

# Q2 FY24 Results Presentation

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October 20, 2023



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# Agenda

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**Q2 FY24 Highlights**

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**Operational & Financial Performance**

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**Segment Wise Performance**

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**Safety & Sustainability**

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**Business Environment**

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**Appendix**

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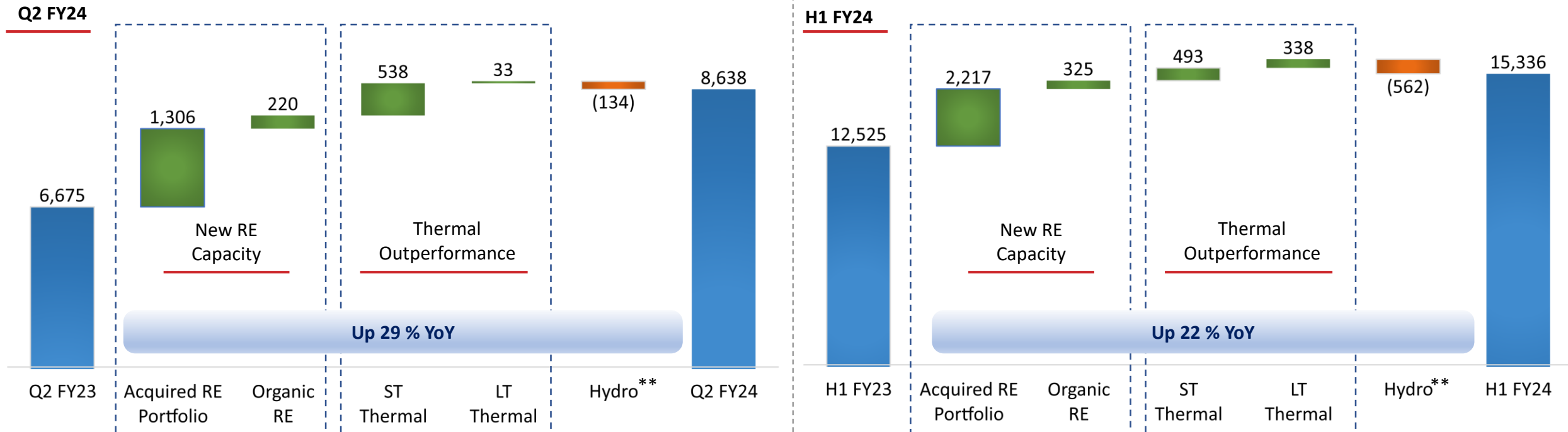
# Q2 FY24 Highlights (1/2)



## Operational Performance

- Overall Net Generation: Up by 29% YoY at 8.6 BUs driven by strong merchant sales, organic RE capacity additions and contribution from acquired\* RE portfolio
- Net renewable generation is up by 47% YoY at 4.4 BUs and total thermal generation is up 15% at 4.3 BUs
- Net Long Term Generation: Up by 22% YoY driven by higher generation at Ratnagiri (Unit-1) and RE capacity additions

### Generation (MUs)





## Consolidated Financial Performance

### Company reported highest ever quarterly EBITDA

- EBITDA at ₹2,008 Cr and reported PAT of ₹850 Cr, both increased 83% YoY; Cash PAT stood at ₹1,180 Cr
- On a sequential basis, EBITDA increased 54% while PAT increased 2 folds
- Receivables (excl. acquired RE portfolio and hydro true-up) improved 10% YoY while DSO stood at 56 days; healthy collection trend sustained
- Best in class Balance Sheet: Net Debt to Equity at 1.2x, Net Debt to (Proforma TTM) EBITDA at 4.6x, Net Debt to Normalised EBITDA (excl. CWIP) at 3.3x. Cash & Cash Equivalents<sup>1</sup> at ₹3,291 Cr



## Group Captive MoUs

### Signed MoUs with JSW Steel for providing RE Solutions progressively by 2030

- Generation capacity of ~6.2 GW and Energy Storage projects of ~2.7 GWh
- 85,000-90,000 TPA of Green H<sub>2</sub> and 7,20,000 TPA of Green O<sub>2</sub>, with associated RE power solutions



## Project Progress

- 2.1 GW Wind projects : (i) SECI X project under progress with part CoD received for 216 MW as of Sept'23 (ii) WTG erection & balance of plant works in-progress for SECI IX and Group Captive plant
- 240 MW Kutehr HEP: (i) ~99% tunneling completed (~96% in Q1 FY24) (ii) Power house and control room concreting 55% complete



## Acquired Assets

- Ind-Barath TPP: Unit 1 Boiler light up and critical piping steam blowing activity completed, expected commissioning in the current quarter. Unit 2 revival activity in progress, expected commissioning in Q4 FY24
- Acquired RE Portfolio: Generation increased 27% YoY resulting in EBITDA of ₹ 557 Cr



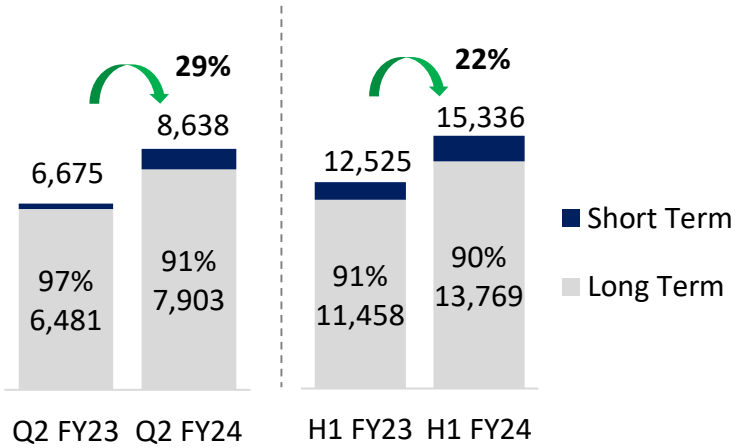
# Operational & Financial Performance



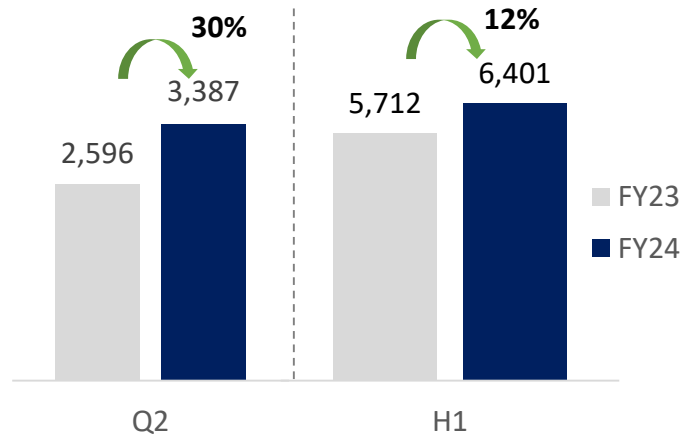
Sholtu Hydro Power Plant - Turbine

# Consolidated Performance

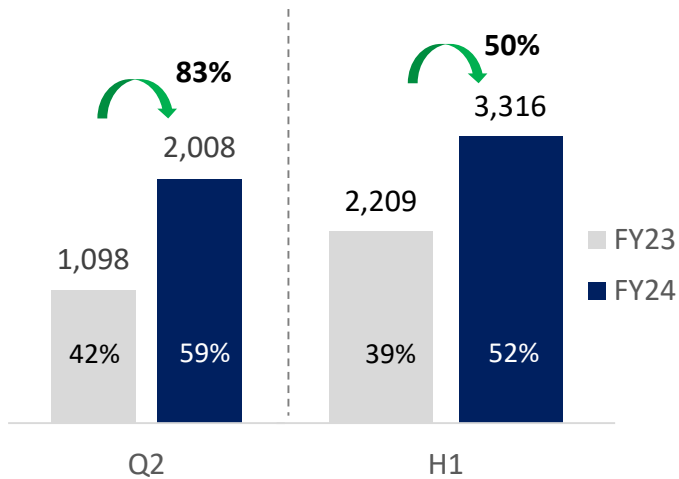
## Net Generation (MUs)



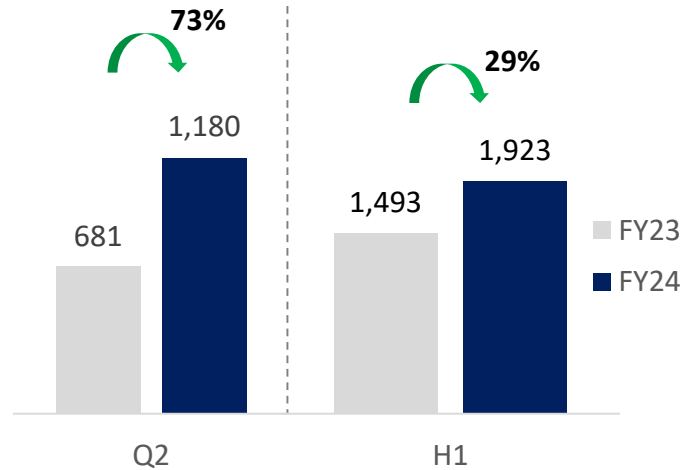
## Total Revenue (₹ Cr)



## EBITDA (₹ Cr) and Margins (%)



## Cash Profit After Tax (₹ Cr)



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

## Operational Highlights

- **Overall Net Generation:** Up by 29% YoY at 8.6 BUs driven by acquired RE portfolio and higher thermal generation, partly offset by lower generation at Hydro assets
- **Net Renewable Generation:** Up by 47% YoY at 4.4 BUs due to organic RE capacity additions and contribution from acquired RE portfolio
- **Net Long Term Generation:** Up by 22% YoY

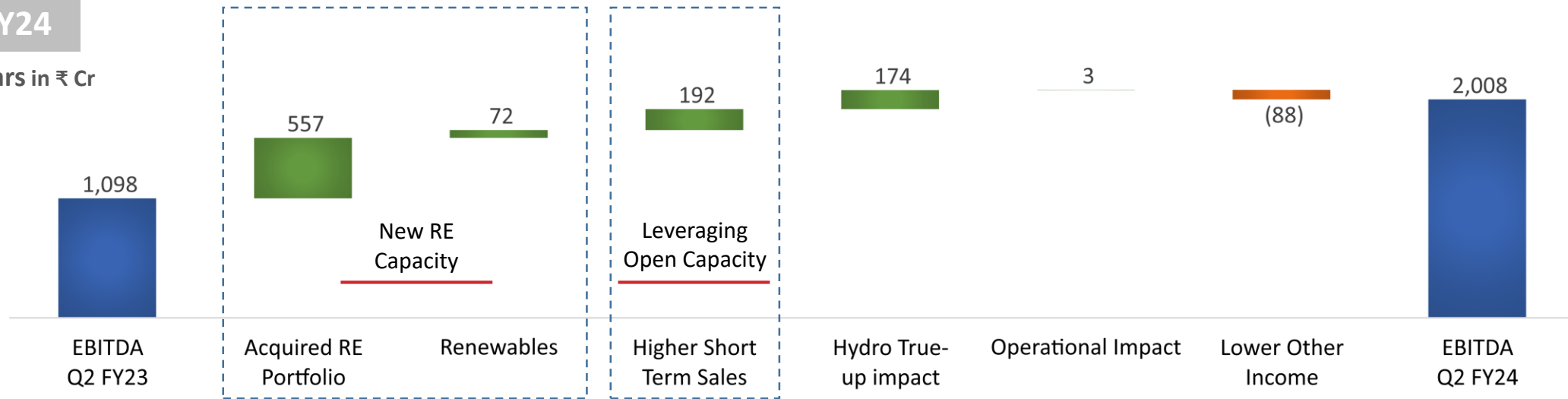
## Financial Highlights

- **Total Revenue:** increased 30% YoY to ₹3,387 Cr due to incremental revenue from RE assets and higher merchant sales
- **EBITDA** at ₹2,008 Cr in Q2 FY24 was up 83% YoY due to contribution from RE assets, strong thermal merchant volumes and positive hydro true-up impact
- **PAT** increased 83% YoY to ₹ 850 Cr and **Cash PAT** surged by 73% YoY to ₹ 1,180 Cr

# EBITDA Bridge

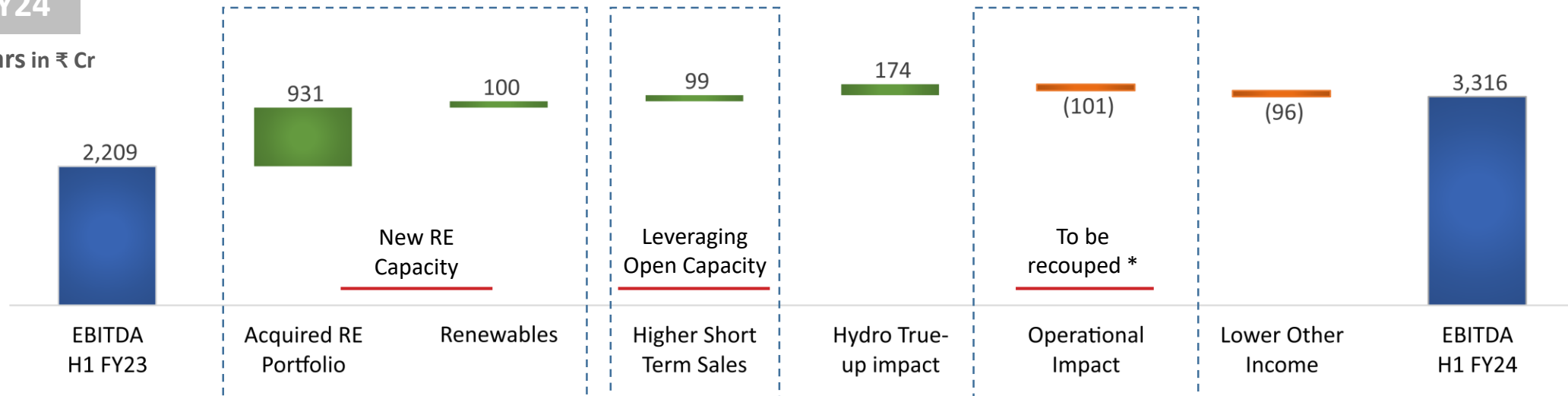
## Q2 FY24

Particulars in ₹ Cr



## H1 FY24

Particulars in ₹ Cr

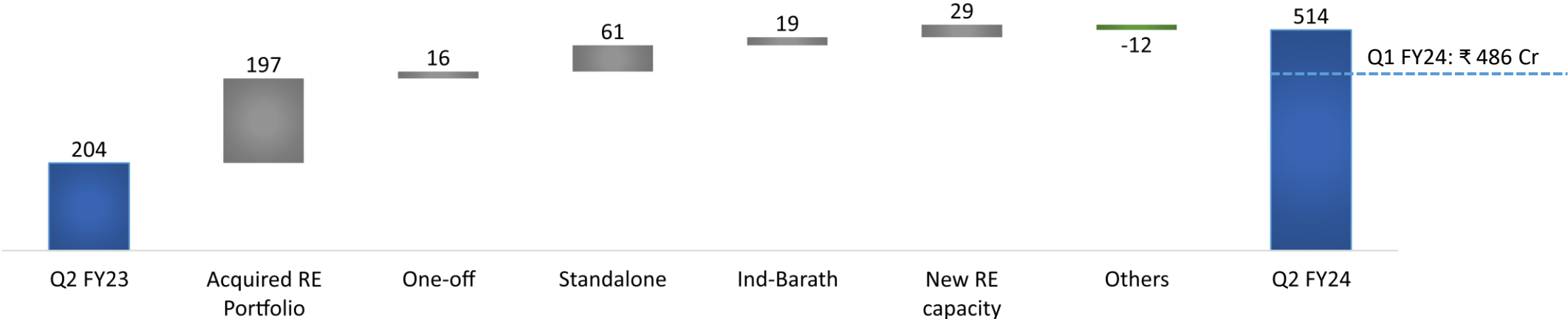


\* Subjected to meeting design energy generation and plant availability for Hydro, and plant availability factor for Barmer (which has consistently been met in every year of operations)

