

# Delivering Promises Realising True Potential

**Corporate Presentation | January 2024** 

# Forward Looking and Cautionary Statement (1/2)



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- 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

# JSW Group Overview



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



- 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



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



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





- 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



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



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



- 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



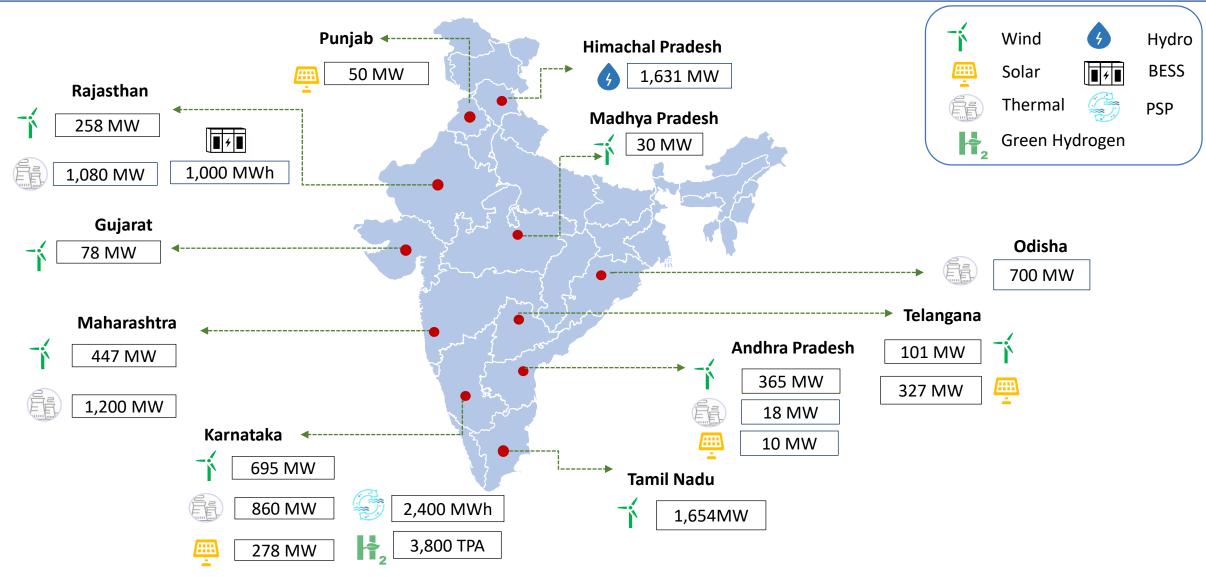
Well placed to achieve 10 GW of generation capacity ahead of stated timeline of 2025 with foray into New Age Businesses

| Power Generation  |               | Energy Storage                |                    | Energ   | Energy Products & Services    |                                 |   |
|---|---------------|-------------------------------|--------------------|---------|-------------------------------|---------------------------------|---|
| 9.8 GW Installed Capacity by CY24   |               | 3.4 GWh of locked in capacity |                    | ty Sola | Solar Module & Green H2       |                                 |   |
| RE 5.9 GW<br>Thermal 3.9 GW   |               |                               |                    |         |                               |                                 |   |
|   |               |                               |                    |         |                               |                                 |   |
| Thermal   Solar   Hydro   | Wind          | Battery Storage               | Hydro Pump Storage |         | Solar Module<br>manufacturing | Green Hydrogen<br>& Derivatives |   |
| 3.9 GW         0.7 GW         1.6 GW           39%         7%         17% | 3.6 GW<br>37% | 1.0 GWh                       | 2.4 GWh            |         | 1.0 GW                        | 3,800 TPA                       | 6 |

### Pan India Footprint of Diverse Asset Base by CY24

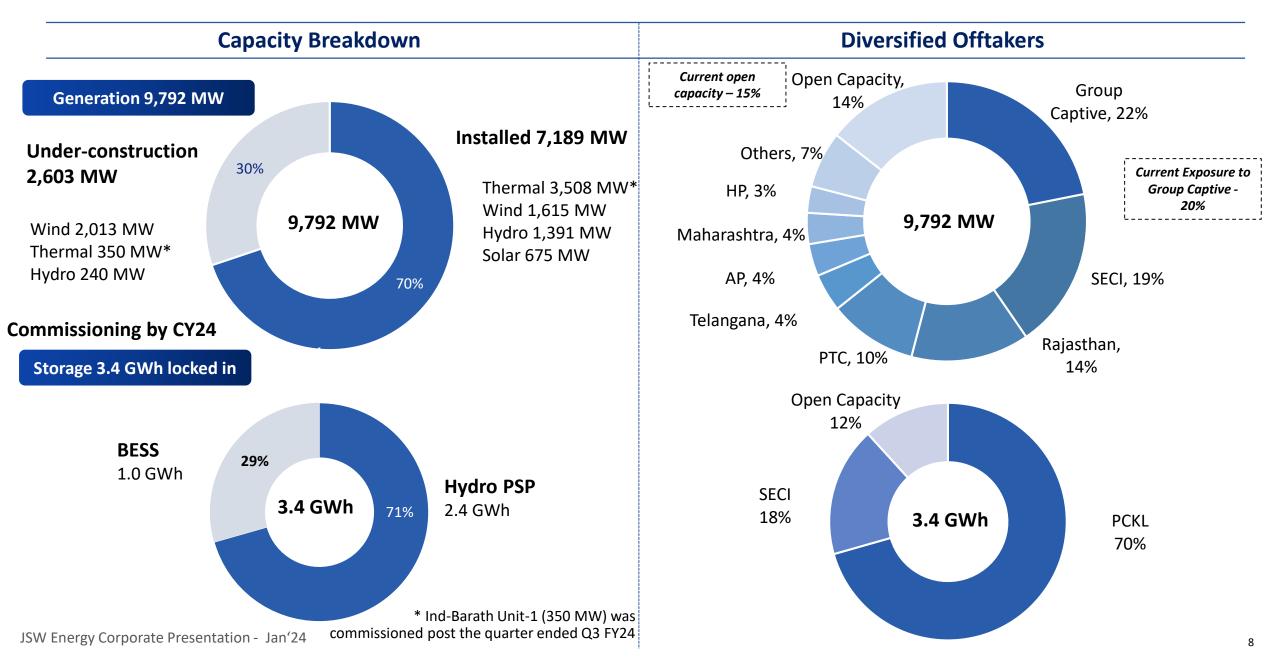


#### **Operational Capacity by CY 24 (9,792 MW)**



## Well Diversified Portfolio – Focused on Maximising Cash Returns









#### Safety & Sustainability

#### **Healthy Operations and Financials**

Why JSW Energy ?

JSW NEO – at a Glance

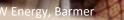
Appendix

# **Safety & Sustainability**



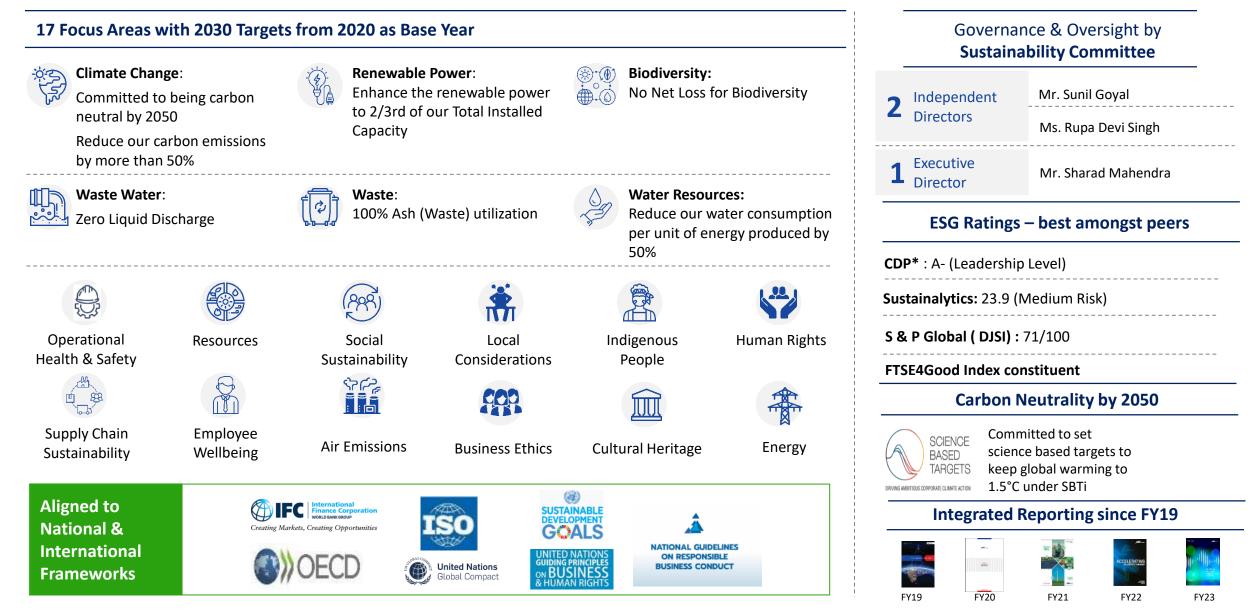
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# **Sustainability: Framework and Policies**





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\*based on CDP climate change rating 2022. CDP water security rating 2022 is B (Management). CDP Supplier Engagement rating 2022 is A (Leadership)

