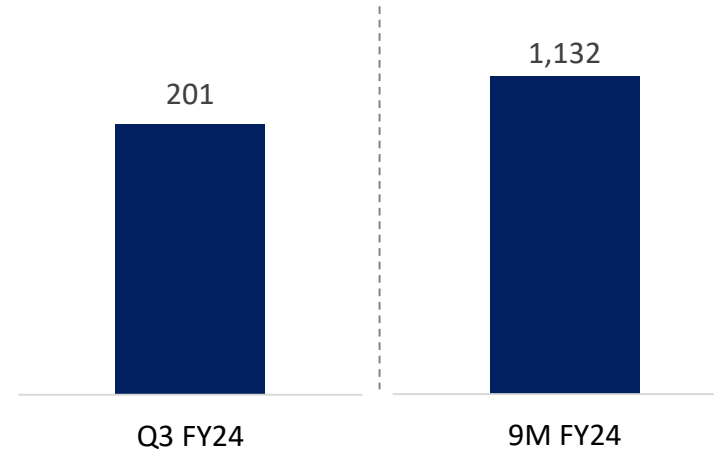
## PLF



## Segmental Revenue from Operations (₹ Cr)



## EBITDA (₹ Cr)



## Operational Highlights

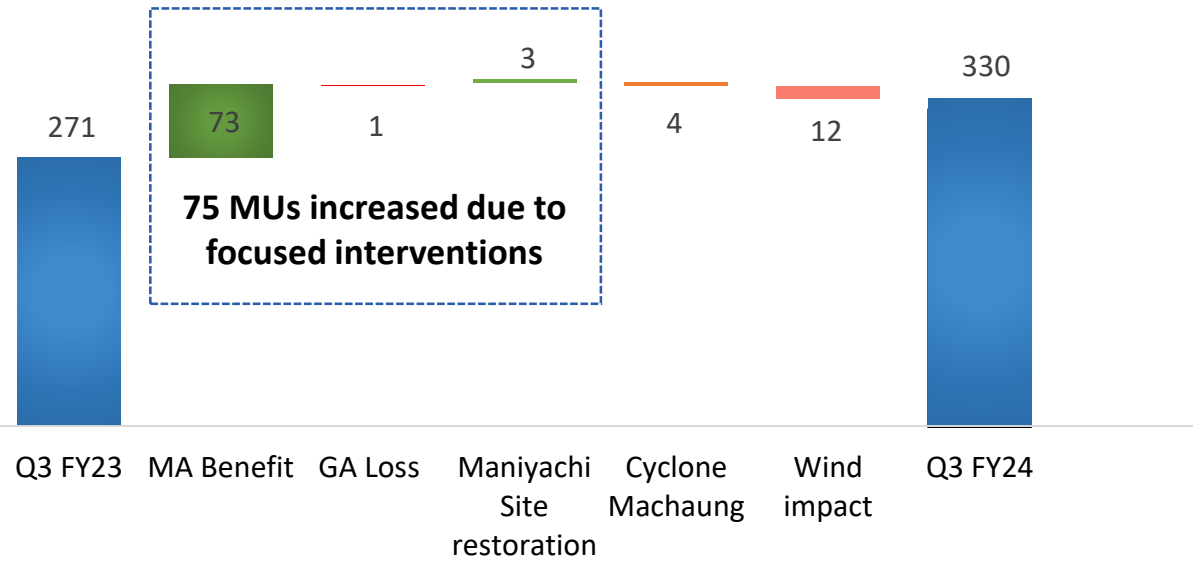
- Net generation increased 16% YoY driven by 22% increase in wind generation