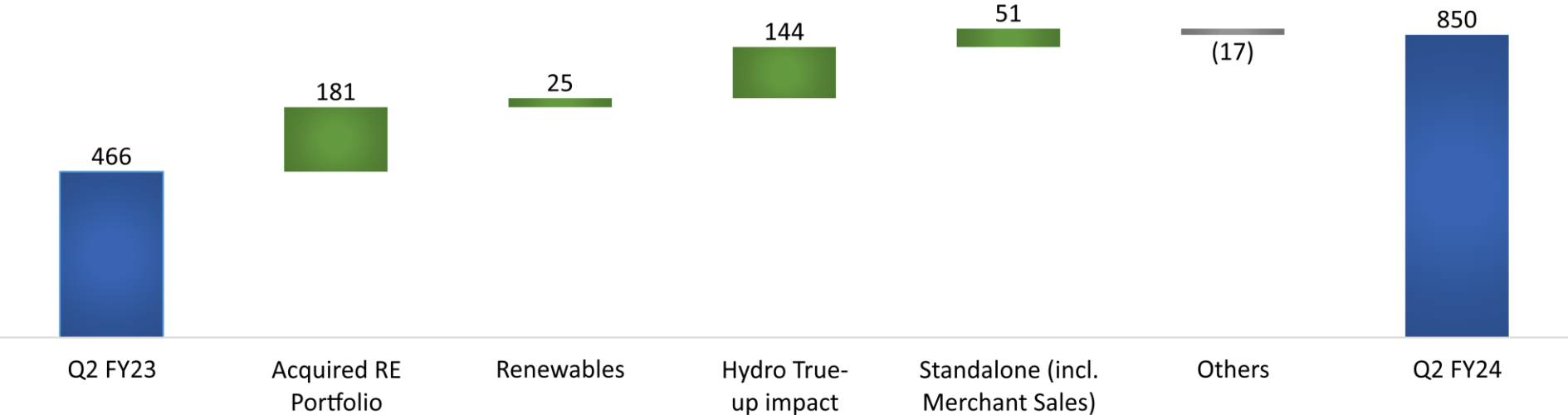


# Finance Cost & PAT Movement

Finance Cost (YoY; ₹ Cr)



Profit After Tax (YoY; ₹ Cr)



# Consolidated Financial Results

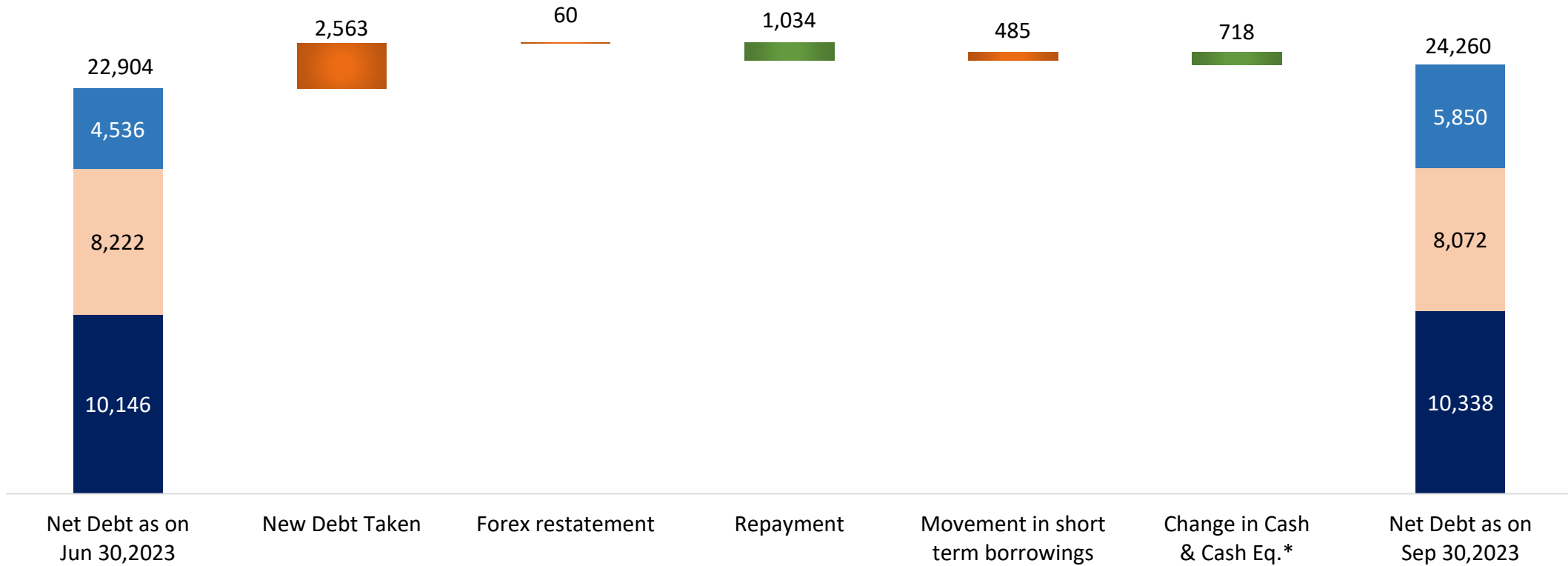
H1 FY24	H1 FY23	Particulars in ₹ Crore	Q2 FY24	Q2 FY23
<b>6,401</b>	5,712	Total Revenue	<b>3,387</b>	2,596
<b>3,316</b>	2,209	EBITDA	<b>2,008</b>	1,098
<b>52%</b>	39%	<i>EBITDA Margin(%)</i>	<b>59%</b>	42%
<b>807</b>	583	Depreciation	<b>409</b>	294
<b>999</b>	398	Finance Cost	<b>514</b>	204
<b>1,510</b>	1,349	Profit Before Tax	<b>1,086</b>	600
<b>1,140</b>	1,026	Profit After Tax	<b>850</b>	466
<b>1,923</b>	1,493	Cash Profit After Tax <sup>1</sup>	<b>1,180</b>	681
<b>6.93</b>	6.24	Diluted EPS <sup>2</sup> (₹)	<b>5.17</b>	2.84

# Net Debt Movement

Particulars in ₹ Cr

- Capital Work- in-Progress (CWIP)
- Acquired RE Portfolio
- Operational Projects

Leverage	Net Debt (₹ Cr)	EBITDA (TTM; ₹ Cr)	ND/EBITDA (x)
Operating	10,338	3,993	2.6x
Acquired RE Portfolio (Normalised EBITDA)	8,072	1,650	4.9x
<b>Combined (Excl. CWIP)</b>	<b>18,410</b>	<b>5,643</b>	<b>3.3x</b>

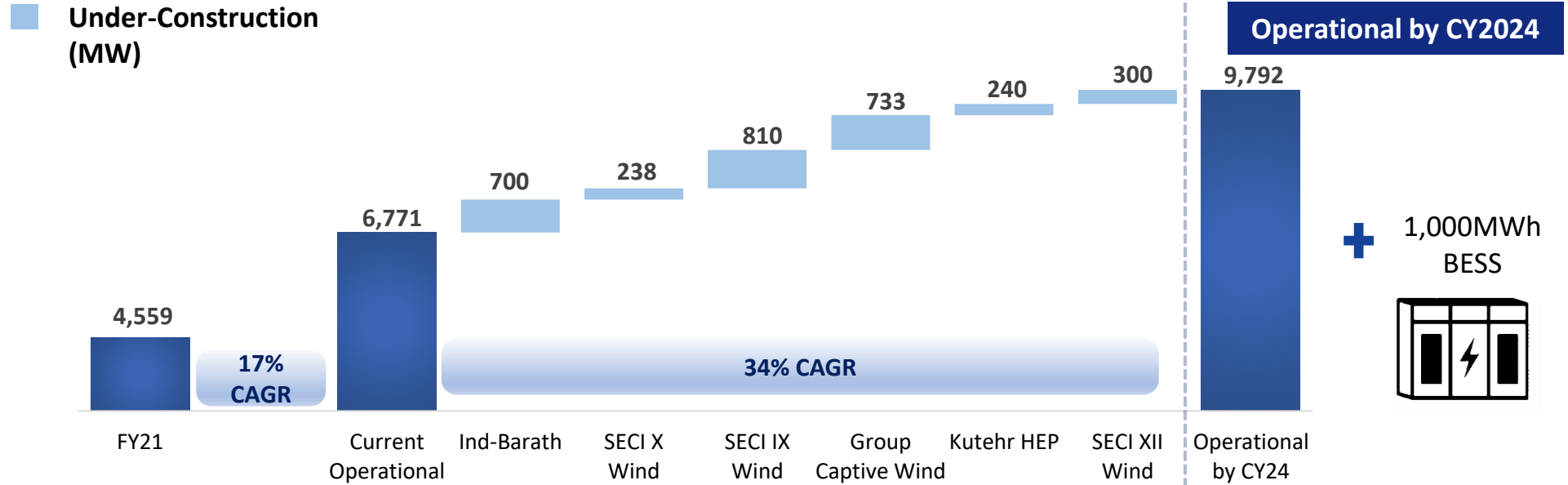


**Sustainable ND/EBITDA is within the guided range of 3.5x-4.0x**

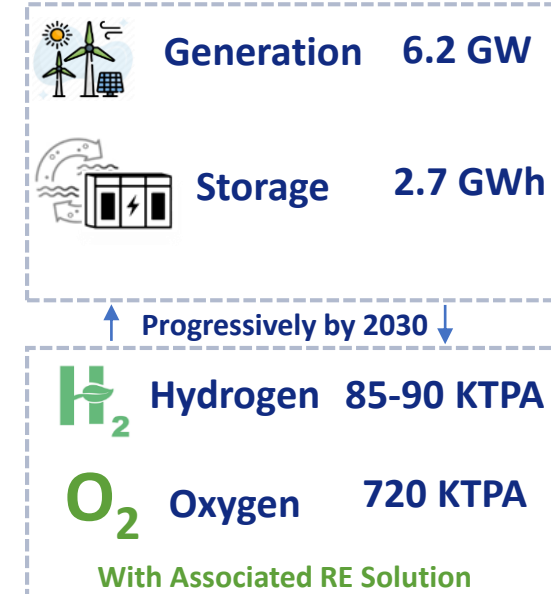


# Project Progress

## Under Construction 3.0 GW, to be Commissioned by CY24



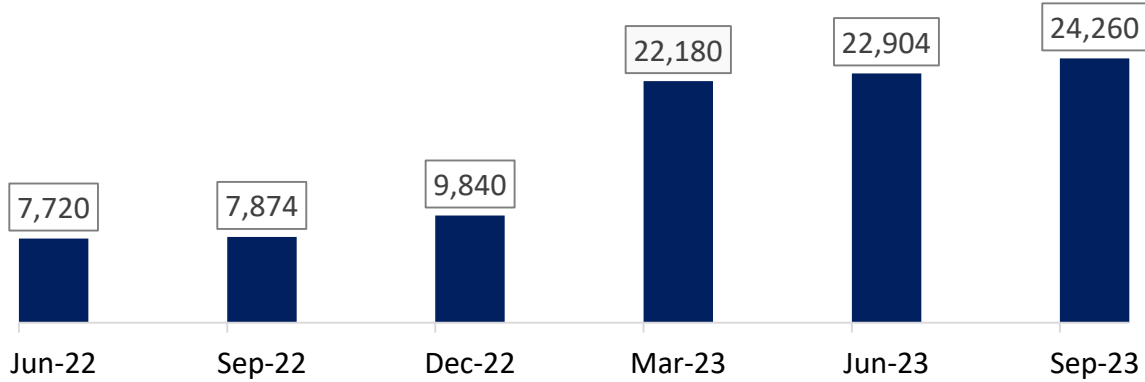
## Group Captive MoUs



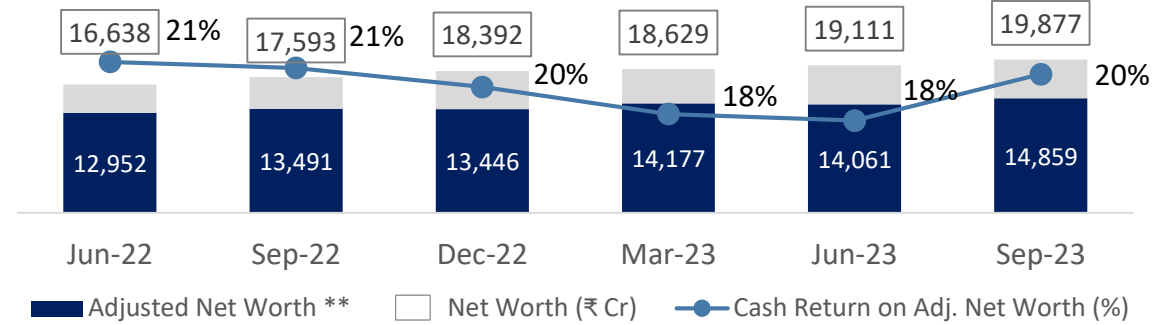
Plant (MW)	Commissioning	PPA	Capital Expenditure
<b>SECI IX (810)</b>	Progressively from Q3 FY24	25- year; SECI	Total: ₹19,360 Cr Committed : ~₹16,993 Cr Spent: ~₹11,317 Cr
<b>SECI X (454)</b>	Progressively (216 MW Commissioned)	25- year; SECI	
<b>Group Captive - JSW Steel (958)</b> 225MW Solar operational	Progressively from Q3 FY24	25- year; JSW Steel	
<b>Kutehr HEP (240)</b>	Sept 2024	35- year; Haryana Discom	
<b>Ind-Barath (700)</b>	Unit 1 in Q3 FY24, Unit 2 in Q4 FY24	-	
<b>SECI XII (300)</b>	March 2025	25- year; SECI	~₹ 2,200 Cr