## **Sustainability: Targets and Strategy**



| SD Ta    | argets            |   | FY20<br>Actuals      | FY30<br>Targets                                   | Improvement       | Strategic Initiatives and Approach  |
|----------|-------------------|---|----------------------|---|-------------------|---|
|          | Climate<br>Change | <ul> <li>GHG Emissions<br/>tCO<sub>2</sub>e/ MWh</li> </ul>   | 0.76                 | 0.215 *   | 60%               | <ul> <li>TCFD – Identified associated short tem , 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>  |
|          | Water<br>Security | <ul> <li>Specific fresh water<br/>intake (m<sup>3</sup>/MWh)</li> </ul>                               | 1.10                 | 0.591   | 46%               | <ul> <li>Maintaing 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<br/>Concentration with modified chemical regime</li> <li>Reuse of treated effluent of Sewage Treatment Plan for horticulture</li> </ul>   |
| <b>İ</b> | Waste             | <ul> <li>Specific Waste (Ash)<br/>Generation (t/MWh)</li> <li>Waste Recycled - Ash<br/>(%)</li> </ul> | 0.070<br>100         | 0.032<br>100                                      | -                 | <ul> <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> |
| Ű        | Air<br>Emissions  | Specific process<br>emissions(Kg/MWh)<br>• PM<br>• SOx<br>• NOx                                       | 0.16<br>1.78<br>1.01 | 0.053<br>0.683<br>0.373                           | 67%<br>61%<br>63% | <ul> <li>Ensuring ESP (Electrostatic Precipitator) Fields availability</li> <li>Optimising Lime dozing system efficiency</li> <li>Process efficiency improvements</li> </ul>  |
|          | Biodiversity      | <ul> <li>Biodiversity at our<br/>operating sites</li> </ul>   | -                    | Achieve<br><b>'no net loss'</b><br>of biodiversit |                   | <ul> <li>Implementation of Bodiversity 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** Performance Increased share of renewable energy for deep decarbonisation Ash Utilisation (%) Climate Wind Projects – Tuticorin – generation started and commissioned 232.2 Change MW till Q3 FY 24. 100% 100% Continuous focus on process improvements to reduce GHG emission Maintained zero liquid discharge across operations FY22 **FY23** Water Optimizing utilization of rain water harvesting system. 44,866 m3 water utilized by Security Ratnagiri Plant by this method Reuse of treated effluent of Sewage Treatment Plant for horticulture CO2 intensity (tCO2e/MWh) 0.68 0.68 Reutilising pond ash as well as bottom ash in Boiler. • 0.60 0.59 Continue 100% Ash utilization initiatives at all plants through tie-ups with ٠ **Jaste** cement factories & similar businesses Over 19,200 MT Fly ash exported by Ratnagiri Plant FY22 FY23 9M FY24 FY24 Ensuring ESP (Electrostatic Precipitator) Fields availability Target Process efficiency improvements being done in all plant locations **Emissions** SOx Emissions (kg/MWh) Lime Dozing system availability and parameters optimization at Barmer to reduced air emissions 1.55 1.25 1.15 1.03 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 **Biodiversitv** planned completed at Ratnagiri Plant. FY22 9M FY24 **FY23** FY24 Biodiversity Assessment – Phase 2 is in process for Ratnagiri Plant Target

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#### FY 2024 Targets include generation from Ind-Barath Thermal Power Plant for part of the year 13

100%

**FY24** 

Target

0.140

FY22

0.81

FY22

100%

9M FY24

PM Emissions (kg/MWh)

0.110

FY24

Target

0.65

FY24

Target

0.103

9M FY24

0.54

9M FY24

0.122

FY23

0.69

FY23

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 23 rd 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



Audit Committee

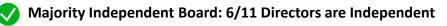
Mr. Munesh Khanna Independent Director



Mr. Rajeev Sharma



Mr. Desh Deepak Verma Independent Director



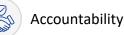
V Fully Independent Audit and Compensation and Remuneration Committees



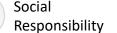
Mr. Rajiv Chaudhri Independent Director

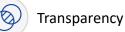


- Risk management Committee
- Stakeholder's relationship Committee
- Corporate social responsibility Committee
- Sustainability Committee
- Permanent invitees to Sustainability Committee











**Our Core Principles** 

Environment





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# **Healthy Operations and Financials**

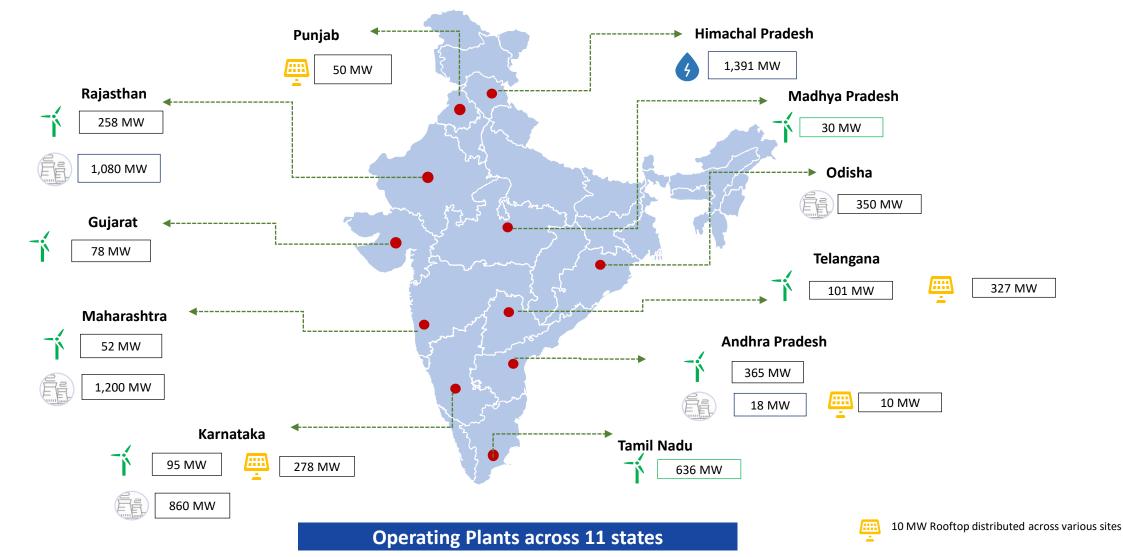
RACE

Sholtu Hydro Power Plant - Turbine

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



**Current Operational Capacity (7,189 MW)** 



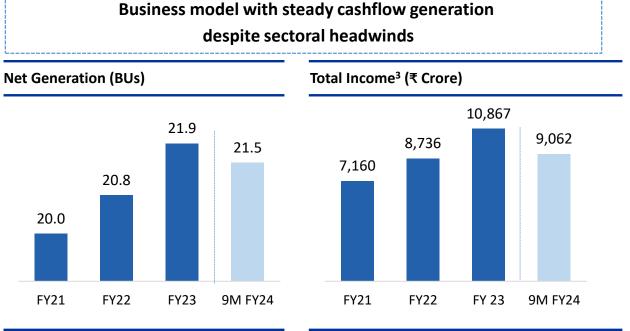
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## **Healthy Operations and Financials**



| <b>85%</b>                         | ~90%                        |  |  |
|------------------------------------|-----------------------------|--|--|
| Capacity under LT PPA <sup>1</sup> | EBITDA contribution from LT |  |  |
| ~22BUs                             | ₹ 3,138Cr                   |  |  |
| Net Generation                     | 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

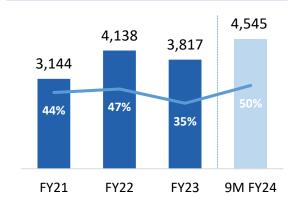


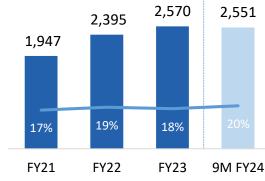
EBITDA & EBITDA Margin (₹ Crore)

20.0

FY21

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

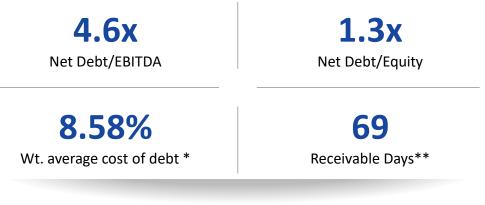




LT : Long Term, ₹1 Crore = 10Mn; 1 - As on Dec 31, 2023 ; 2- Calculated as PAT+ Depreciation+ Deferred Taxes+ Exceptional items (on TTM basis as on Dec 31, 2023); 3-Not comparable YoY in FY21 due to Change to Job Work Model Partially

## **Robust balance sheet to support renewable-led growth**

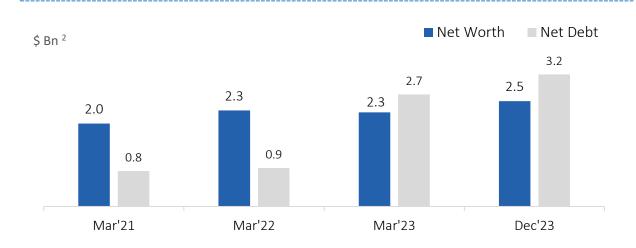


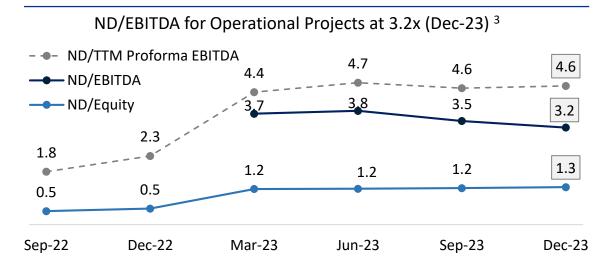


Figures as of December 31, 2023

- ✓ 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
- $\checkmark$  Operating portfolio generating healthy CF & mid-teen equity IRR
- ✓ Weighted average cost of debt\* is 8.58% as of Dec 31, 2023

Robust balance sheet & strong cashflow available to pursue growth





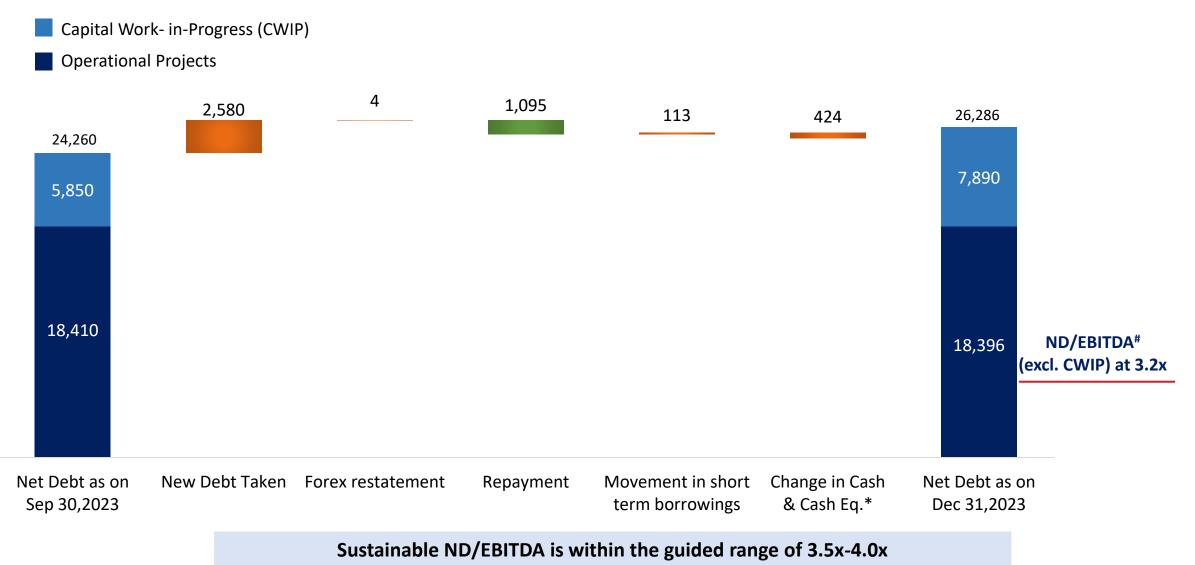
1 Value of JSW Steel Share holdings as on Dec 31 2023

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





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\* Includes unencumbered bank balances, FDs, and liquid mutual funds. # ND/Proforma EBITDA excluding debt on under-construction projects 20