## Financial Highlights

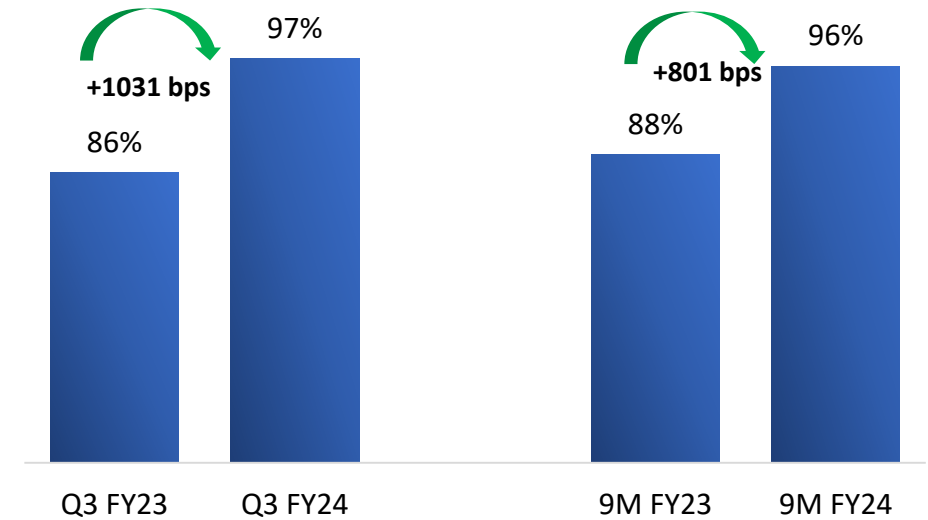
- During the quarter revenue of ₹ 254 Cr resulted in EBITDA of ₹ 201 Cr
- For 9M FY24 the revenue and reported EBITDA stands at ₹ 1,280 Cr and ₹ 1,132 Cr respectively (₹ 1,160 Cr on Proforma basis)

# Acquired RE - Progress on track

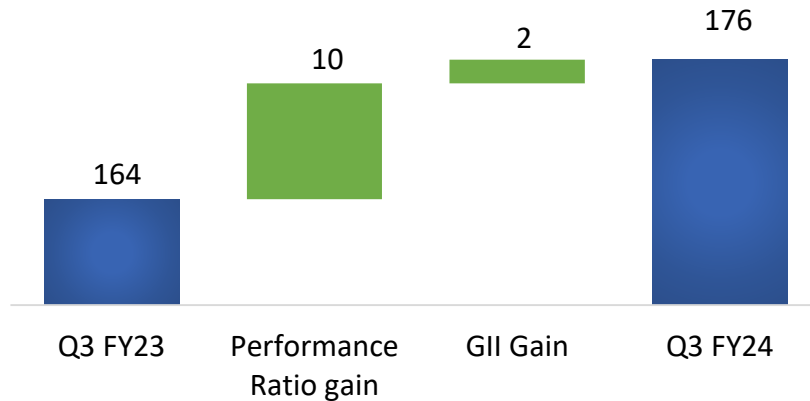
### Wind Generation (MUs)



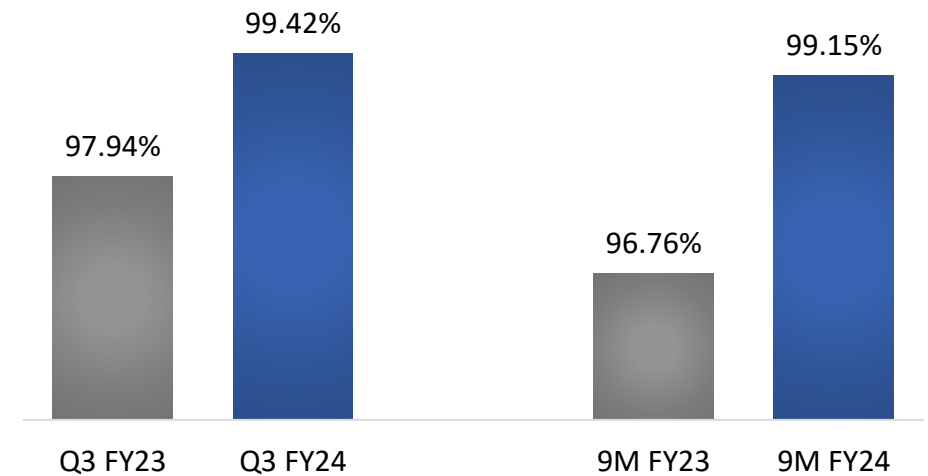
### Wind Machine Availability (%)