# Superior Financial Risk Profile

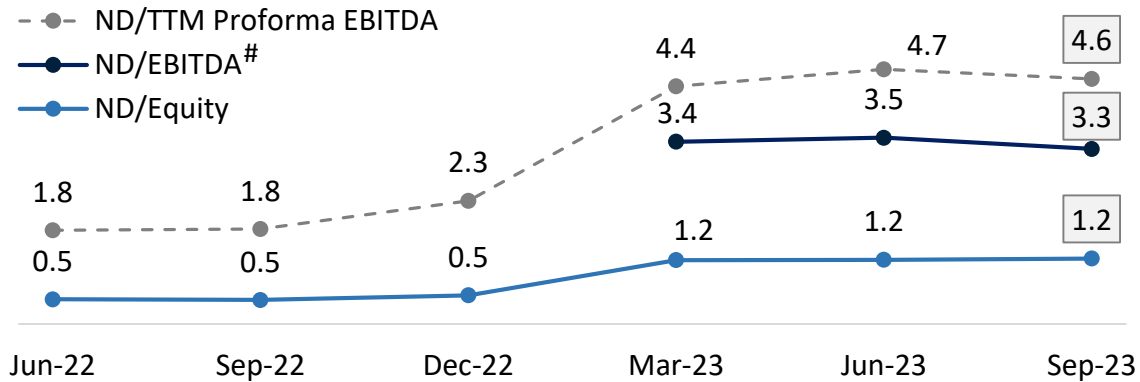
### Net Debt (₹ Cr)



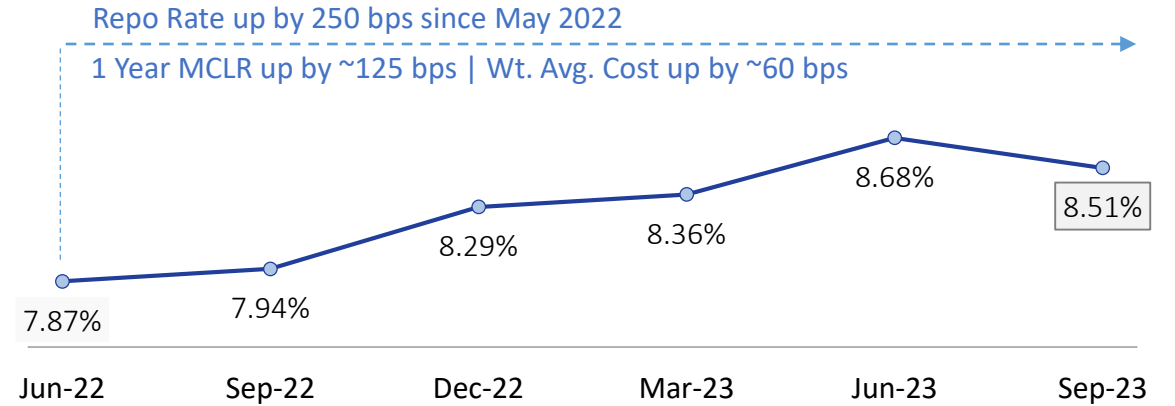
### Net Worth (₹ Cr)\* & Cash Returns (%)



### Leverage Ratios



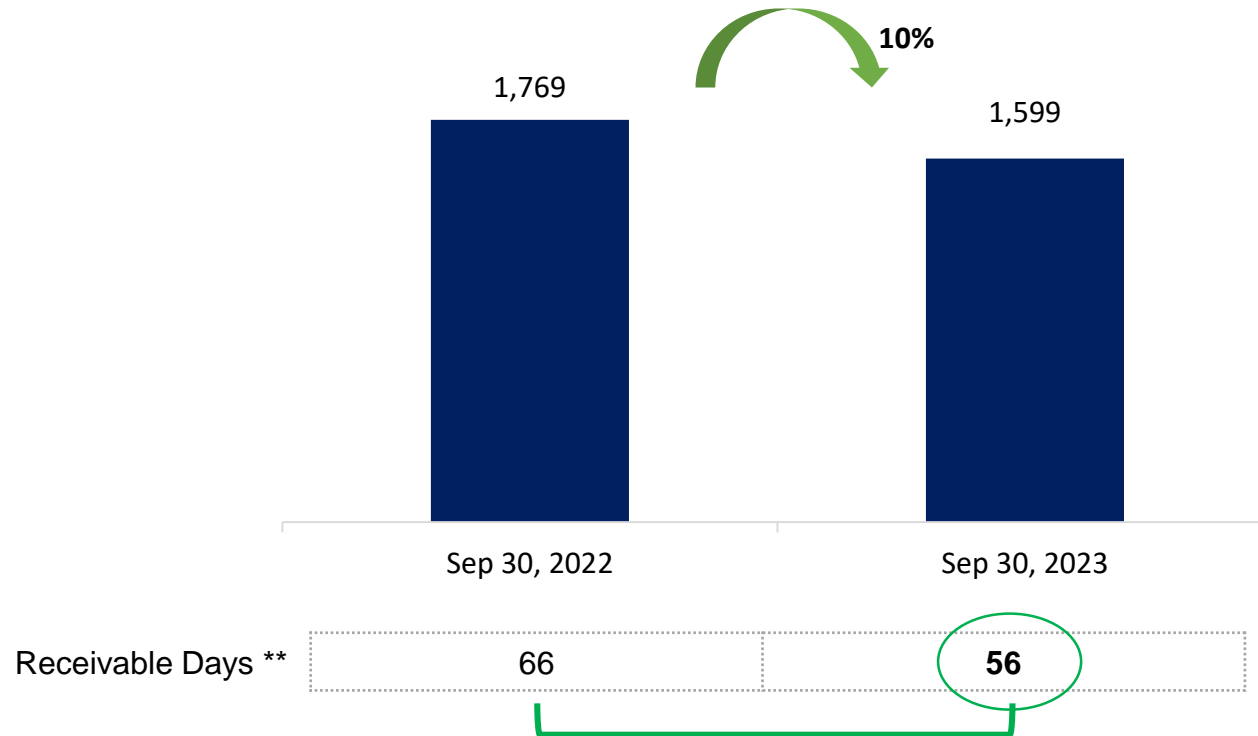
### Wt. Average Cost of Debt



**Robust balance sheet & best-in-class financial metrics**

# Healthy Trade Receivables

## Consolidated Trade Receivables\* Excluding Acquired RE Portfolio (₹ Cr )



## Operational Highlights

- Receivables (in ₹ Cr) improved by 10% YoY
  - Receivables days (*excl. Acquired RE Portfolio and Hydro true-up impact*) further improved to 56 days in Q2 FY24
- All plants placed favourably in States' Merit Order Dispatch.
  - Further, Hydro plants under 'Must-run status' with no scheduling risk
- No history of any bad debts from routine long term trade receivables
- Payment security mechanism in force for power tied under long term PPA with discoms
- Recovery of late payment surcharge in case of delayed payments from discoms



# Segment Wise Performance



1208 MW

UNIT-1

**JSW ENERGY LIMITED SBU-1 UNIT#1 (2 X 130 MW)**

NET PLANT PRESSURE	SUPERHEATER TEMP	HEAT EXCHANGER TEMP	LOAD	STEAM FLOW	CONDENSER TEMP	CONDENSER FLOW	CONDENSER PRESSURE
127.3 KG/CM <sup>2</sup>	538.5 °C	533.9 °C	121.48 MW	364.9 T/Hr	331.6 T/Hr	2897.5 T/Hr	0.08 BAR
406.3 T/Hr	851.7 MMWC	-0.6 MMWC	FREQ	CONDENSER FLOW	CONDENSER PRESSURE	CONDENSER FLOW	CONDENSER PRESSURE
46.0 T/Hr	0.0222 HR	18.4 MM	50.00 Hz	-0.9081 KG/CM <sup>2</sup>	6.61 KG/CM <sup>2</sup>	205.9 MM	0.0222 HR

TOTAL EXPORT: -3.74 MW      STEEL CONSUMPTION: 1026.51 MW

2009:42      4997 Hz

ELECTRICAL CONTROL PANEL

UNIT 1 STATION AND GENERATOR      UNIT 2 STATION AND GENERATOR

Control panel with various gauges, buttons, and digital displays for electrical control.

1055 MW

UNIT-2

**JSW ENERGY LIMITED SBU-1 UNIT#2**

NET PLANT PRESSURE	SUPERHEATER TEMP	HEAT EXCHANGER TEMP	LOAD	STEAM FLOW	CONDENSER TEMP	CONDENSER FLOW	CONDENSER PRESSURE
127.4 KG/CM <sup>2</sup>	538.8 °C	532.5 °C	105.68 MW	440.2 T/Hr	384.0 T/Hr	2897.5 T/Hr	0.08 BAR
406.3 T/Hr	851.7 MMWC	-0.6 MMWC	FREQ	CONDENSER FLOW	CONDENSER PRESSURE	CONDENSER FLOW	CONDENSER PRESSURE
46.0 T/Hr	0.0222 HR	18.4 MM	50.00 Hz	-0.9081 KG/CM <sup>2</sup>	6.61 KG/CM <sup>2</sup>	205.9 MM	0.0222 HR

TOTAL EXPORT: 5.59 MW      STEEL CONSUMPTION: 1.95 MW

# Thermal Assets | Q2 FY24 Highlights (1/2)

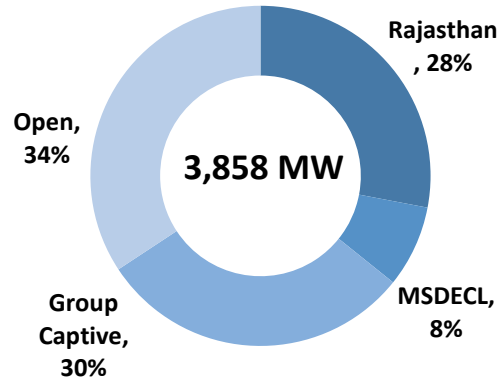
## Overview

**Total Thermal Capacity**  
3,858 MW

**Operational Capacity**  
3,158 MW

**Under Construction**  
Ind-Barath  
700 MW

## Offtaker Profile



**Installed Capacity**

**PPA tied**

**Fuel Type**

**Net Generation (Mus)**

LT

Total

**PLF/ (Deemed PLF)**

LT

Total

## Operational Assets - 3,158\* MW



**Ratnagiri**

1,200 MW

1,100MW

Imported Coal

1,478 MUs (14% YoY)

1,752 MUs (34% YoY)

67%/(88%)

72%/(91%)



**Barmer**

1,080 MW

1,080 MW

Lignite

1,593 MUs (-4% YoY)

1,593 MUs (-4% YoY)

75%/(78%)

75%/(78%)



**Vijayanagar**

860 MW

338 MW

Imported Coal

510 MUs (-18% YoY)

900 MUs (22% YoY)

80%/(86%)

51%/(53%)

## Under Construction



**Ind - Barath**

700 MW

Merchant

Domestic Coal

Located in coal belt

Easy access to water

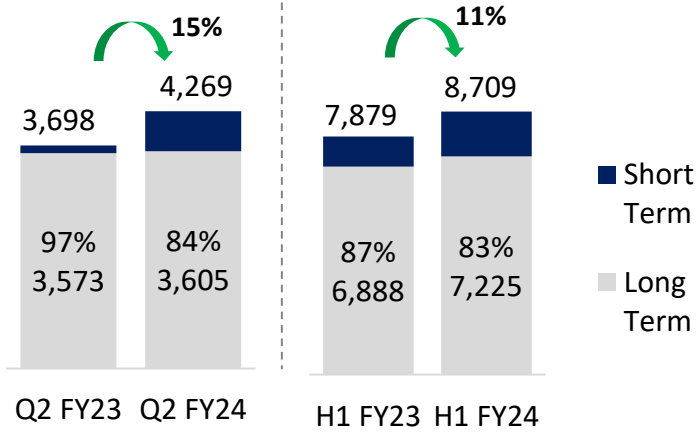
Commissioning  
Unit 1 – Q3 FY24  
Unit 2 – Q4 FY24

**~80% of Installed Thermal Capacity Tied-up under Long-Term PPA**

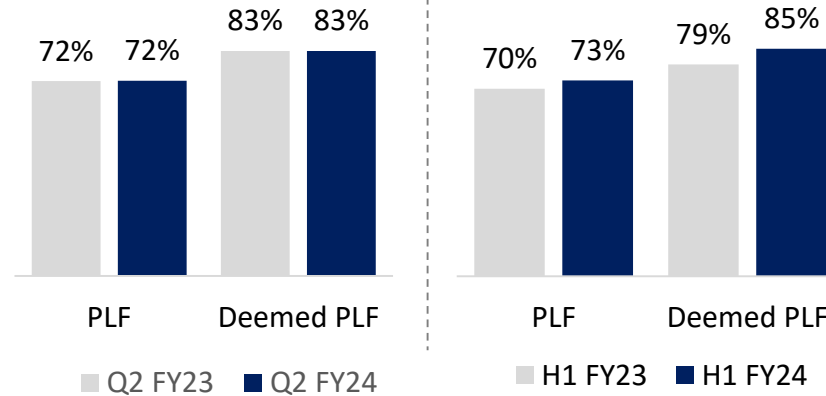


# Thermal Assets | Q2 FY24 Highlights (2/2)

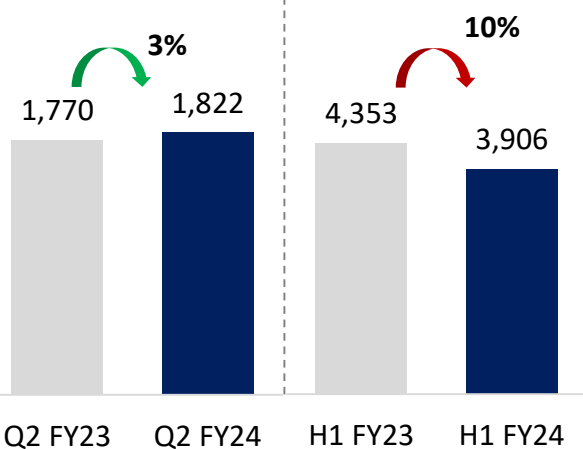
## Net Generation (MUs)