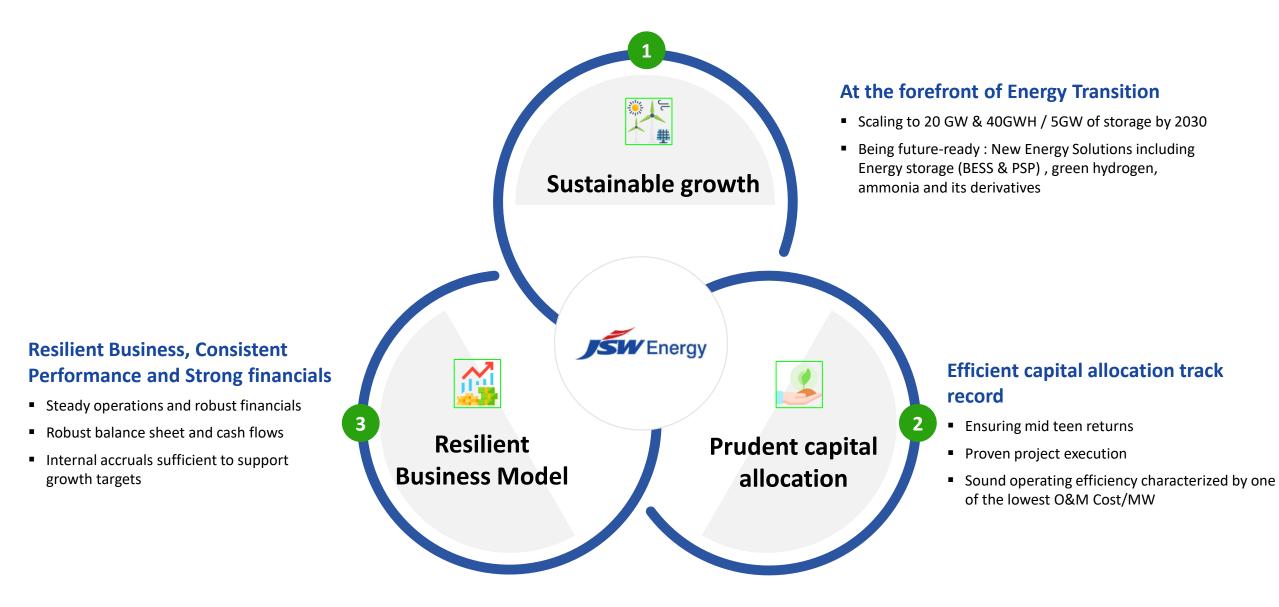
# Why JSW Energy ?

- Investment Story
- Key Highlights

Committed to reaching Net Zero emissions by 2050

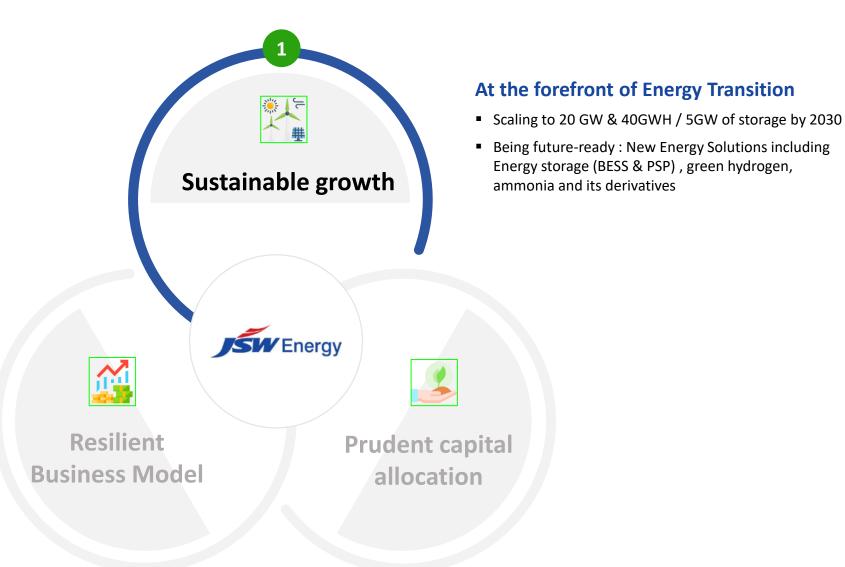
### JSW Energy | Investment Story



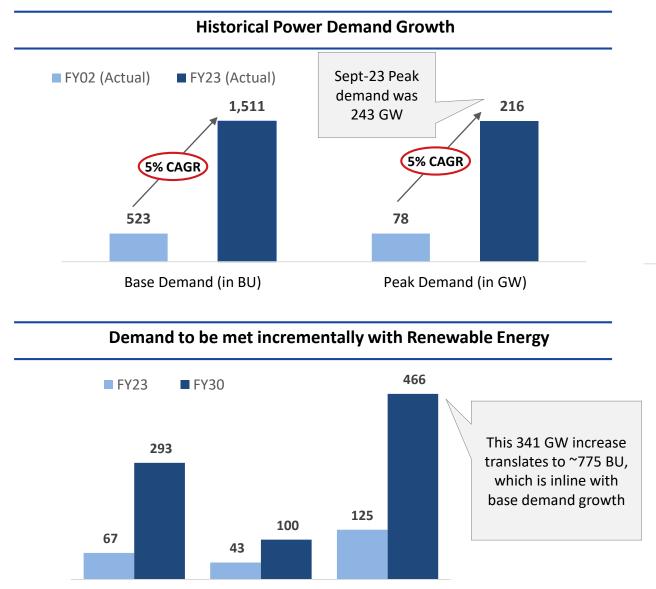


### JSW Energy | Investment Story



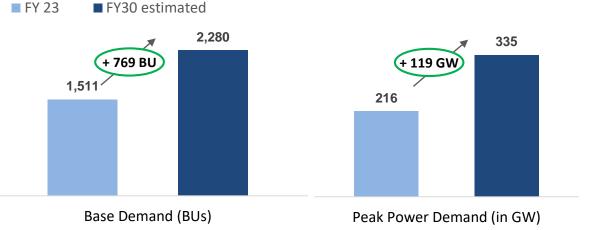


# Significant Market Opportunity: Power Demand Growth to be met by RE



Total Renewable

Similar growth expected in power demand over next decade



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

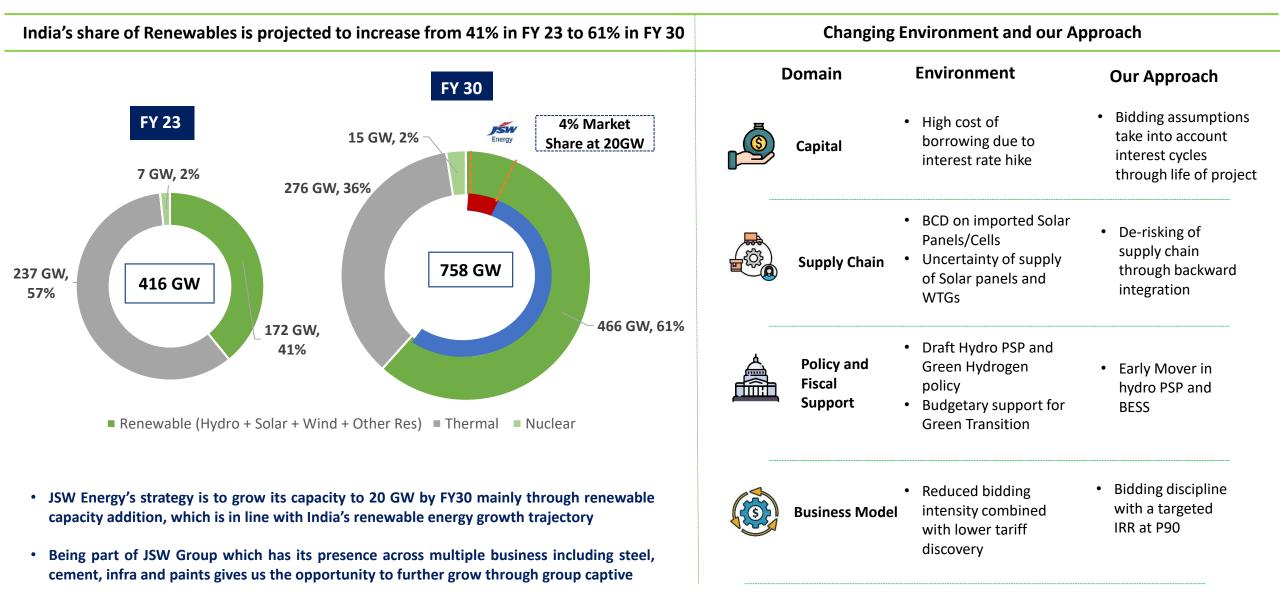
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Wind

Solar

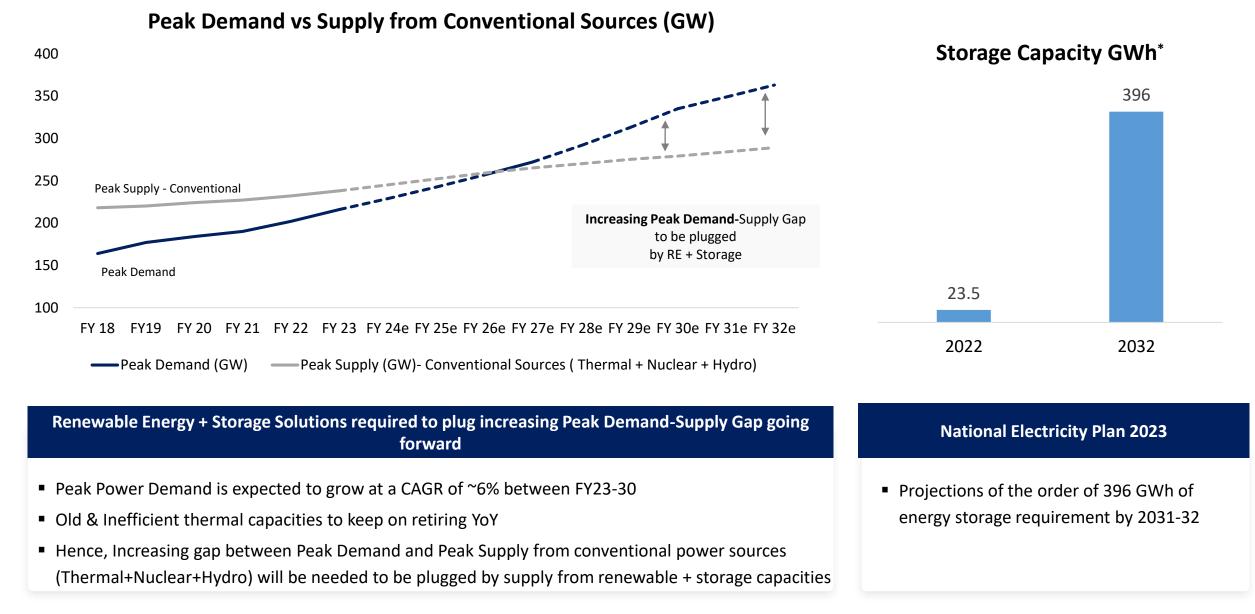
## **Participating in India's Green Transition**