### Solar Generation (MUs)

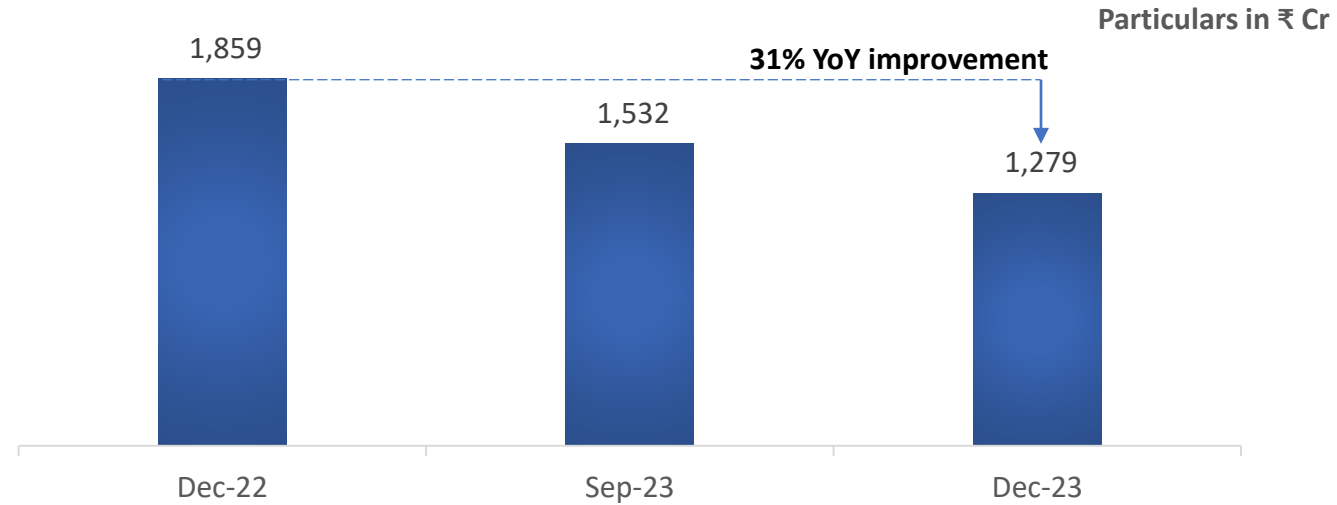


### Solar Plant Availability (%)

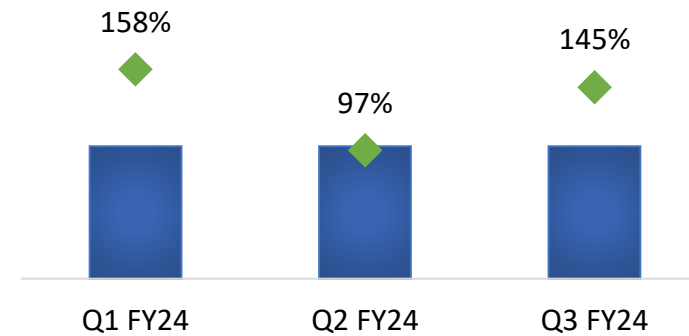


# Receivables Cycle Improving

## Strong collection in Acquired RE Portfolio's Receivables\*



## Focused O&M Interventions leading to strong billing/collection growth



Operating efficiency reflecting in strong generation and billing growth

Continued focus on collection efficiency supports further reduction in the receivables

■ Billing (Indexed to 100) ◆ Collection Including LPS

**Optimise Receivables Cycle to Healthy Levels within 12 months**

# Under Construction Projects



Acquired RE Portfolio Solar Plant (Hungund, Karnataka)

# JSW Neo- Wind Power Projects – 2.3 GW



## Wind Projects (SECI IX,X, XII and Group Captive)

- SECI IX (810MW) : 51 MW Commissioned
- SECI X (450 MW) : 232 MW Commissioned
- Approx 2 GW is under construction and to be commissioned by CY24



## Barrage & Intake

- Barrage concreting completed 86%
- Erection of spillway radial gate in advanced stages



## Tunneling & Concreting

- Completed tunneling work ~100%
- Completed HRT lining ~25%



## Power-House works

- Power house civil works completed for Unit-1 & Unit-2
- Erection of draft tube liners, spiral casing and stay ring complete in all the three units

# JSW Energy - Ind-Barath Unit 2 (350 MW)

## Revival works in Progress

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