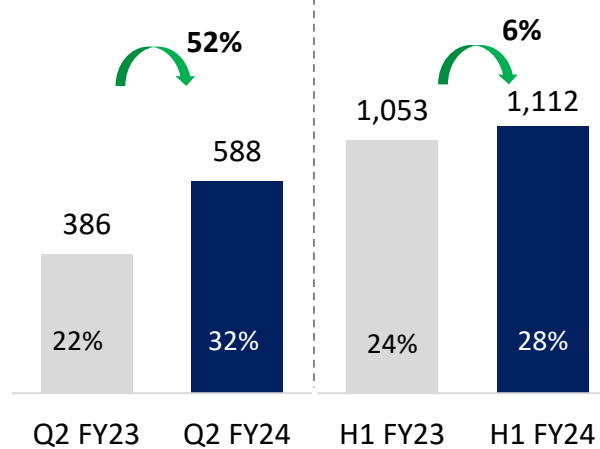
## Thermal : PLF – long term



## Segmental Revenue from Operations (₹ Cr)



## EBITDA Excl. Other Income (₹ Cr) and Margins (%)



## Operational Highlights

- **Total Net Generation** +15% YoY at 4.3 BUs, supported by strong merchant volumes, higher LT generation at Ratnagiri, partly offset by lower generation at Barmer plant
- **Short Term generation** at 664 MUs was 5x YoY
- **Long Term generation** was up 1% YoY in the quarter. LT PLF remains healthy at 72%

## Financial Highlights

- Total operating revenue at ₹1,822 Cr increased by 3% YoY due to higher volumes partly offset by lower realization on account of lower fuel cost (pass through in nature)
- EBITDA increased to ₹ 588 Cr driven by higher merchant volumes and higher contribution from Ratnagiri Unit 1



# Renewable Assets | Presence across all modes of generation

Total 5,922 MW

Offtaker Profile

Operational Assets – 3,613 MW

Under Construction – 2,321 MW

Expected to be operational by CY 2024

**3,628 MW**  
61%

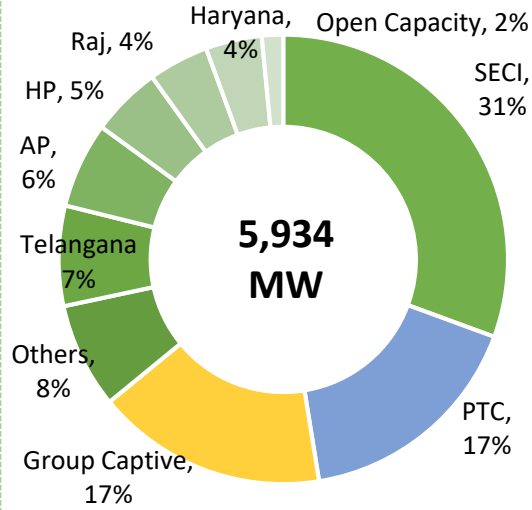
Wind

**1,631 MW**  
27%

Hydro

**675 MW**  
11%

Solar



Net Generation (Mus)

LT

Total

Capacity % share in RE

MW

%

HYDRO



- Karcham Wangtoo (1,091)
- Baspa (300)

2,694 MU  
2,766 MU

**1,391 MW**  
23.4%

WIND



- Acquired RE Wind (1,331)
- SECI X (216)

1,315 MU  
1,315 MU

**1,547 MW**  
26.1%

SOLAR



- Vijayanagar Captive (225)
- Acquired RE Solar (422)
- Others (20)

288 MU  
288 MU

**675 MW**  
11.4%

HYDRO



- Kutehr (240)

**240 MW**  
4.0%

WIND



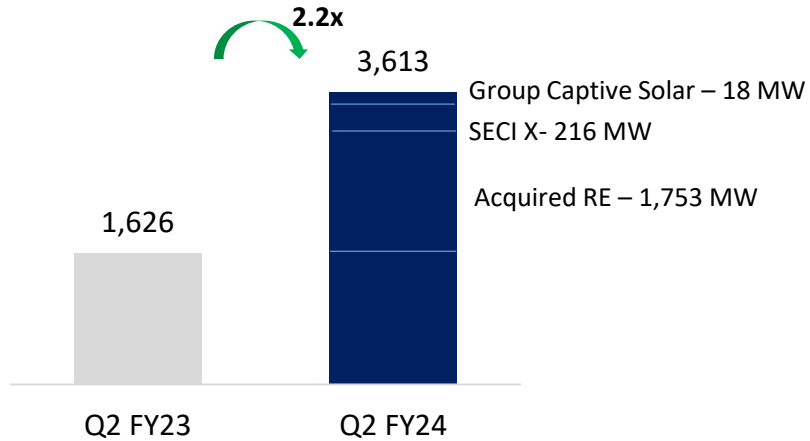
- SECI IX (810)
- SECI X (234)
- Captive JSW Steel (733)
- SECI XII (300)

**2,081 MW**  
35.1%

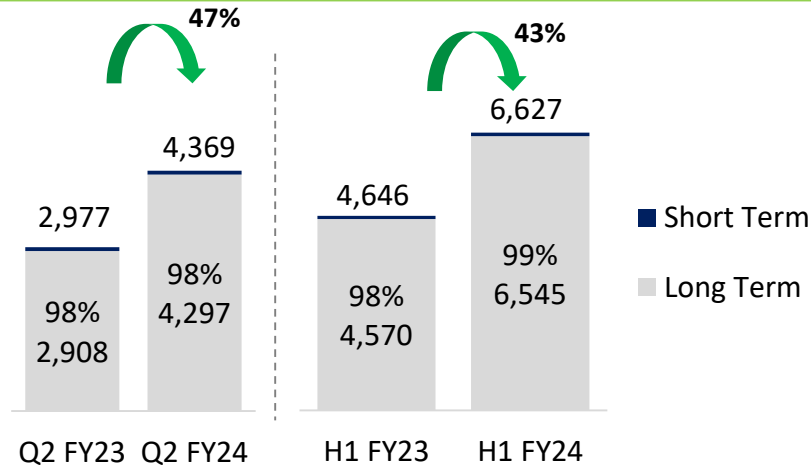
All under construction projects are tied-up with long term PPA

# Renewable Assets | Q2 FY24 Highlights

## Installed Green Capacity (MW)



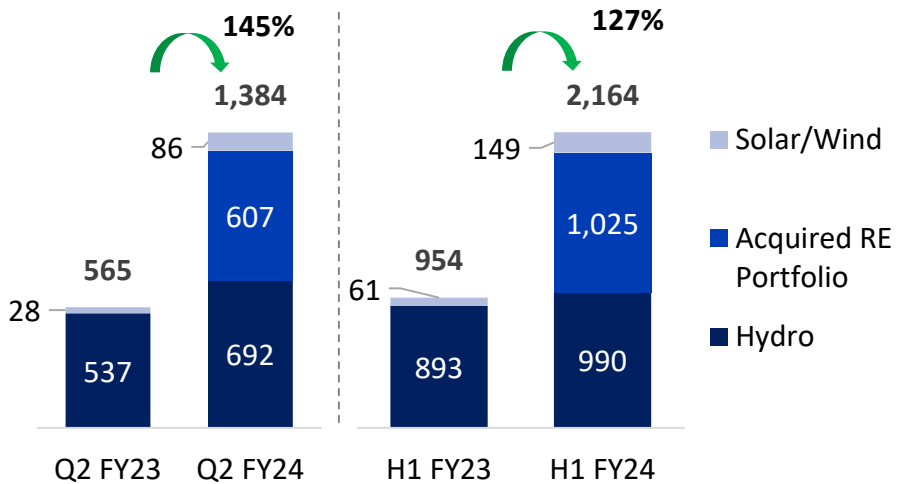
## Net Generation (MUs)



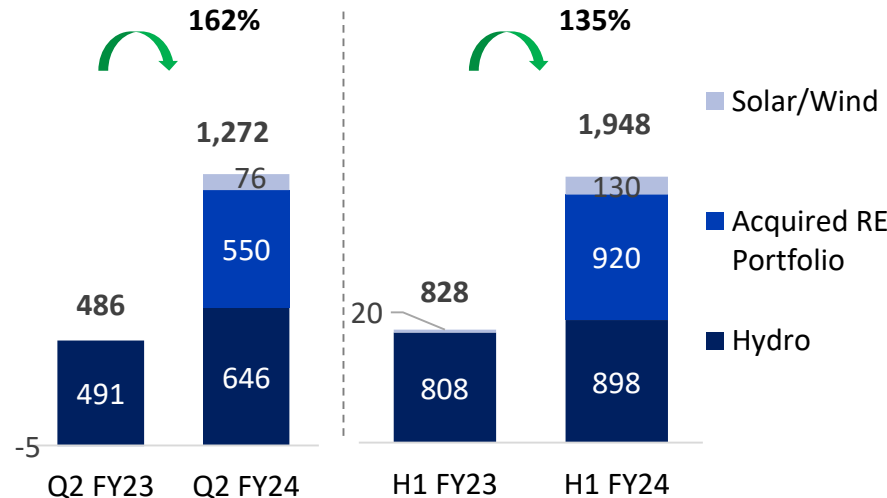
## Operational Highlights

- Net generation increased 47% YoY to 4.4 BUs driven by capacity additions and contribution from Acquired RE portfolio party offset by lower generation at Hydro power plants

## Segmental Revenue from Operations (₹ Cr)



## EBITDA Excl. Other Income (₹ Cr)



## Financial Highlights

- Total operating revenue increased 145% YoY to ₹1,384 Cr driven by Acquired RE portfolio, greenfield RE assets and positive hydro true up impact
- Operating EBITDA at ₹1,272 Cr was up 162% YoY. Acquired RE portfolio contributed ₹ 557 Cr (incl other income) in the quarter

# Safety & Sustainability





# Continued Focus on Health & Safety Excellence

All Figures are for Q2 FY24



## Zero severe injuries/fatalities

Lost Time Injury Frequency Rate of zero at all the operational plants



## 84% of contractors covered by JSW CARES audit

20 Contractors (34%) achieve 5 Star rating & 73% contractors achieve 3 Star and above in a stringent Internal Safety Assessment and evaluation.



## 36,100+ Cumulative Safety Observations Resolved in Q2 FY24

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



## GWO (Global Wind Organization) Training for WTG project Teams

- ✓ 58% of Target Employees have completed GWO training
- ✓ 55% of Target Associate employees have completed GWO training
- ✓ All remaining target employees to complete training by December - 2023



## Enhancing Safety for Employees, Contractors & Community

- ✓ High Risks (Number 21 to25) mitigation through BHM tool initiated across all major plants – Barmer, Vijayanagar, Ratnagiri & Hydro Plants. Expected completion progressively by Dec-2023 onwards
- ✓ High Risks numbers 16 to 20 – audit completed. All improvement recommendations being implemented for finalization at respective locations
- ✓ Hydro Sholtu – Safety documentation & systems enhancements underway as part of preparation for BSC 5 STAR Gap Audit Dec-2023





# Sustainability: Framework and Policies

## 17 Focus Areas with 2030 Targets from 2020 as Base Year

<p><b>Climate Change:</b> Committed to being carbon neutral by 2050 Reduce our carbon emissions by more than 50%</p>	<p><b>Renewable Power:</b> Enhance the renewable power to 2/3rd of our Total Installed Capacity</p>	<p><b>Biodiversity:</b> No Net Loss for Biodiversity</p>
<p><b>Waste Water:</b> Zero Liquid Discharge</p>	<p><b>Waste:</b> 100% Ash (Waste) utilization</p>	<p><b>Water Resources:</b> Reduce our water consumption per unit of energy produced by 50%</p>

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

**Aligned to National & International Frameworks**

## Governance & Oversight by Sustainability Committee

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

## ESG Ratings – best amongst peers

CDP\* : A- (Leadership Level)

Sustainalytics: 23.9 (Medium Risk)

FTSE4Good Index constituent

## Carbon Neutrality by 2050

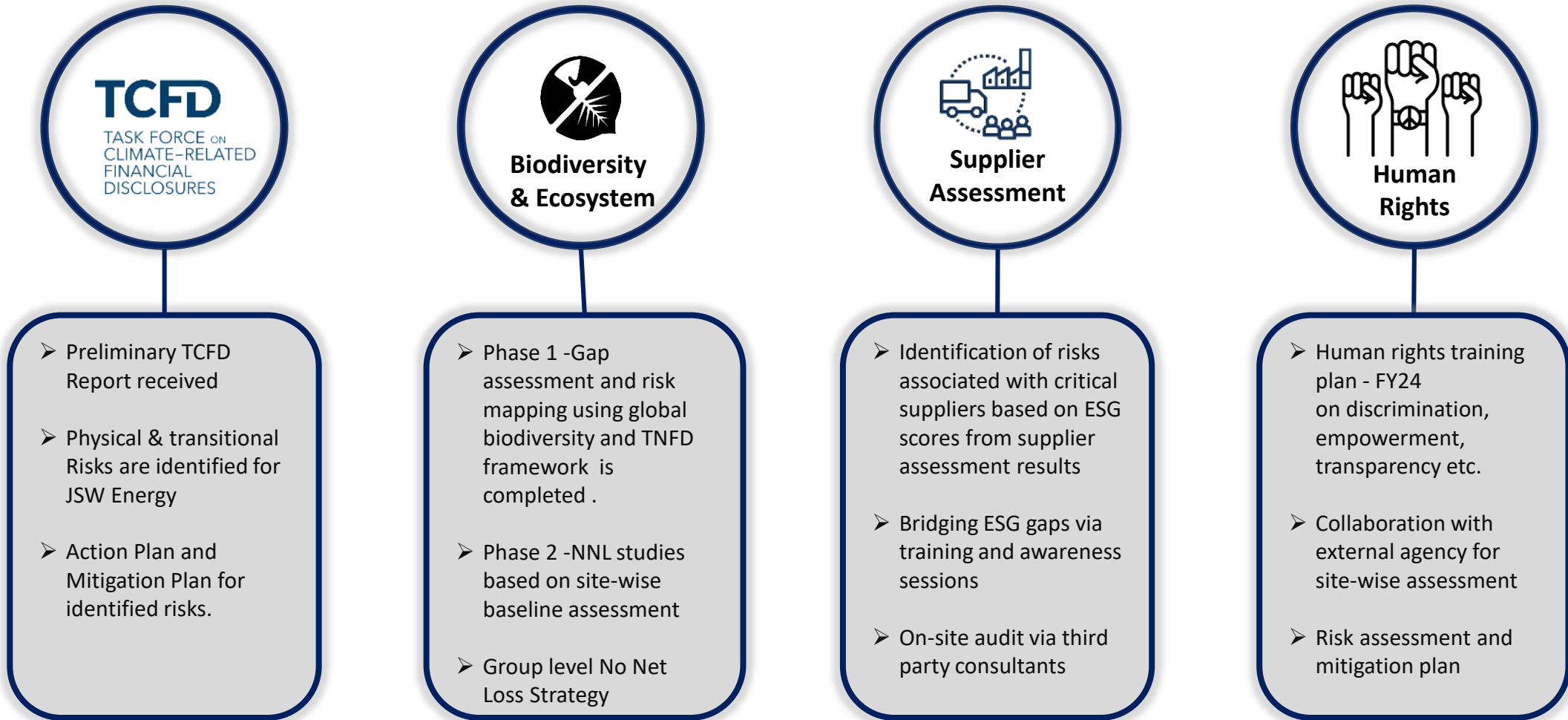
Committed to set science based targets to keep global warming to 1.5°C under SBTi