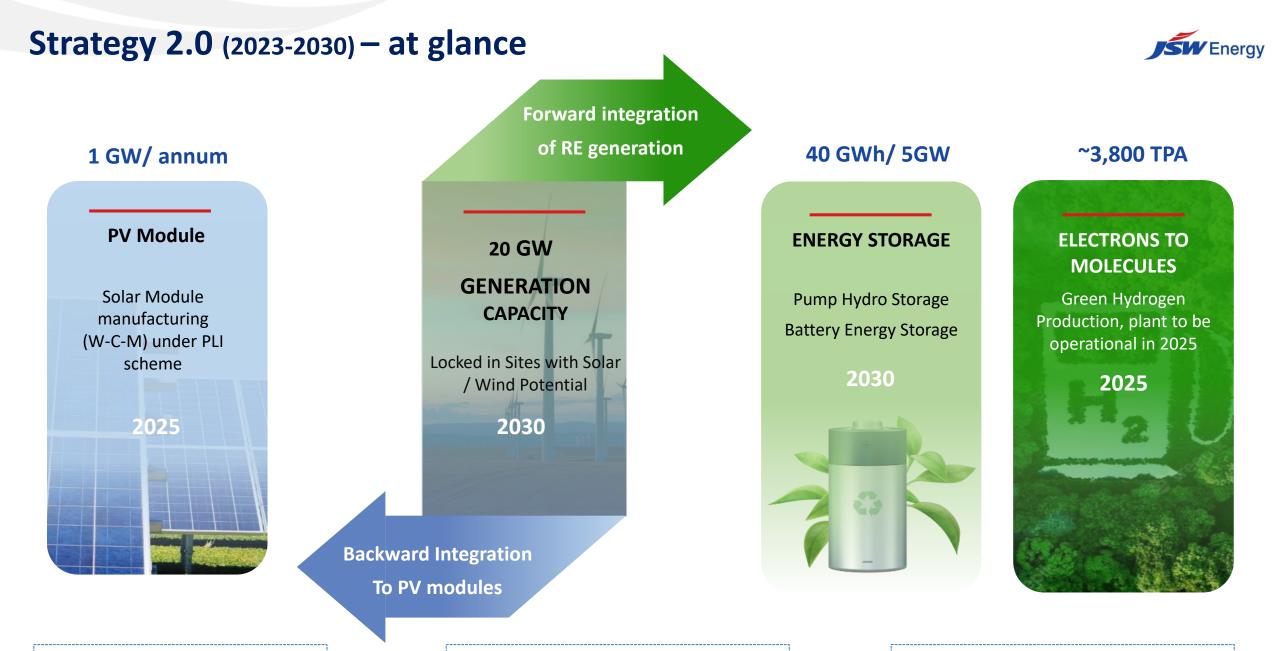




## **Energy Storage critical in India's Energy Transition**







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

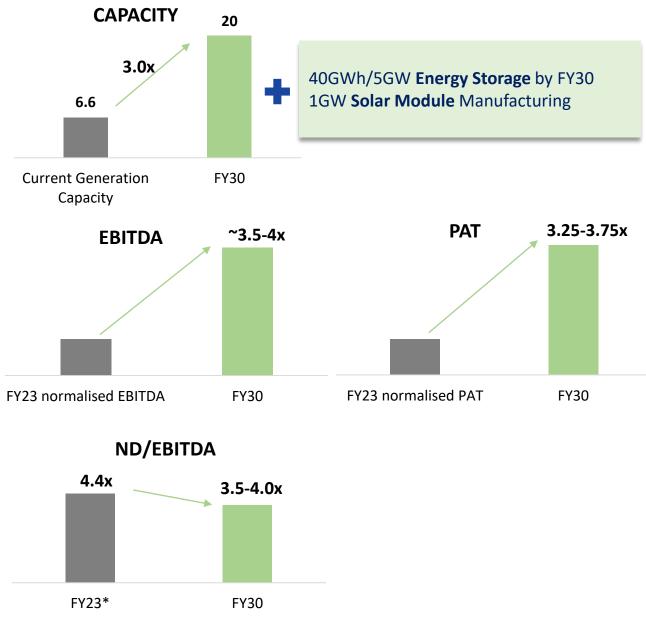
#### **Growth Multipliers**

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

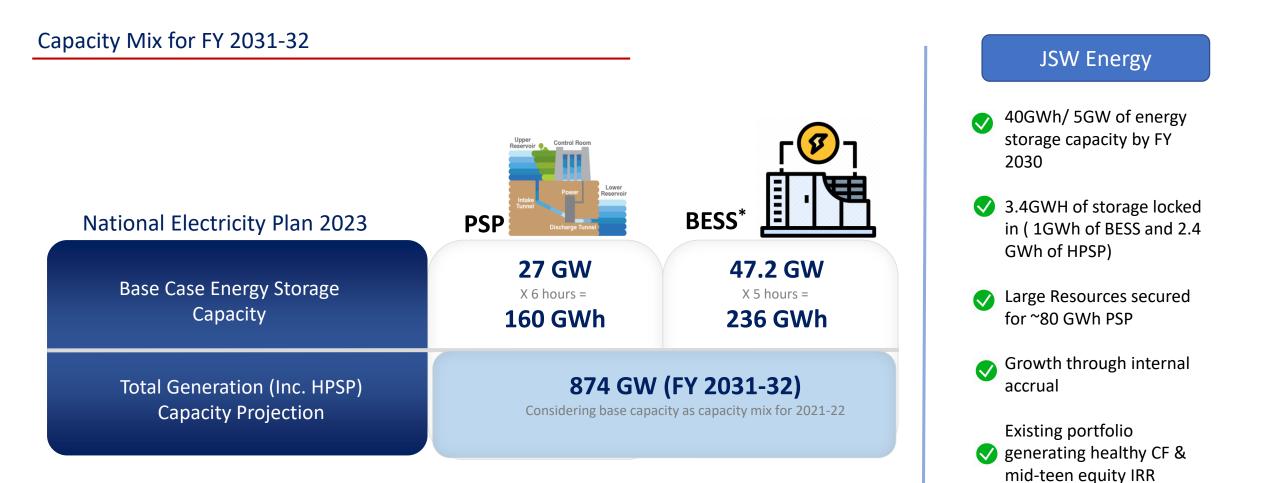
- 85% of portfolio tied-up under Long Term PPA; Remaining
   Avg. Life of Assets/PPA: ~24years / ~18 years
- Financial flexibility enhanced by equity investments: JSW Steel shares: 7 Cr shares held (Value as on Dec 31, 2023: ₹ 5,640 Cr)
- Healthy receivables management and low working capital cycle



1 Adjustment in net worth by excluding the value of shares of JSW Steel \* Proforma Net Debt 28

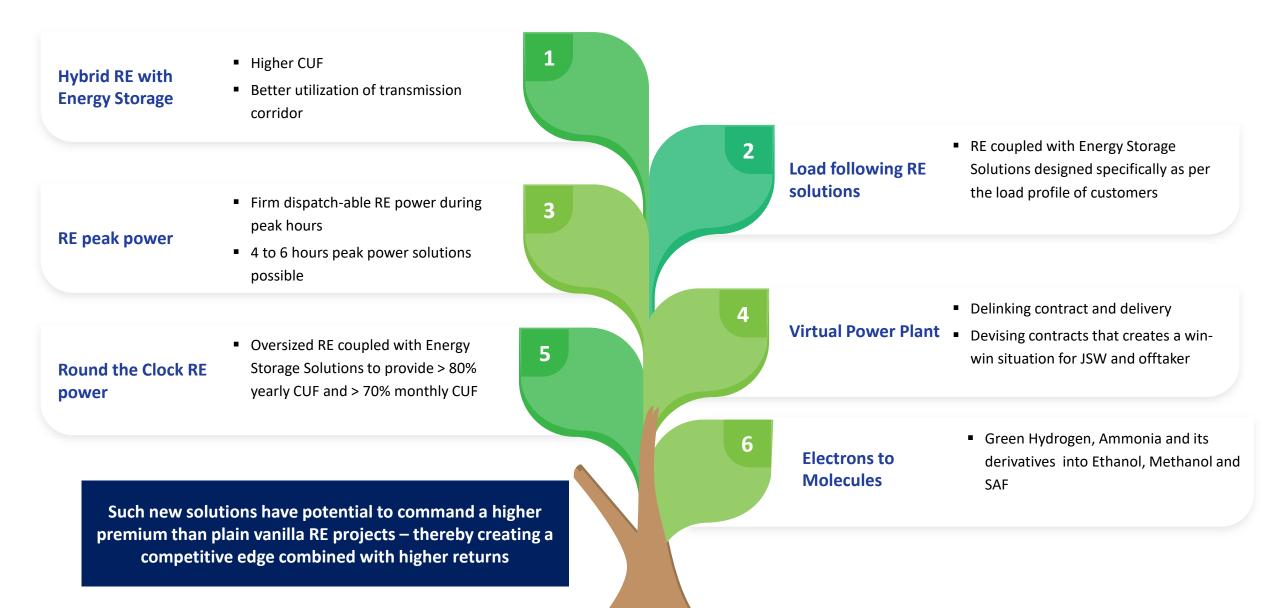
# Battery Storage (BESS) and Hydro Pump Storage (HPSP)





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





### **Electrons to Molecules: Green Hydrogen Potential**



Advantage India

| Significant Hydrogen demand<br>Current demand ~6 MMT expected<br>to grow to ~24 MMT by 2050 | Huge RE potential<br>Existing RE capacity of ~181 GW<br>(incl. Hydro)<br>Target – 50% of capacity share of<br>RE by 2030 | Low Tariffs<br>RE tariffs in India<br>(INR ~ 2.5-3.0) |  |
|---|--|---|--|
| India's Import Bill   | <b>Clean energy Commitment</b>   | Infrastructure build                                  |  |
| India is 3 <sup>rd</sup> largest consumer of oil &  | GH adoption contributes to   | Large part of India's infrastructure                  |  |
| gas, imports ~ <b>85%</b> of oil and ~ <b>50%</b>   | emission reduction & meet energy   | needs to be built out, allows better                  |  |
| of Gas  | demand   | integration   |  |