## Integrated Reporting since FY19



# Sustainability: Targets and Strategy

SD Targets		FY20 Actuals	FY30 Targets	Improvement	Strategic 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 –Preliminary report received</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 Q2FY 24 - 3613 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 Vijaynagar</li> <li>Re-utilisation of pond ash as well as Bottom ash in Boiler</li> </ul>
	<ul style="list-style-type: none"> <li>Waste Recycled - Ash (%)</li> </ul>	100	<b>100</b>	-	
<hr/>					
<b>Air Emissions</b>	Specific process emissions(Kg/MWh)				<ul style="list-style-type: none"> <li>Ensuring ESP (Electrostatic Precipitator) Fields availability</li> <li>Optimising Lime dozing system efficiency</li> <li>Process efficiency improvements</li> </ul>
	<ul style="list-style-type: none"> <li>PM</li> </ul>	0.16	<b>0.053</b>	67%	
	<ul style="list-style-type: none"> <li>SO<sub>x</sub></li> </ul>	1.78	<b>0.683</b>	61%	
	<ul style="list-style-type: none"> <li>NO<sub>x</sub></li> </ul>	1.01	<b>0.373</b>	63%	
<hr/>					
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>Biodiversity at our operating sites</li> </ul>	-	Achieve <b>'no net loss'</b> of biodiversity		<ul style="list-style-type: none"> <li>Biodiversity Desktop Assessment completed for Thermal - Ratnagiri, Ind bharat , Wind - Dharapuram, Sandur, Tuticorin and Hydro Power Plant – Baspa II &amp; Karcham Wangtoo.</li> <li>Increased green cover across operations</li> <li>Implementation of Biodiversity Management plan at Barmer Plant .</li> <li>management plan at Barmer location.</li> </ul>



## Key Highlights



### Climate Change

- Increased share of renewable energy for deep decarbonisation
- Wind Projects – Tuticorin – generation started and commissioned 216 MW till Q2 FY 24.
- Continuous focus on process improvements to reduce GHG emission



### Water Security

- Maintained zero liquid discharge across operations
- Optimising utilisation of rain water harvesting system. 1,68,429 m3 water utilised by Ratnagiri Plant by this method
- Reuse of treated effluent of Sewage Treatment Plant for horticulture
- 2,36,869 m3 of water recycled and utilizing for process at Vijayanagar



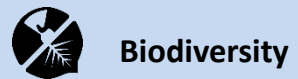
### Waste

- 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



### 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

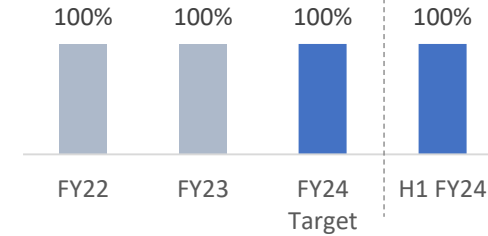


### Biodiversity

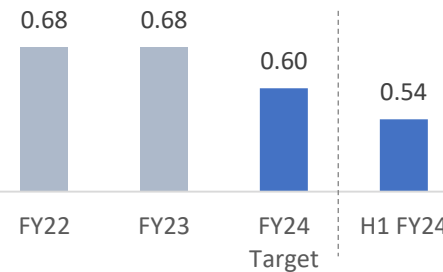
- Plantations of various species numbered 635, 1730, and 800 in the areas around Ratnagiri, Vijayanagar, and the Hydro Power Plants, respectively.
- Draft report of Biodiversity Assessment for Ratnagiri, Hydro, Wind Plant is received from CII
- Increase in green cover at all operations to achieve 'No Net Loss' of Biodiversity by 2030.

## Performance

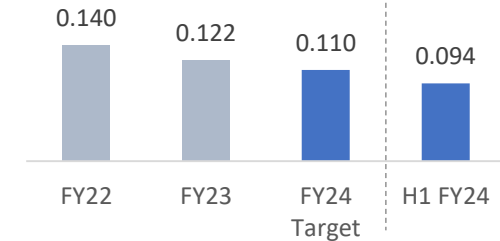
### Ash Utilisation (%)



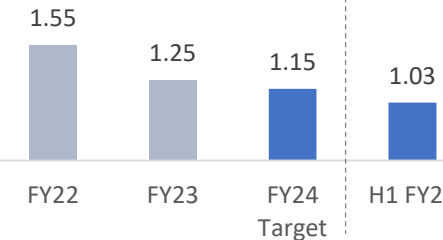
### CO2 intensity (tCO2e/MWh)



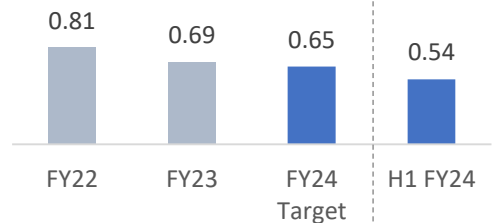
### PM Emissions (kg/MWh)



### SOx Emissions (kg/MWh)



### NOx Emissions (kg/MWh)





# Sustainability: Empowering Our Communities





# Sustainability: Empowering Our Communities

## Project Shikhar: Bringing Powerful Transformation in the Field Of Sports

### Our Footprint

- 4 Centres
- 120+ Trainees
- 374 Medals

Boxing training sessions



Strength and Condition coaching



Shikhar Fellowship



Dedicated Professional Coaches



Events and Competitions Platform



### Health & Nutrition

#### Eye screening Camp at Hydro



#### Healthcare Outreach at Ratnagiri



**12,549**  
people availed OPD,  
IPD services

**588**  
lab tests done  
in FY23

**378**  
people availed  
ambulance services

### Medicinal Farming

A total of 230 farmers initiated medicinal farming



[Health & Nutrition](#)



[Water & Environment](#)



[Waste Management](#)



[Agri-livelihoods](#)



[Education](#)



[Women's BPO & Livelihoods](#)



[Skill Enhancement](#)



[Art, Culture & Heritage](#)



[Sports](#)

# Awards and Recognition



“Gold Award - 14th Exceed Green future Environment Award in sustainability category” Sustainable development foundation



Power- Gen ESG & Sustainability award -2023 for Best ESG Initiative – Water Efficiency by Council of Enviro Excellence



SEEM National Award for Energy Efficiency Platinum category in Sept-23



“National award for excellence in energy management 2023” Organized by CII



1st Prize in TOPS Convention by Indian Society for Quality, Bengaluru Chapter in July-23



Received LACP 2022 Vision Awards for JSW Energy Annual Report (FY 22-23) – Gold Award, Top 80 Reports & Top 10 Indian Reports





**JSW** Energy

**Investor Relations Contact:**

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

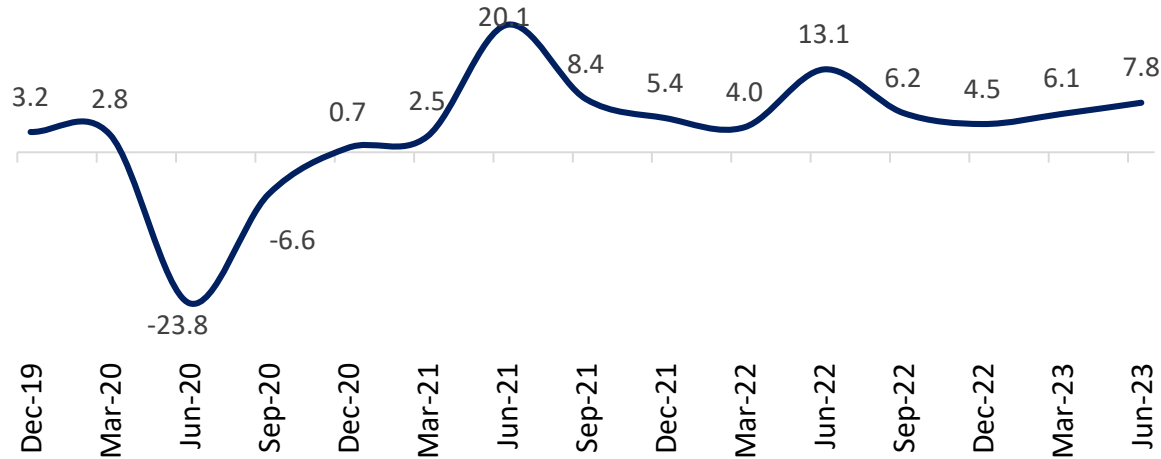
**ESG Data Profile:** [Link](#)



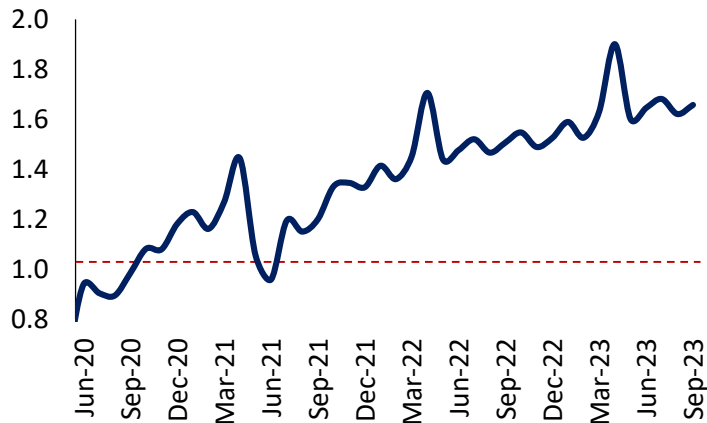
# Business Environment



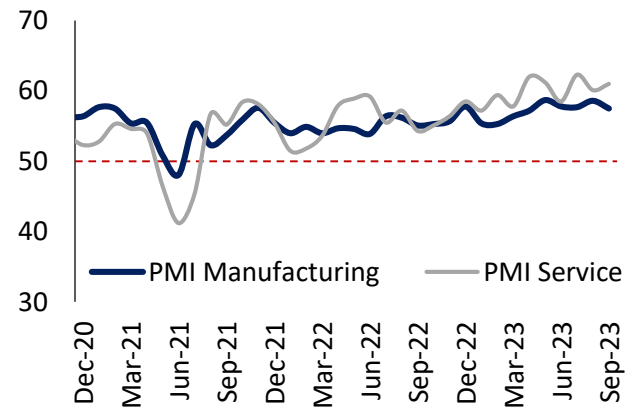
### Real GDP Growth (%)



### GST Collection (₹ Lakh Cr)



### PMI – Manufacturing & Services

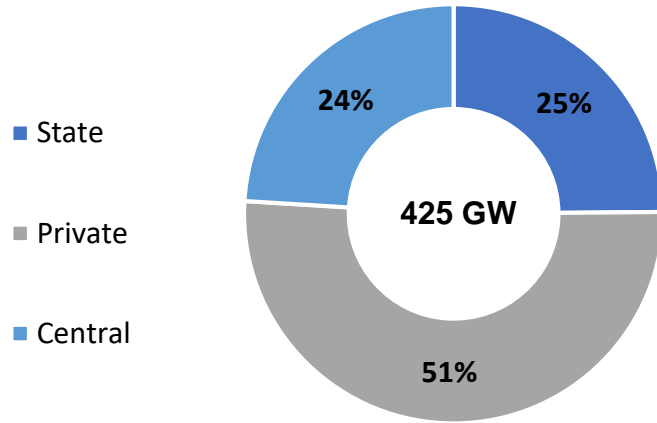


**IMF projects India's GDP growth at 6.3% for 2023**

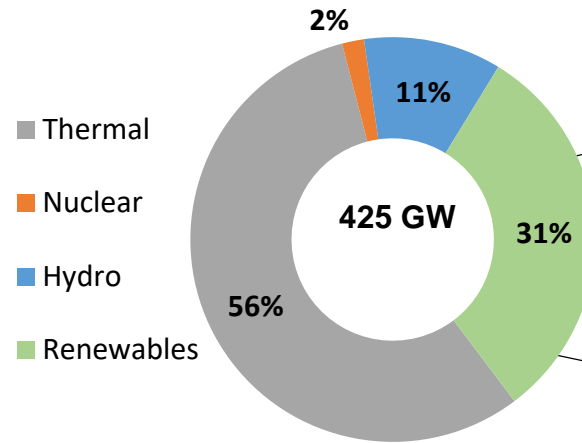
- Indian economy continues to see resilient growth amid slow global recovery and growing regional divergences
  - Real GDP growth for Jun-23 quarter stood at 7.8 % YoY; this is despite a strong base of 13.1% in Jun-22
  - PMI: Manufacturing (Sep-23: 57.5) and Services (Sep-23: 61) PMI continue to be encouraging
  - GST revenue surpasses ₹1.60 trillions for the fourth time this year; H1 FY24 collection grew 11% YoY
- Indian Retail Inflation
  - CPI eased to a three month low of 5.0% in Sep-23 within the RBI's tolerance mark, down from 6.8% in Aug-23.
  - RBI in its recent MPC meet kept repo rate unchanged to 6.50%; the key rate has been raised by 250 bps since May-22

# India's installed capacity stands at 425 GW as on Sep-23

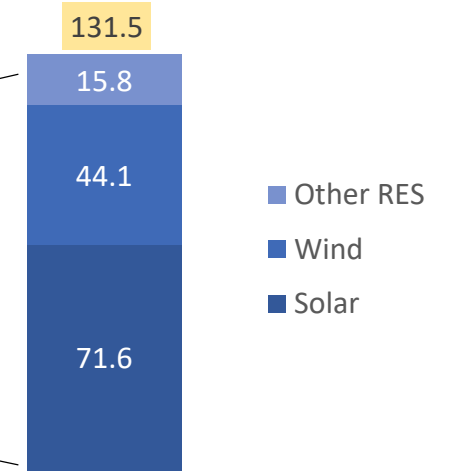
### Sector-wise Installed Capacity



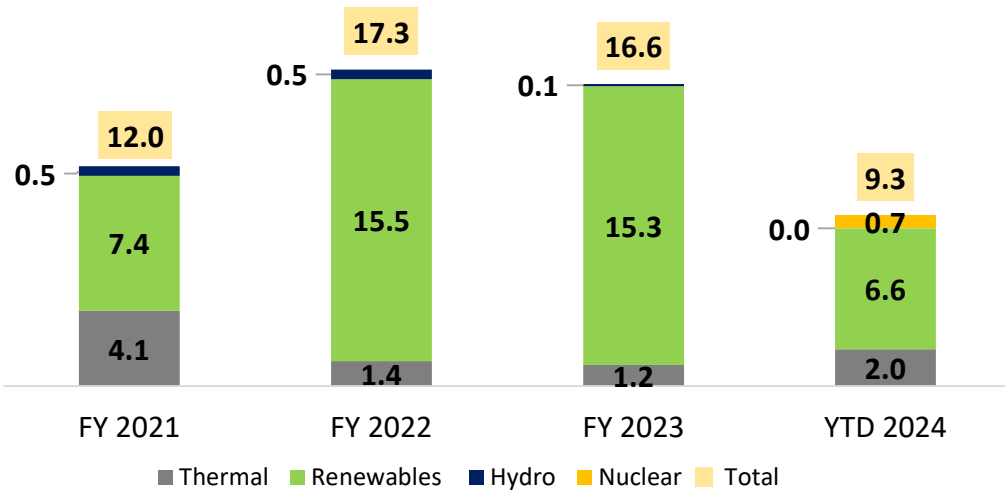
### Segment-wise Installed Capacity



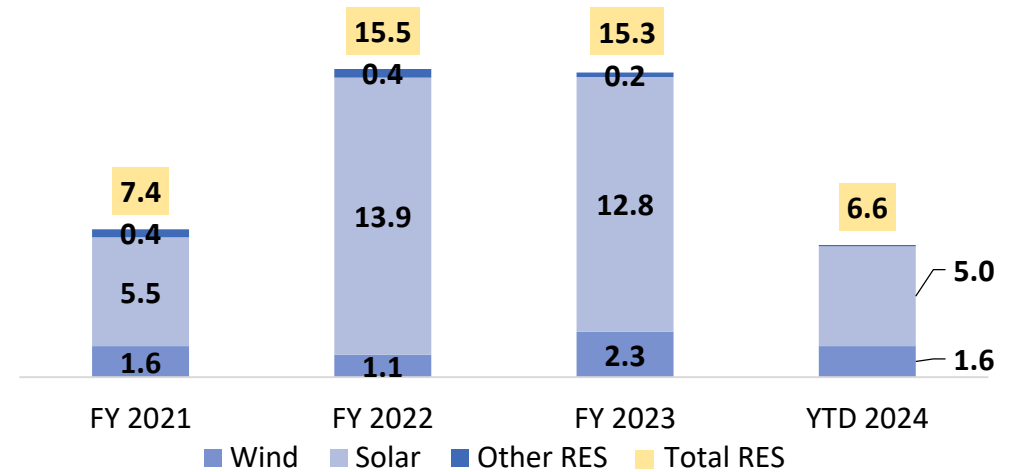
### Renewable Capacity Breakdown



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



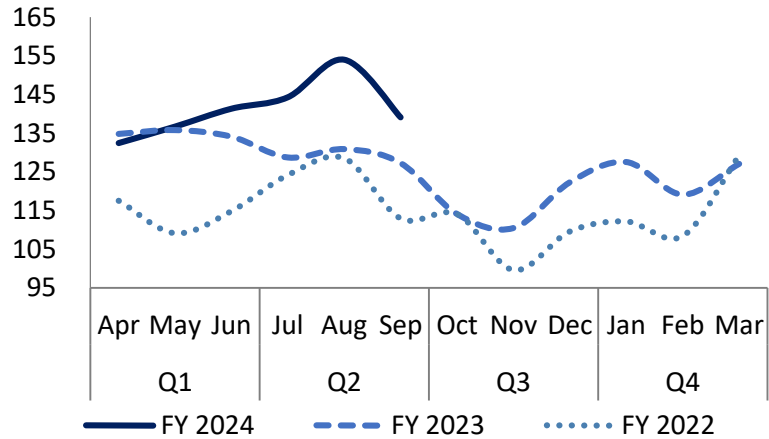
### Renewable Capacity Additions (excl. Hydro) GW



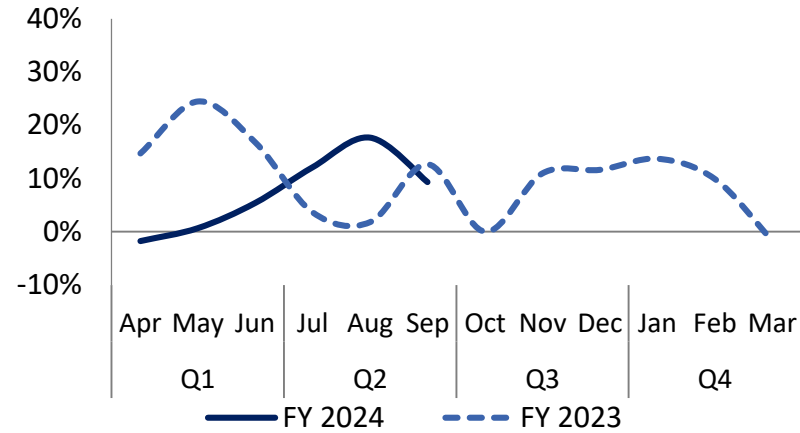
Source: Central Electricity Authority (CEA)

# Power Demand increased by 13% YoY in Q2 FY24

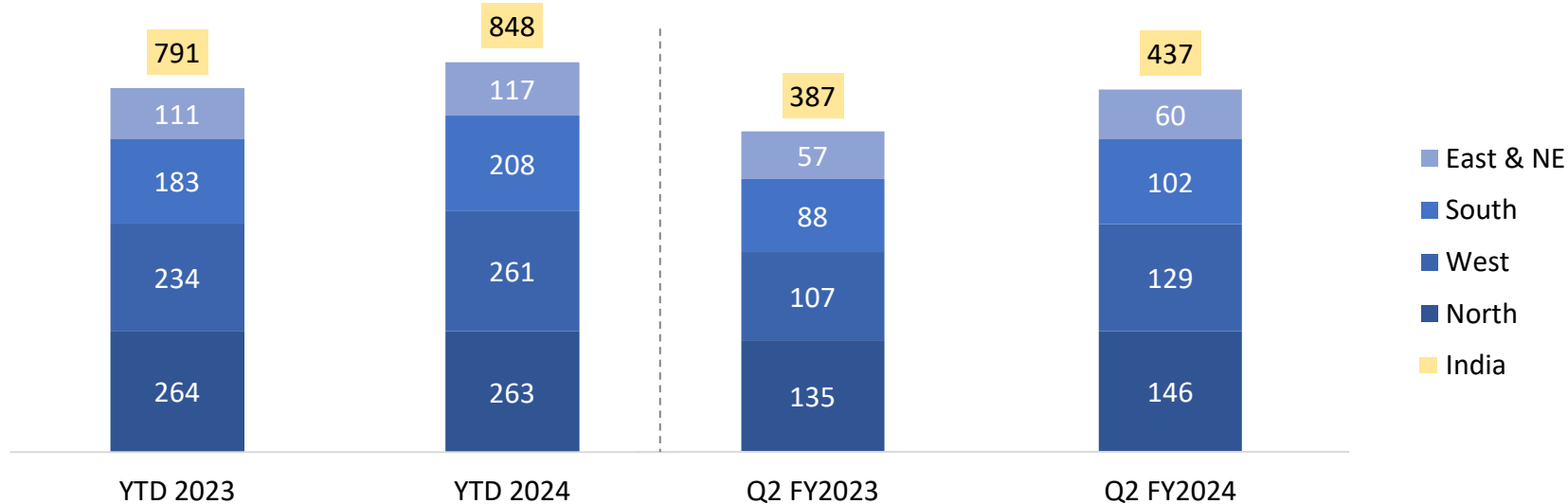
### Power Demand in BUs



### Power Demand Growth (% YoY)



### Power Demand by Region in BU

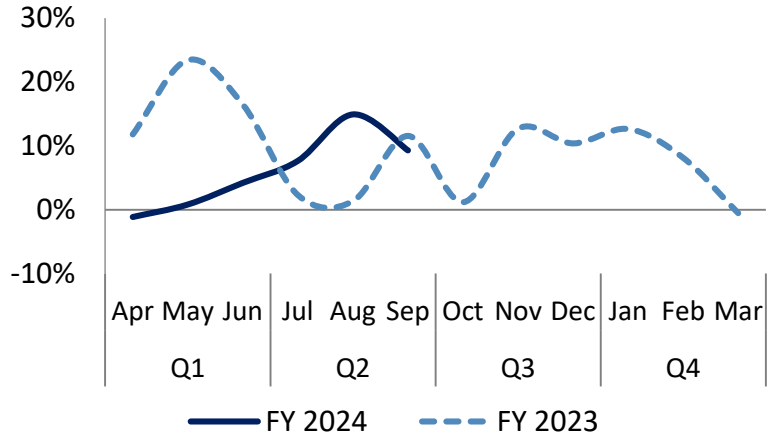


- Pan India demand during Q2 FY24 increased by 13% YoY and 7% YTD to 437 BUs due to surge in economic activities
- Demand in West increased by 21% YoY followed by South, up by 16% YoY
- Total demand met during the quarter stood at 436 Bus, up by 13% YoY and 8% YTD
- The peak demand in this quarter of 240 GW was witnessed during September month

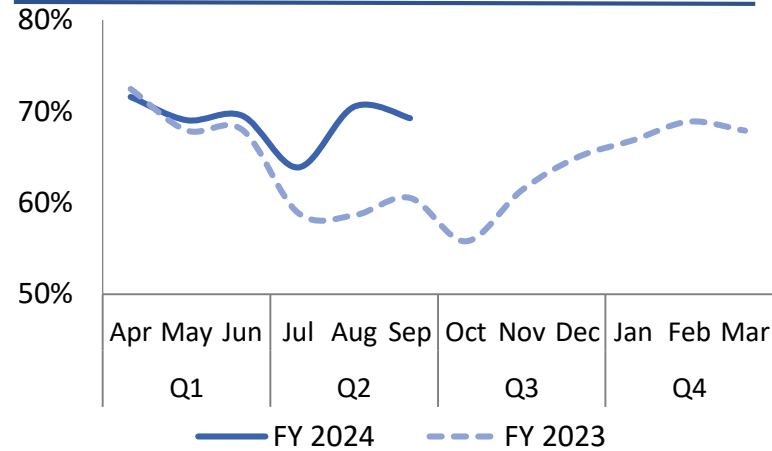


# Overall Generation Increased by 11% YoY in Q2 FY24

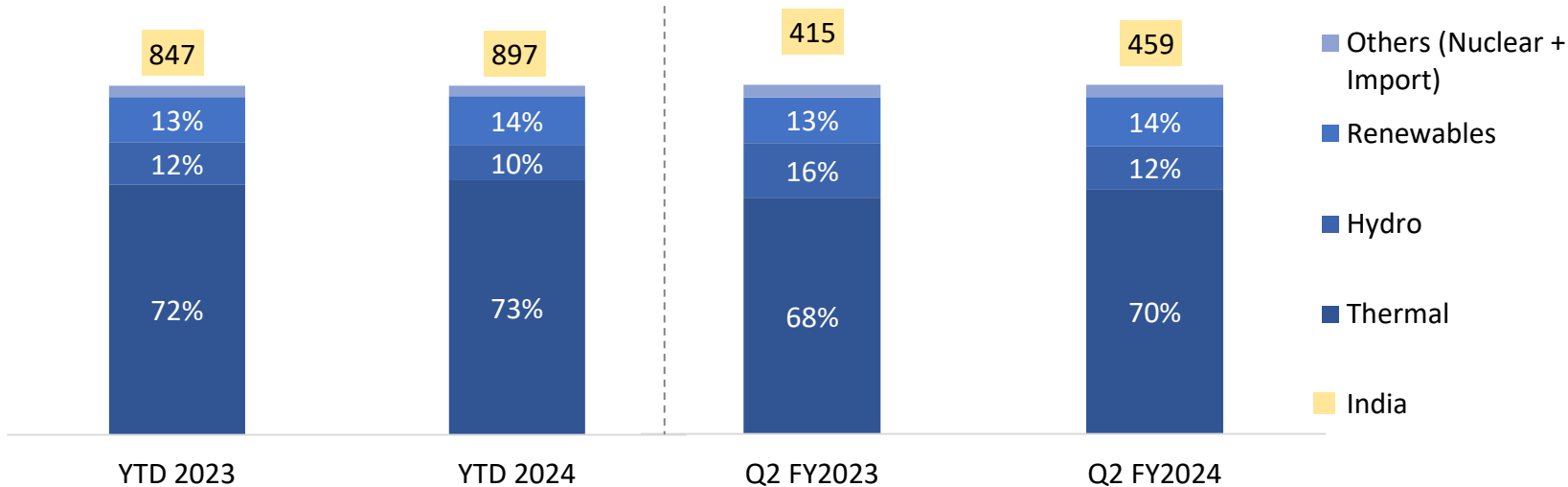
### Power Generation Growth (% YoY)