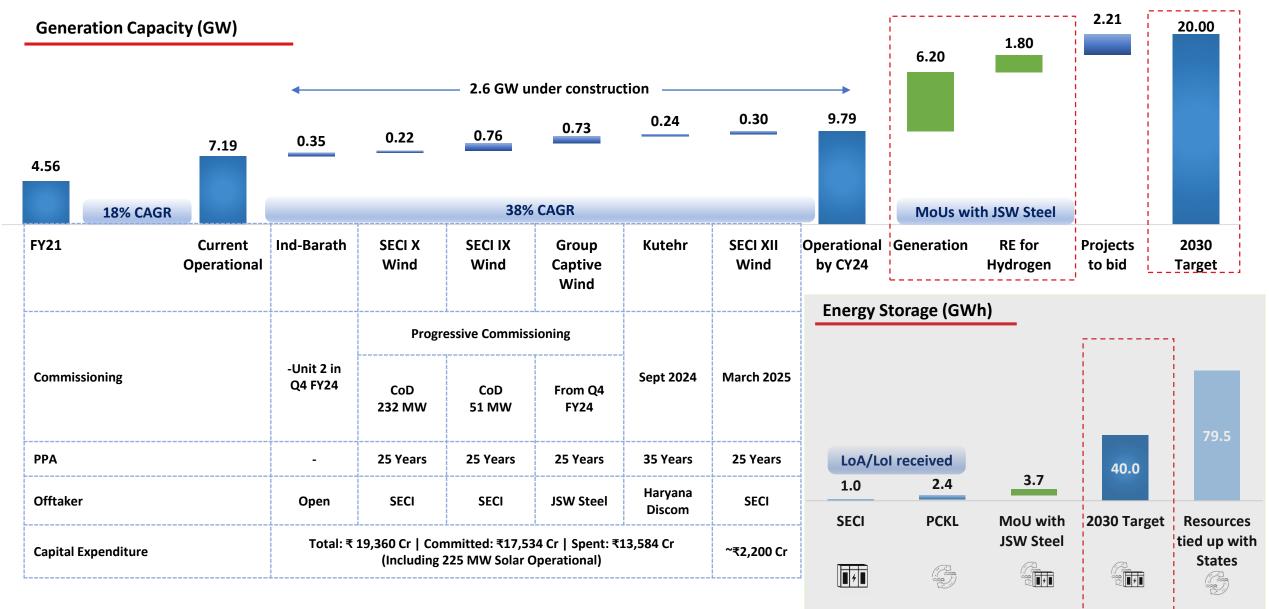
#### JSW Energy

- 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.

| <b>Grey Hydrogen:</b> Currently, more than 95% of hydrogen is produced from fossil fuels via carbon intensive processes. |                 | <b>Blue Hydrogen:</b> Grey hydrogen whose of production is sequestered via carbon ca (CCS) |                         |                 | <b>Green Hydrogen:</b> Low or zero-emission hydrogen produced using clean energy sources |                               |                 |      |
|--|-----------------|--|-------------------------|-----------------|--|-------------------------------|-----------------|------|
| Main production route Characteristics  |                 | Main production route  | Characteristics         |                 | Main production route  | Characteristics               |                 |      |
| Steam Methane Reforming (SMR)  |                 |  | SMR + CCS               |                 |  | Electrolysis using renewables | Ļ               |      |
|  | Intense         | Low  | Coal Gasification + CCS | Low             | High   |                               | Zero            | High |
| Coal Gasification  | CO <sub>2</sub> | Cost   | Coal Gasification + CCS | CO <sub>2</sub> | Cost   |                               | CO <sub>2</sub> | Cost |

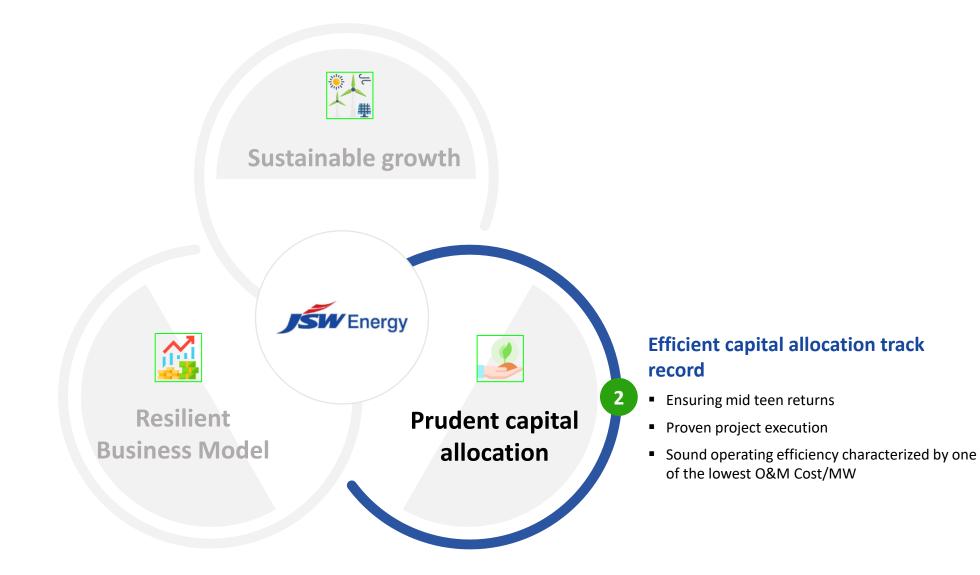
#### **Progress on Strategy 2.0**





### JSW Energy | Investment Story





### Proven project execution and operational excellence...



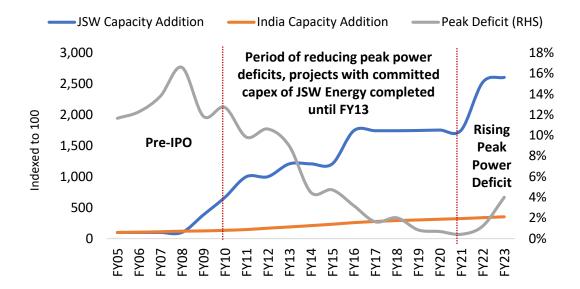
Prudent and consistent capital allocation strategy for growth over a 25 year history

Selective bidding to ensure mid teen returns

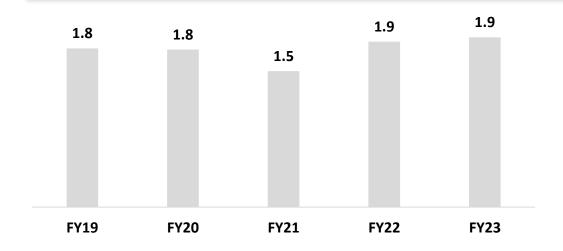
Successful integration of inorganic capacities

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

| 2014 2014   | 2013 2014                                    | 2013 201                                     | 1 2009 2010                               | 2010  | 2000 2009                                |
|---|--|--|---|---|--|
| 7.9<br>7.0<br>1.0<br>0.8                          | 6.3       6.2         0.8       0.7          | 6.2<br>0.7<br>0.6                            | 5.2     4.7       0.6     0.6             |   | .3<br>.5 0.4                             |
| Nigre<br>(1320 MW)<br>Jangiri-Champa<br>(1200 MW) | Warora<br>(600 MW)<br>Chandrapur<br>(600 MW) | Padampur<br>(540 MW)<br>Maithon<br>(1050 MW) | Amarkantak<br>(600 MW)<br>Udupi<br>(1200) | JSW : Ratnagiri2<br>(1200 MW)<br>JSW : Vijaynagar | (260 MW)<br>JSW : Vijaynagar<br>(600 MW) |
| 1 <sup>st</sup> COD year                          | \$Mn/  | ′MW>   | Rs. Cr/MW                                 |   |  |



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



## JSW Energy | Investment Story





### **Robust Balance Sheet & Cashflows**





#### Balance sheet headroom to pursue growth opportunities

Strong Financials

.

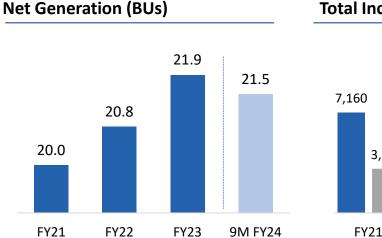
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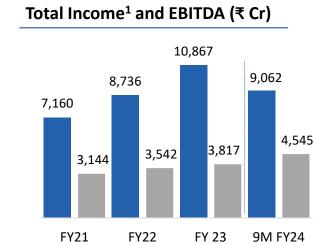
| Particulars  | As on December 31,<br>2023 |
|--|----------------------------|
| Networth   | ₹ 20,976 Cr                |
| Net Debt   | ₹ 26,286 Cr                |
| Net Debt/TTM Proforma EBITDA                                     | 4.6x                       |
| Net Debt/TTM Proforma EBITDA (excl.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

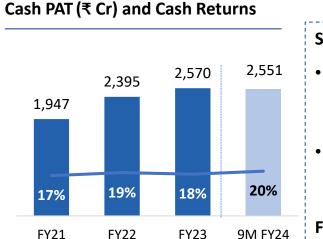
- Healthy Credit Ratings and access to diverse pools of liquidity
  - India Rating & Research: IND AA (Outlook Stable)
  - ICRA Ltd: ICRA AA/ Stable
- Strong Liquidity with healthy cash balances: ₹2,867 Cr\*

# **Steady Operations and Robust Financials**









#### 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**

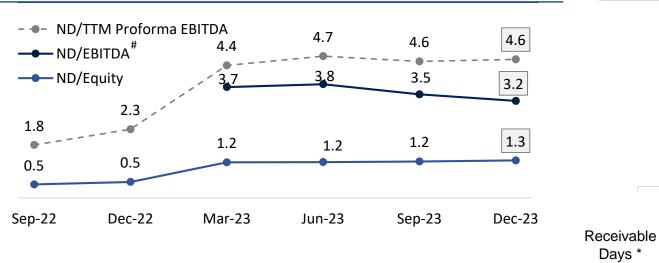
- Strong leverage ratio, Net Debt to operating EBITDA of 3.2x
- JSW Steel shares: 7 Cr shares held (Value as on Dec 31, 2023: ₹ 5,640Cr)

#### Receivables

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

#### ND/EBITDA for Operational Projects at 3.2x



#### Healthy receivables days

1,628

Dec 31, 2022

69

1,857

Dec 31, 2023

69

1.Not comparable YoY from FY21 due to Change to Job Work Model Partially

# ND/Proforma EBITDA excluding debt on under-construction projects \* Includes Unbilled Revenue and excluding Acquired RE Portfolio receivables

# **JSW Energy : Key Highlights**



|    | Proven Execution<br>Excellence     | <ul> <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>   |
|----|------------------------------------|---|
|    | Focus on<br>Sustainability         | <ul> <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> |
| Ø  | Efficient O&M                      | <ul> <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>   |
| Í. | Steady EBITDA and<br>Cash accruals | <ul> <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>  |
| ¢  | Healthy Receivables                | <ul> <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>   |
|    | Strong Balance Sheet               | <ul> <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>   |
| ES | Low Cost of Funding                | <ul> <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>   |

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# JSW Energy – at a glance

# **Thermal Assets**



Ratnagiri 1,200 MW

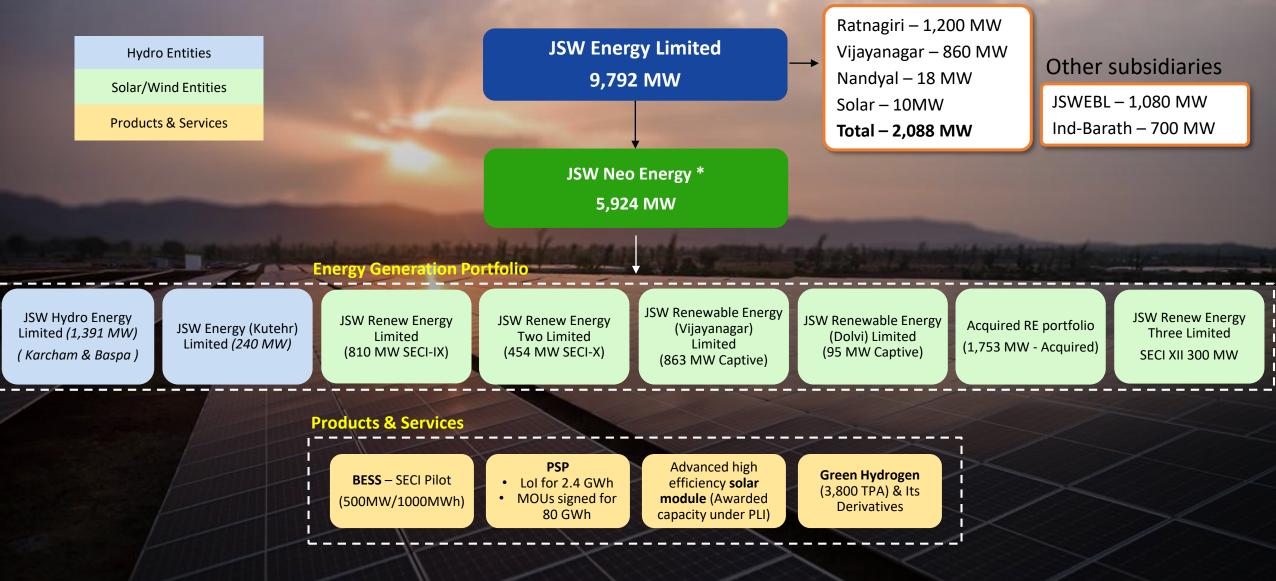


Barmer 1,080 MW

Ind Barath 700 MW

JSW Energy Limited

### JSW Energy – Broad Corporate Structure

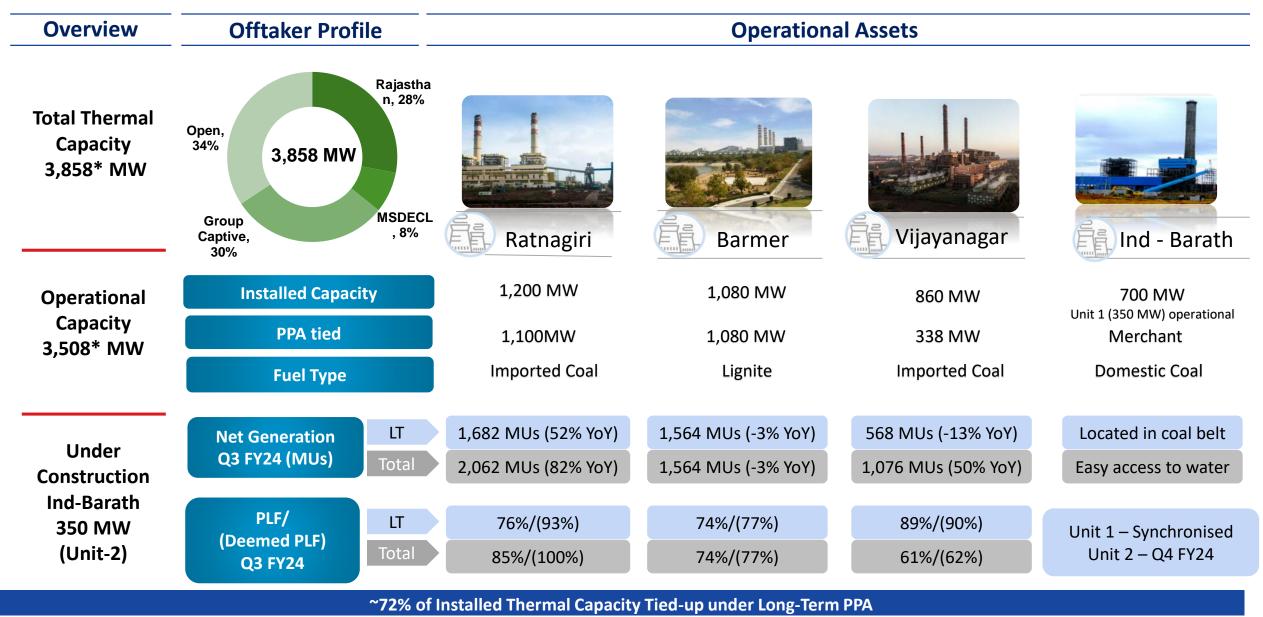


Standalone

\* Corporate structure post Acquisition and restructuring. Includes 18 MW of operational solar power plant for JSW group captive. All subsidiaries shown are wholly owned subsidiaries except RE CPP

# Thermal Assets | Q3 FY24 Highlights

**Energy** 



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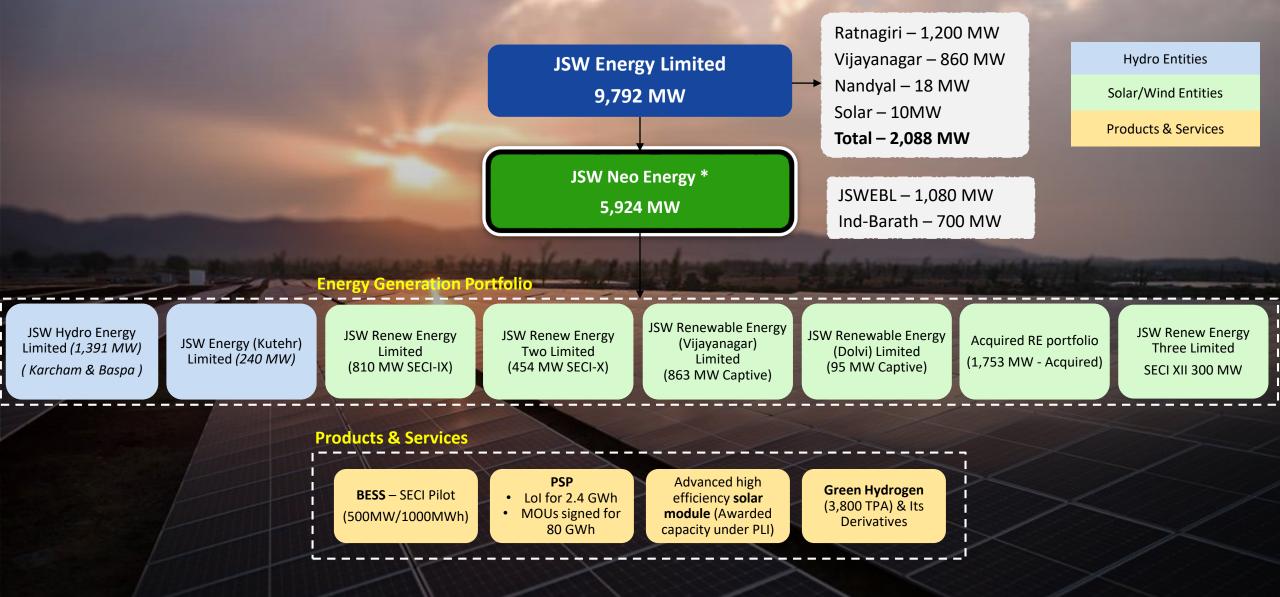
\*Including 18 MW TPP at Nandyal; Ind-Barath Unit-1 (350 MW) was commissioned post the quarter end 42

# **Renewable Assets - 5.9 GW**





### **JSW Energy** – Broad Structure

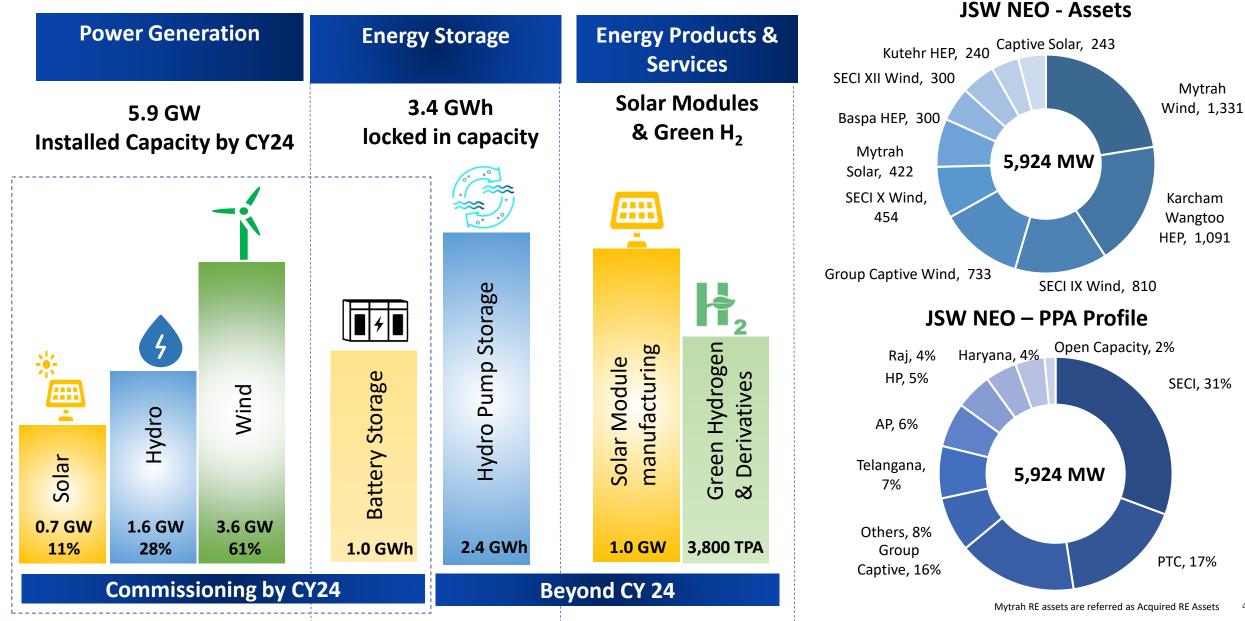


\* Corporate structure post Acquisition and restructuring. Includes 18 MW of operational solar power plant for JSW group captive. All subsidiaries shown are wholly owned subsidiaries except RE CPP