### Thermal PLFs



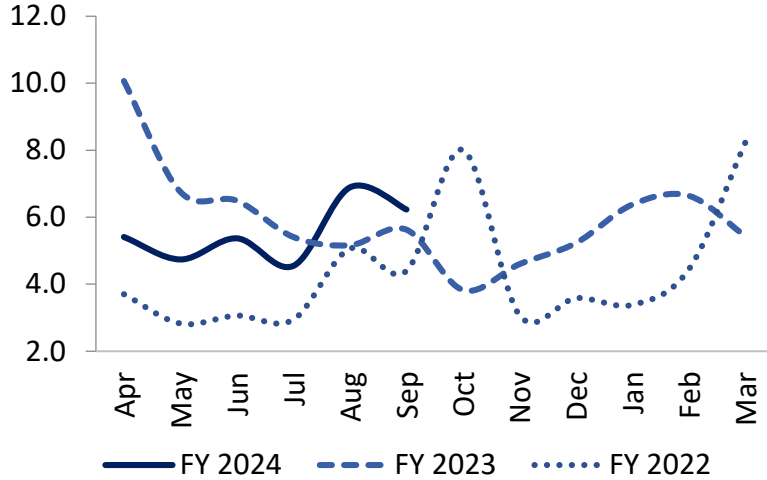
### Power Generation by Source in BU



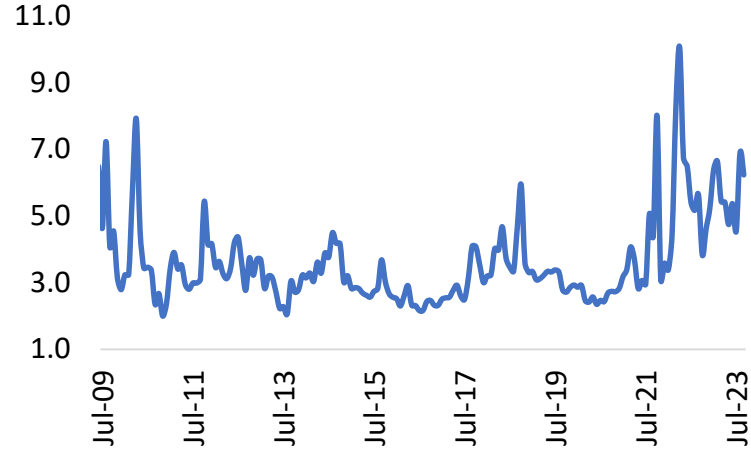
- Overall generation in Q2 FY24 stood at 459 Bus, an increase of 11% YoY
- Share of thermal in overall generation stood at 70% (vs 68% YoY) with net generation of 322 BUs up 15% YoY resulting in PLFs of 68%
- Generation from large hydro declined by 13% YoY in quarter and 12% YTD; while generation from renewables increased by 20% YoY supported by 30% growth in wind generation

# Merchant Power – Day Ahead Market

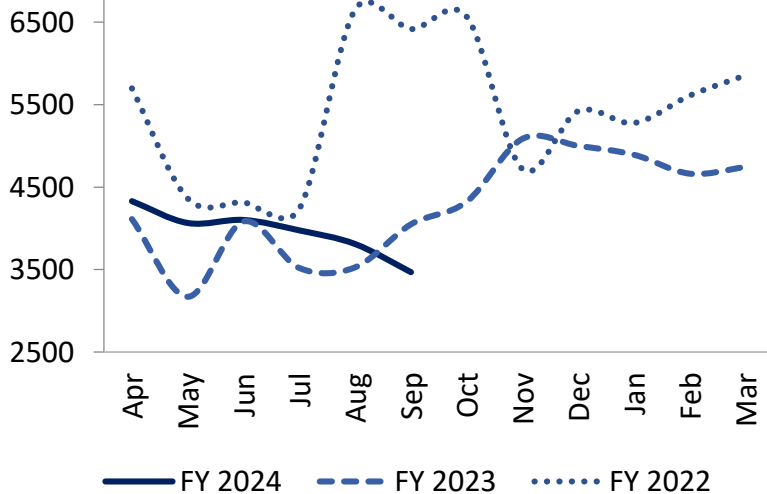
Monthly Average Merchant Tariff (₹/unit)



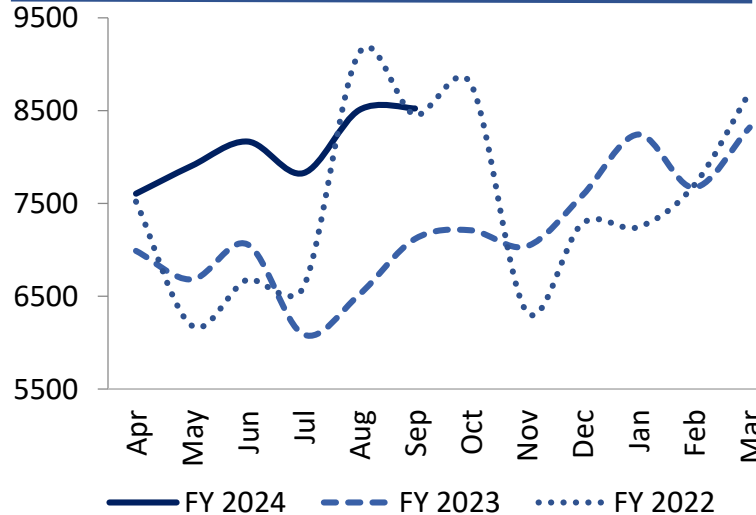
Linear Trend - Monthly Avg Price (₹/kuh)



DAM Market Cleared Volume (MUs)



Total Cleared Volume (MUs)



- Day Ahead Market (DAM) prices averaged at ₹5.9/unit during Q2 FY24 and increased by 9% YoY due to hot weather conditions and unusual monsoon season
- The cleared volume in DAM market at 11.3 BUs was down by 1% YoY in Q2 FY24 and up 6% YTD
- Total cleared volume on IEX stood at 24.9 Bus, up 26% YoY in Q2 FY24 and up 20% YTD

# Appendix



Acquired RE portfolio Solar Plant (Hungund, Karnataka)

# Operational Performance – Net Generation

Location		Net Generation (MUs)						
		Capacity	Q2 FY24	Q2 FY23	Change YoY	H1 FY24	H1 FY23	Change YoY
		%			%			%
Ratnagiri (1,200 MW)	LT	89%	<b>1,478</b>	1,302	14%	<b>3,140</b>	2,507	25%
	Total	100%	<b>1,752</b>	1,311	34%	<b>3,691</b>	2,828	30%
Barmer (1,080 MW)	LT	100%	<b>1,593</b>	1,651	-4%	<b>3,011</b>	3,205	-6%
Vijayanagar (860 MW)	LT	36%	<b>510</b>	620	-18%	<b>1,039</b>	1,166	-11%
	Total	100%	<b>900</b>	736	22%	<b>1,973</b>	1,836	7%
Nandyal (18 MW)	LT	100%	<b>25</b>	0	NA	<b>34</b>	10	256%
<b>Total Thermal (3,158 MW)</b>	LT	79%	<b>3,605</b>	3,573	1%	<b>7,225</b>	6,888	5%
	Total	100%	<b>4,269</b>	3,698	15%	<b>8,709</b>	7,879	11%
Hydro (1,391 MW)*	LT	97%	<b>2,694</b>	2,832	-5%	<b>3,828</b>	4,396	-13%
	Total	100%	<b>2,766</b>	2,900	-5%	<b>3,910</b>	4,472	-13%
Solar (253 MW)	LT	100%	<b>123</b>	76	61%	<b>274</b>	174	57%
Wind (216 MW)**	Total	100%	<b>173</b>	NA	NA	<b>227</b>	NA	NA
Acquired RE - Wind (1,331 MW)	Total	100%	<b>1,141</b>	NA	NA	<b>1,836</b>	NA	NA
Acquired RE - Solar (422 MW)	Total	100%	<b>165</b>	NA	NA	<b>381</b>	NA	NA
<b>TOTAL</b>	LT	89%	<b>7,903</b>	6,481	22%	<b>13,769</b>	11,458	20%
	Total	100%	<b>8,638</b>	6,675	29%	<b>15,336</b>	12,525	22%

\*Includes free power to HPSEB \*\* Generation from SECI X progressive commissioning started in Dec-22  
 LT : Long Term. NM : Not meaningful Figures rounded off to nearest units digit



# Operational Performance – PLF

Location		PLF/CUF				
		Capacity	Q2 FY24	Q2 FY23	H1 FY24	H1 FY23
		%	%	%	%	%
Ratnagiri (1,200 MW)	LT	89%	<b>67 (*88)</b>	60 (*81)	<b>72 (*94)</b>	58 (*76)
	Total	100%	<b>72 (*91)</b>	54 (*73)	<b>76 (*96)</b>	59 (*74)
Barmer (1,080 MW)	LT	100%	<b>75 (*78)</b>	77 (*81)	<b>71 (*74)</b>	75 (*78)
Vijayanagar (860 MW)	LT	36%	<b>80 (*86)</b>	100 (*100)	<b>83 (*89)</b>	95 (*95)
	Total	100%	<b>51 (*53)</b>	42 (*42)	<b>57 (*59)</b>	53 (*53)
Nandyal (18 MW)	LT	100%	<b>69 (*100)</b>	0 (*100)	<b>49 (*100)</b>	14 (*97)
<b>Total Thermal (3,158 MW)</b>	LT	79%	<b>72 (*83)</b>	72 (*83)	<b>73 (*85)</b>	70 (*79)
	Total	100%	<b>67 (*76)</b>	59 (*67)	<b>69 (*78)</b>	63 (*70)
Hydro (1,391 MW)	LT	97%	<b>95</b>	99	<b>68</b>	78
	Total	100%	<b>94</b>	98	<b>67</b>	76
Solar (253 MW)	LT	100%	<b>22</b>	16	<b>26</b>	20
Wind (216 MW)	Total	100%	<b>36</b>	NA	<b>32</b>	NA
Acquired RE - Wind (1,331 MW)	Total	100%	<b>40</b>	NA	<b>32</b>	NA
Acquired RE - Solar (422 MW)	Total	100%	<b>18</b>	NA	<b>21</b>	NA

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

# Entity-wise Financial Results

Entity-wise Revenue from Operations				
Particulars in ₹ Crore	Q2 FY24	Q2 FY23	H1 FY24	H1 FY23
Standalone	<b>1,133</b>	1,141	<b>2,617</b>	3,138
JSW Energy (Barmer)	<b>727</b>	665	<b>1,367</b>	1,283
JSW Hydro Energy	<b>691</b>	539	<b>988</b>	896
Acquired RE Portfolio	<b>607</b>	NA	<b>1,025</b>	NA
JSW Renewable Energy (Vijayanagar)	<b>40</b>	28	<b>90</b>	61
JPTL	<b>17</b>	17	<b>34</b>	34
<b>Consolidated*</b>	<b>3,259</b>	2,387	<b>6,187</b>	5,414

Entity-wise EBITDA (Including Other Income)				
Particulars in ₹ Crore	Q2 FY24	Q2 FY23	H1 FY24	H1 FY23
Standalone	<b>452</b>	352	<b>877</b>	846
JSW Energy (Barmer)	<b>225</b>	225	<b>430</b>	444
JSW Hydro Energy	<b>689</b>	502	<b>971</b>	827
Acquired RE Portfolio	<b>557</b>	NA	<b>931</b>	NA
JSW Renewable Energy (Vijayanagar)	<b>36</b>	9	<b>83</b>	40
JPTL	<b>19</b>	16	<b>36</b>	33
<b>Consolidated*</b>	<b>2,008</b>	1,098	<b>3,316</b>	2,209

# Cash Returns on Adjusted Net Worth

₹ Cr (Unless mentioned otherwise)

Quarter ended	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23
<b>Reported PAT</b>	<b>324</b>	<b>864</b>	<b>560</b>	<b>466</b>	<b>180</b>	<b>272</b>	<b>290</b>	<b>850</b>
Add: Depreciation	281	277	289	294	295	291	398	409
Add/(less): Deferred Taxes	26	(7)	84	42	14	24	55	89
(Less): Dividend Received	-	-	-	(122)	-	-	-	(24)
Add/(less): One-offs*	-	(492)	(120)	0	-	-	-	(144)
<b>Cash PAT</b>	<b>631</b>	<b>643</b>	<b>813</b>	<b>681</b>	<b>489</b>	<b>587</b>	<b>743</b>	<b>1,180</b>
<b>Cash PAT (TTM)</b>	<b>2,097</b>	<b>2,395</b>	<b>2,697</b>	<b>2,767</b>	<b>2,625</b>	<b>2,570</b>	<b>2,500</b>	<b>2,999</b>
<b>Adjusted Net Worth**</b>	<b>11,830</b>	<b>12,688</b>	<b>12,952</b>	<b>13,491</b>	<b>13,446</b>	<b>14,177</b>	<b>14,061</b>	<b>14,859</b>
<b>Cash Returns on Net Worth (%)</b>	<b>18%</b>	<b>19%</b>	<b>21%</b>	<b>21%</b>	<b>20%</b>	<b>18%</b>	<b>18%</b>	<b>20%</b>

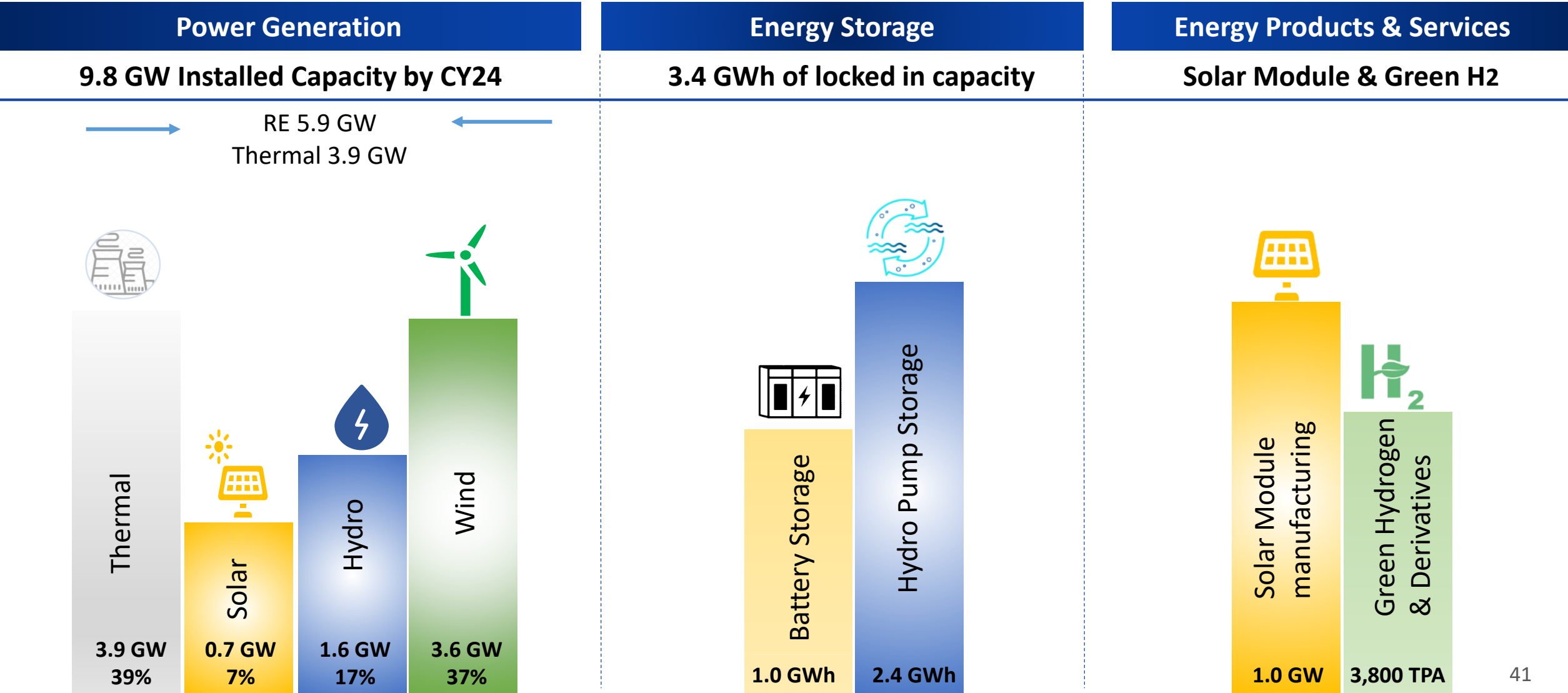
**Strong cash returns of >20% translates to TTM cash profits of ~₹3,000 Cr**