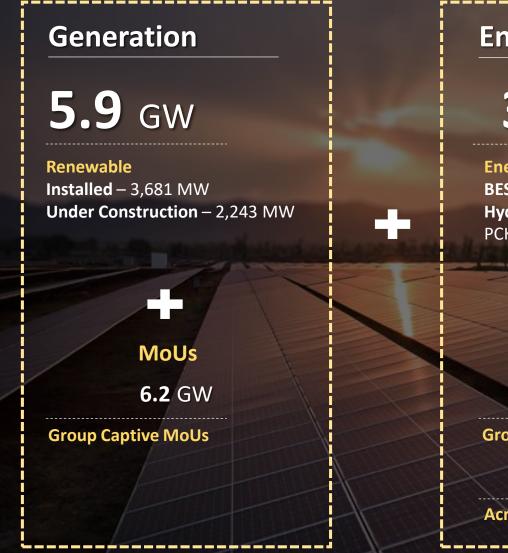
# JSW Neo – Presence across the value chain

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

Energy



### JSW NEO Energy – At a Glance



### 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

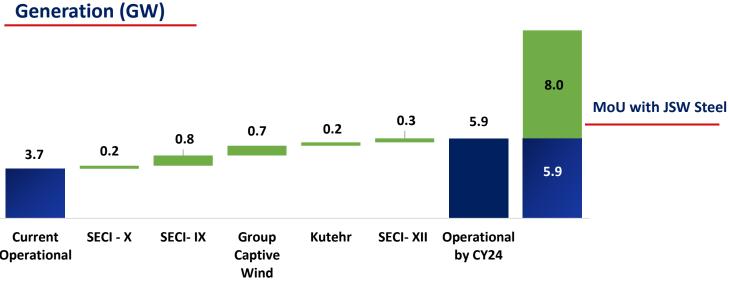
Green  $H_2$  - 85-90 KTPA Green  $O_2$  - 720 KTPA

**Group Captive MoUs** 

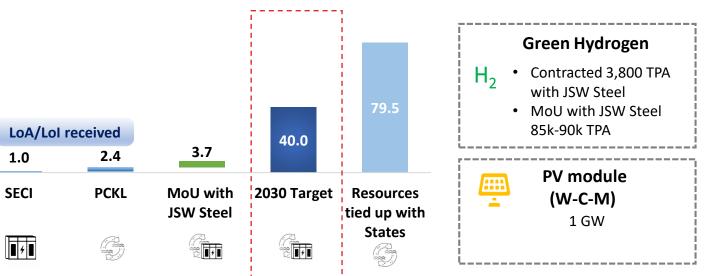
# JSW Neo – Multiple Growth Drivers







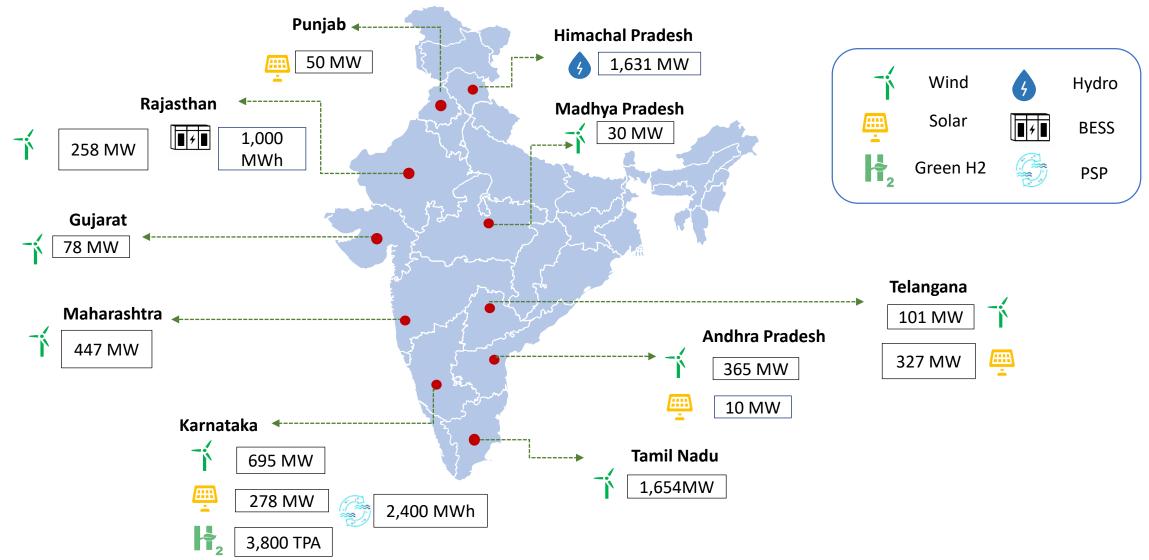
#### **Energy Products & Services**



# 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           |  |
| Resources Secured | 12.3          |  |

# **Green Hydrogen Opportunity – JSW Energy's Positioning**



RTC RE Power at competitive prices

G

- Power is ~65-70% of variable cost for Green H<sub>2</sub> production
- Green H<sub>2</sub> a natural progression path for power companies banking on its competitive power cost
- JSWEL has RE resources with good CUF and profile along with large energy storage resources

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 Valorization of Oxygen produced generating by-product credits

R

**Monetization of** 

byproducts

- O<sub>2</sub> produced in the Green H<sub>2</sub> to also be a part of the offtake agreement
- JSWEL's backward integration to solar module manufacturing along with secured energy storage resources, provides optionality of scaling up its Green H<sub>2</sub> capacity going ahead

Ε

**Scalability** 

 Low LCoE for Green H<sub>2</sub> provides optionality for manufacturing further downstream derivatives  Co-location of Hydrogen Complex with JSW Steel's ecosystem

Ε

**Co-location with** 

Offtaker

- Sharing of common infrastructure like water, roads, rail, etc.
- Ability to execute and build plants at costs well below industry standards

Ν

Project

**Experience** 

- Industry leading efficiency & high Equity IRRs
- Green H<sub>2</sub> project winwin for JSWEL and JSW
   Steel

Η,

Mutually

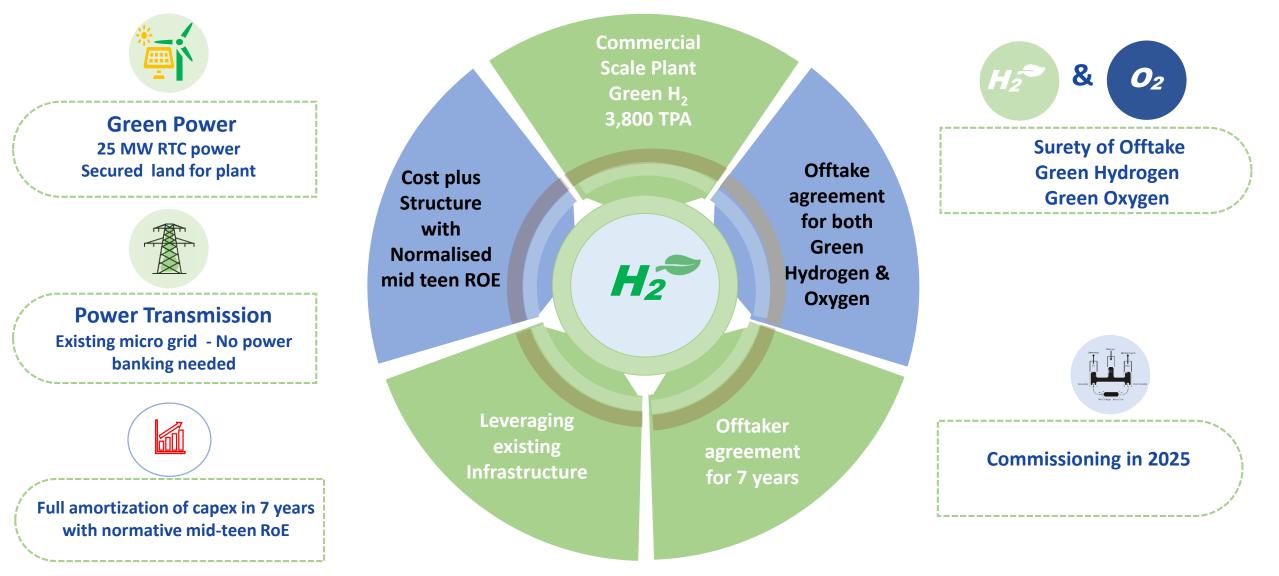
**Beneficial** 

- Decarbonisation for hard to abate sector (Steel)
- Using Green H<sub>2</sub> increases the productivity of Direct Reduced Iron (DRI) process and will help offset Carbon Tax on Exports of Steel.

# **Contracted Commercial Scale Green Hydrogen Project**



### **Produce Green Hydrogen for Production of Green Steel**



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Learning Curve from this project to offer Optionality to Scale Up for Future Projects

# **Solar Module Manufacturing – Supply Chain De-risking**

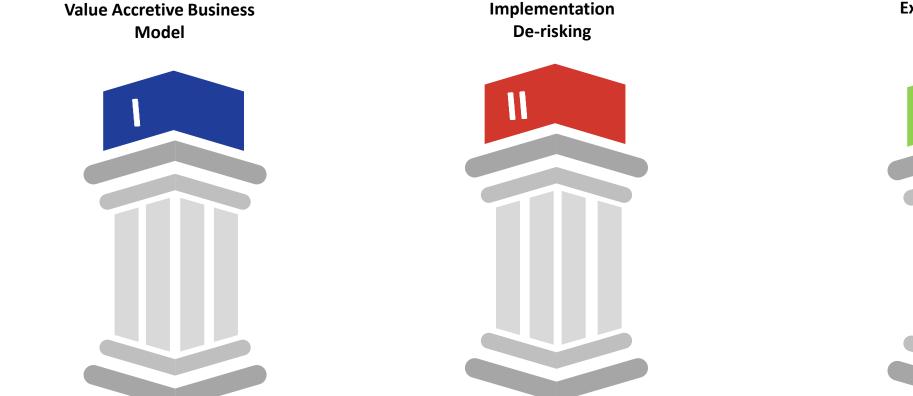


| NEED FOR BACKWARD INTEGRATION   | 1 GW under PLI     | BACKWARD INTEGRATION AT JSW ENERGY  |
|---|--------------------|---|
| Solar power is critical to transition towards green power                         |                    | Allocated 1 GW of capacity under PLI for W-C-M  |
| Tariff policy (BCD) restrictive, leading to high landed cost of cells and modules | -                  | Supply Chain Derisking - strategic intent to utilize solar modules for captive usage                                |
| Grid connected projects must use modules listed in ALMM                           | Wafer-Cell- Module | Eligible for ~₹ 320 Cr benefits under PLI scheme. Additional Incentives from State Government are under negotiation |
| Supply reliability issue, limited domestic module capacity vs the requirement     |                    | Securing Resources – Location identified in Rajasthan, necessary approvals and ordering are in process              |

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

# **JSW Neo Growth Framework**





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

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

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### **Ensuring Consistent Value Creation**



#### **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



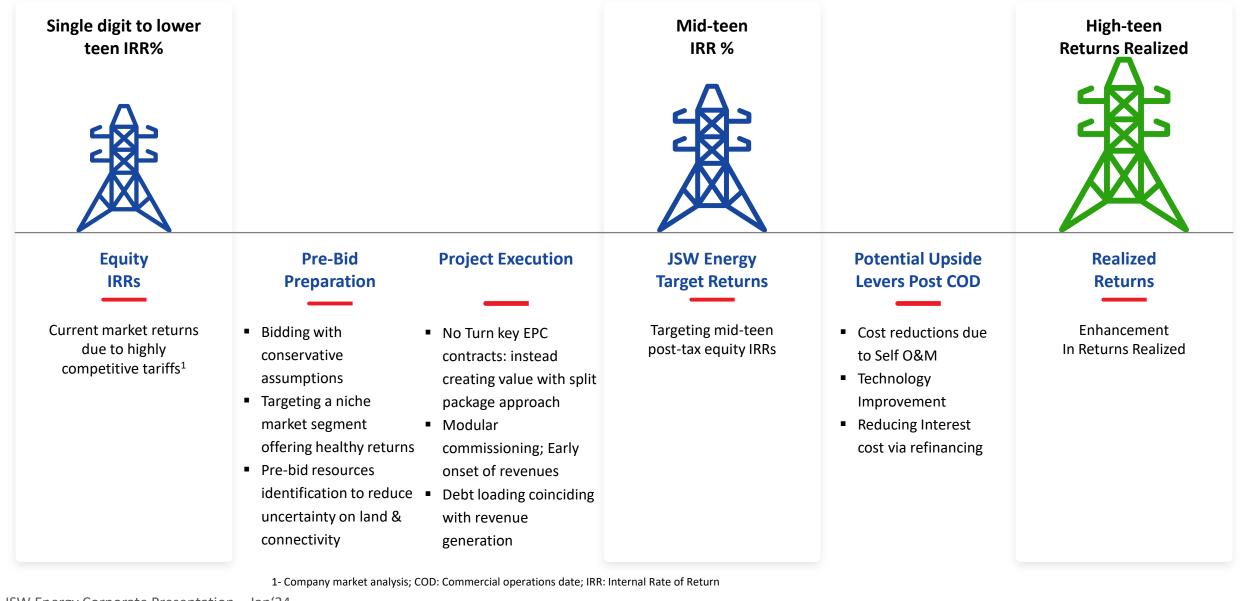
#### Energy Storage: Hydro PSP and BESS



Value Accretive M&A opportunities

# **Growth Framework leading to industry-leading returns**





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ir.jswenergy@jsw.in

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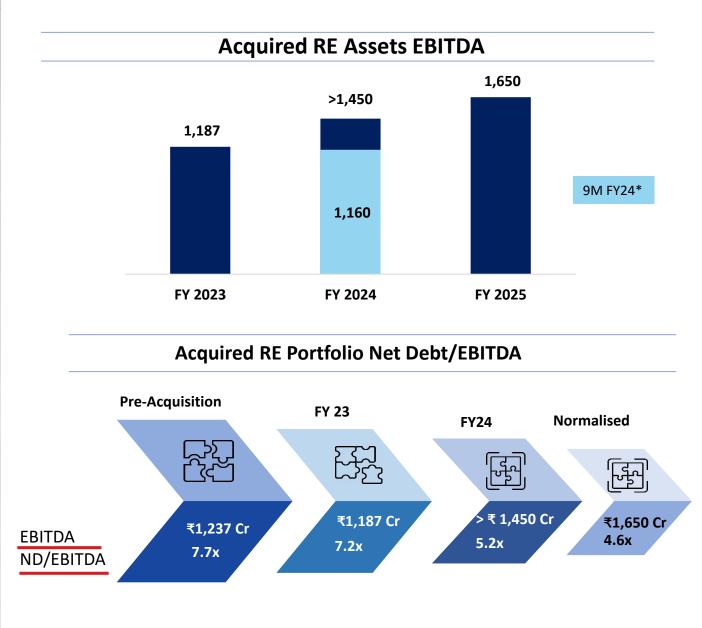
# Appendix

Acquired RE Portfolio Solar Plant (Hungund, Karnataka)

# Acquired RE Portfolio Asset Optimisation & Performance Improvement progressing well

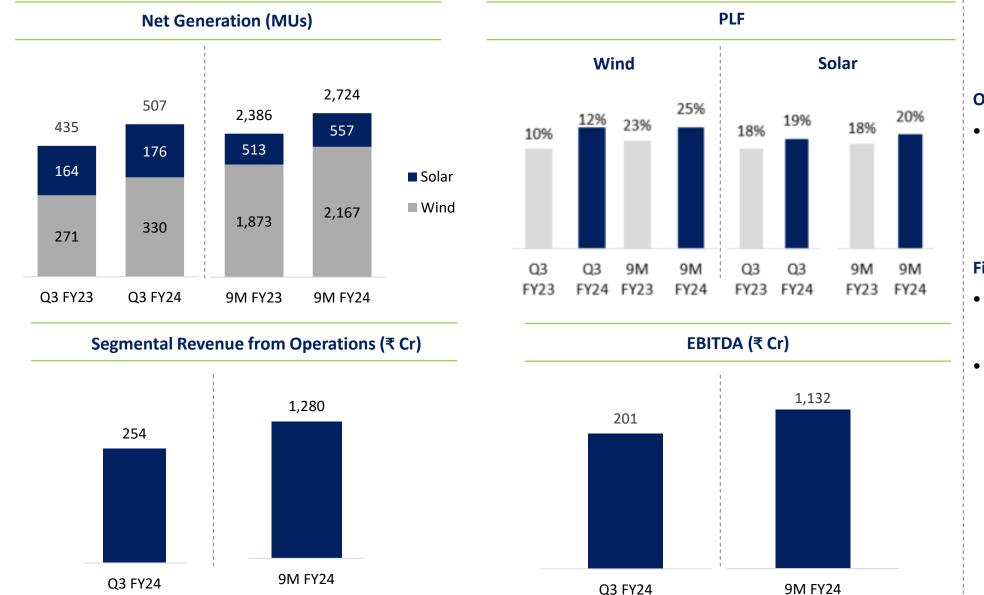
# Acquired RE Portfolio Progress on Track





# **JSW Neo - Acquired RE Portfolio**





#### **Operational Highlights**

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

#### **Financial Highlights**

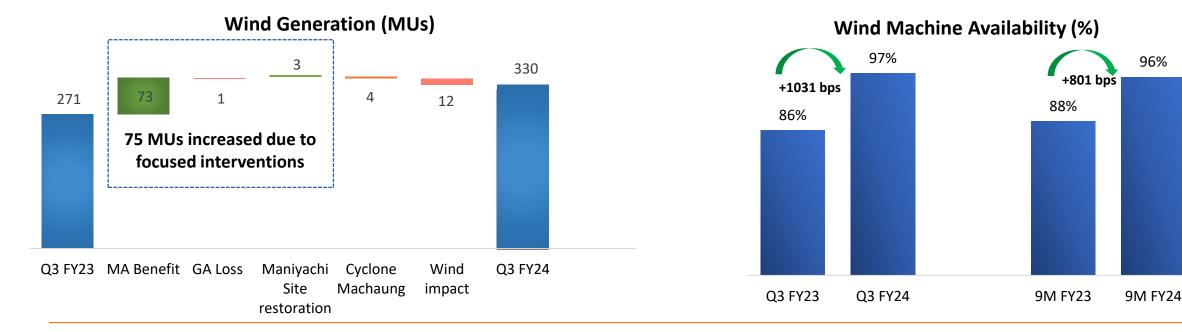
- During the quarter revenue of ₹ 254
   Cr resulted in EBITDA of ₹ 201 Cr
- For 9M FY24 the revenue and reported EBITDA stands at ₹ 1,280 Cr and ₹ 1,132 Cr respectively (₹ 1,160 Cr on Proforma basis)

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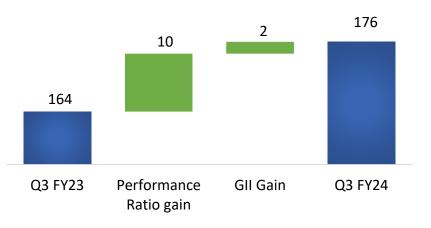
### **Acquired RE - Progress on track**



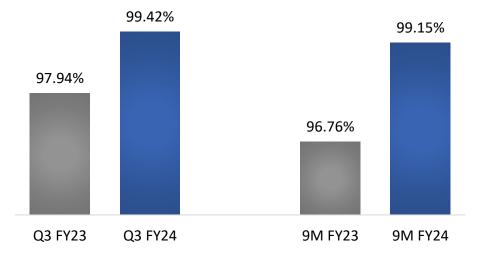
96%



Solar Generation (MUs)







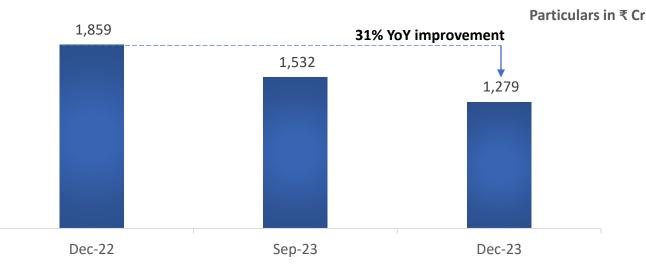
JSW Energy Corporate Presentation - Jan'24



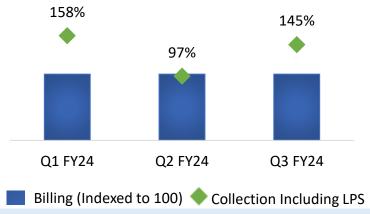
# **Receivables Cycle Improving**



#### 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

**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







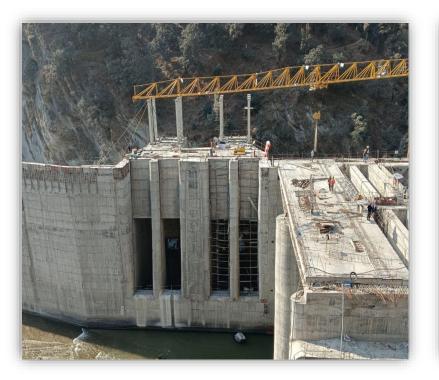


### Wind Projects (SECI IX,X, XII and Group Captive)

- 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

### JSW Neo - Kutehr Hydro Power Plant – 240 MW





#### 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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