\*Refer note 5 of Q4FY22 release for Mar-22 one-offs. Jun-22: Exceptional items ₹ 120 Cr represents reversal of loss allowance made in earlier years on loan given to a party; ₹144 Cr for Sep-23 represents after-tax effects of Hydro True-up

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

# JSW Energy – Presence across the value chain

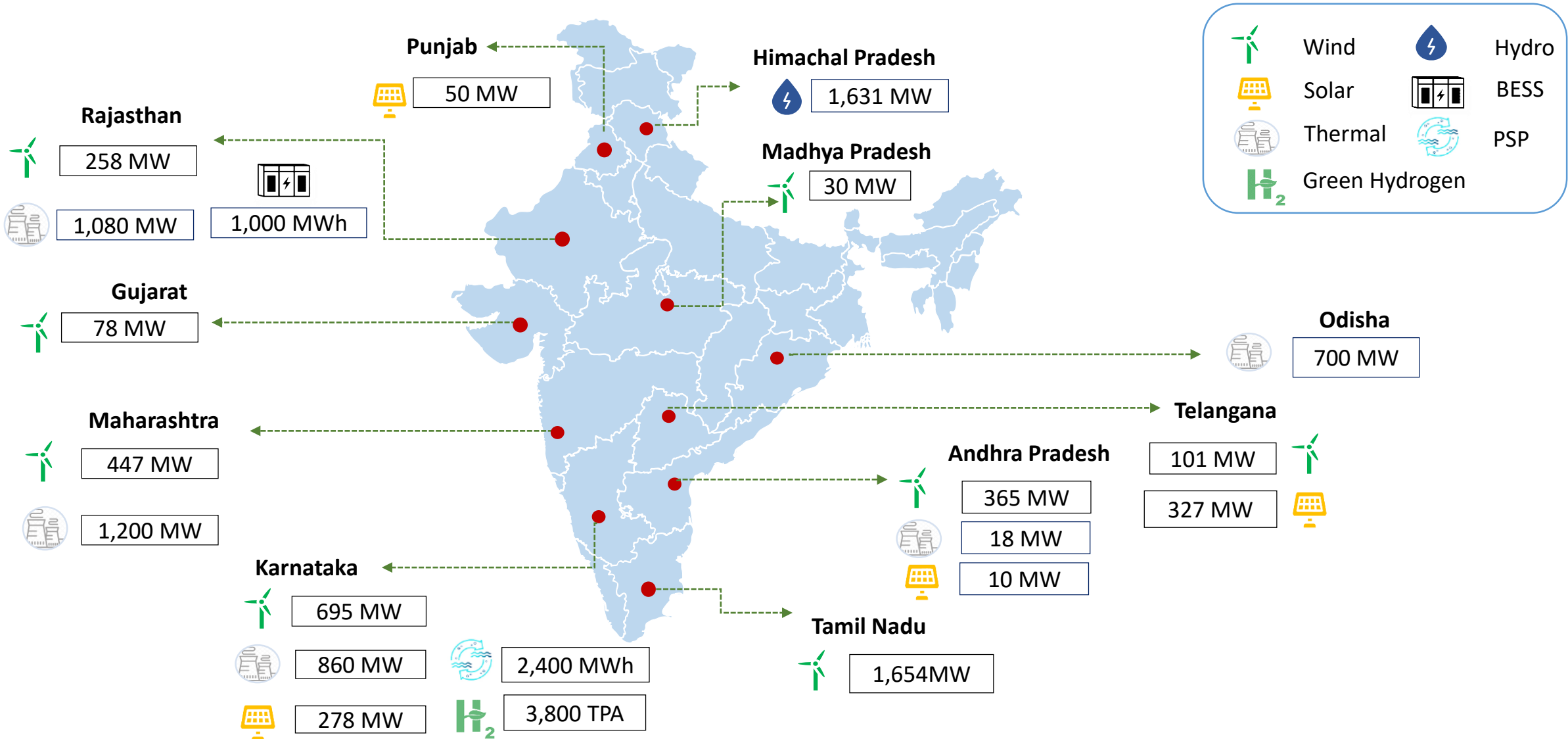
Well placed to achieve 10 GW of generation capacity ahead of stated timeline of 2025 with foray into New Age Businesses





# Developed a Pan India Footprint of Diverse Asset Base

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



• Map of India representation – scaling may not be accurate

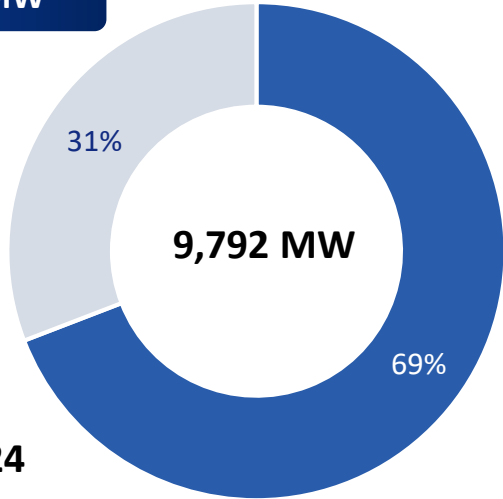
# Well Diversified Portfolio – Focused on Maximising Cash Returns

## Capacity Breakdown

**Generation 9,792 MW**

**Under-construction 3,021 MW**

Wind 2,081 MW  
Thermal 700 MW  
Hydro 240 MW



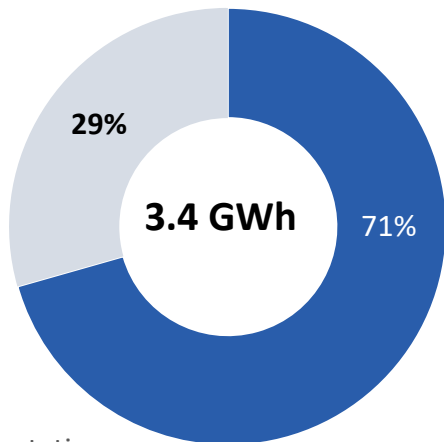
**Installed 6,771 MW**

Thermal 3,158 MW  
Wind 1,547 MW  
Hydro 1,391 MW  
Solar 675 MW

**Commissioned by CY24**

**Storage 3.4 GWh locked in**

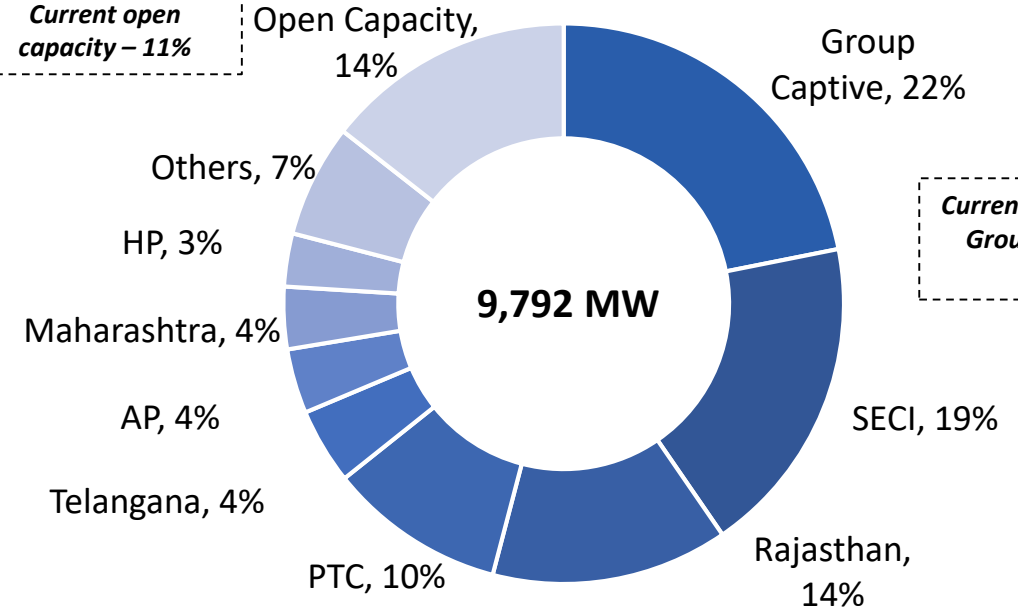
**BESS 1.0 GWh**



**Hydro PSP 2.4 GWh**

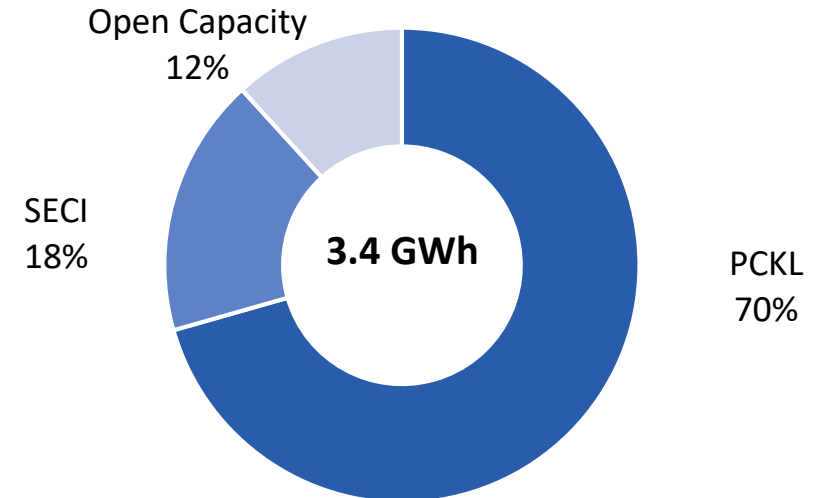
## Diversified Offtakers

*Current open capacity – 11%*

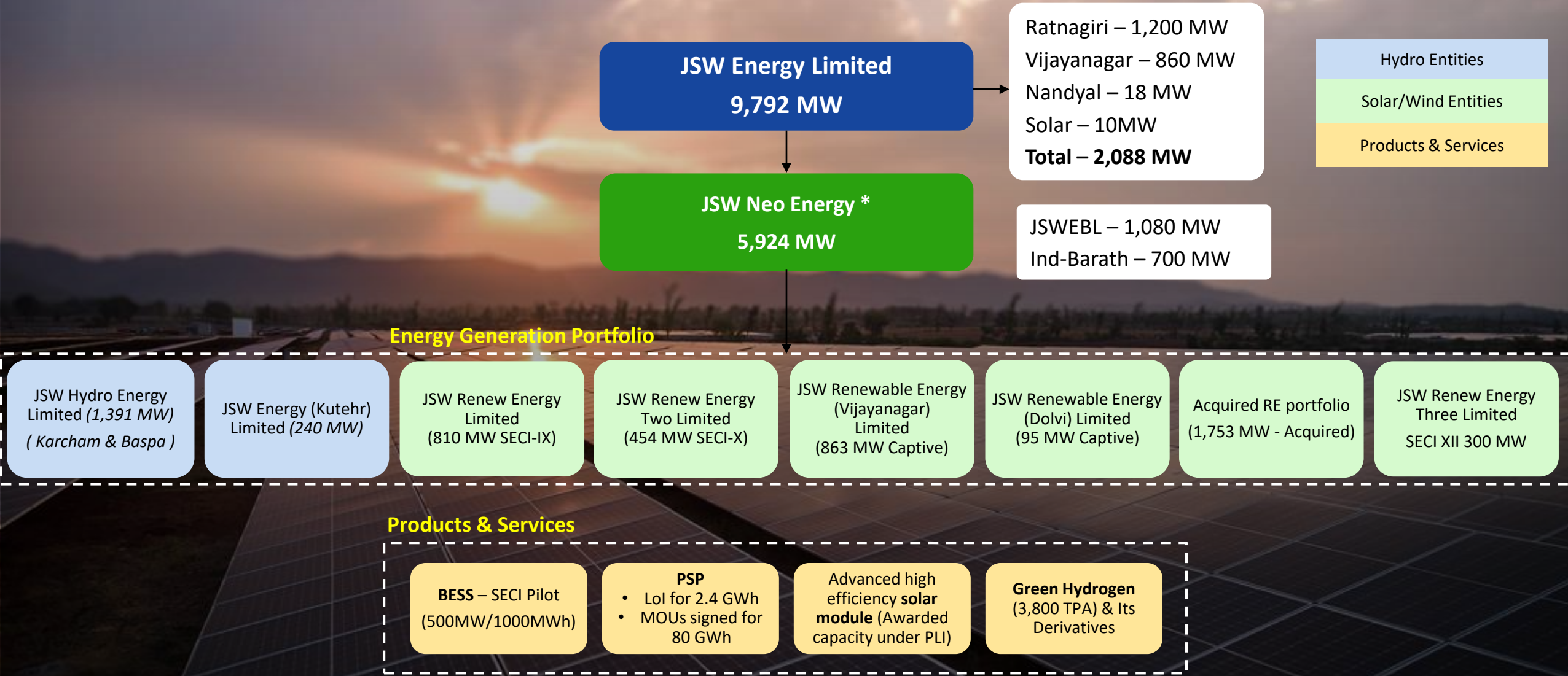


*Current Exposure to Group Captive - 20%*

**Open Capacity 12%**



# JSW Energy – Broad Structure



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

Hydro Entities  
Solar/Wind Entities  
Products & Services

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

## Energy Generation Portfolio

## Products & Services

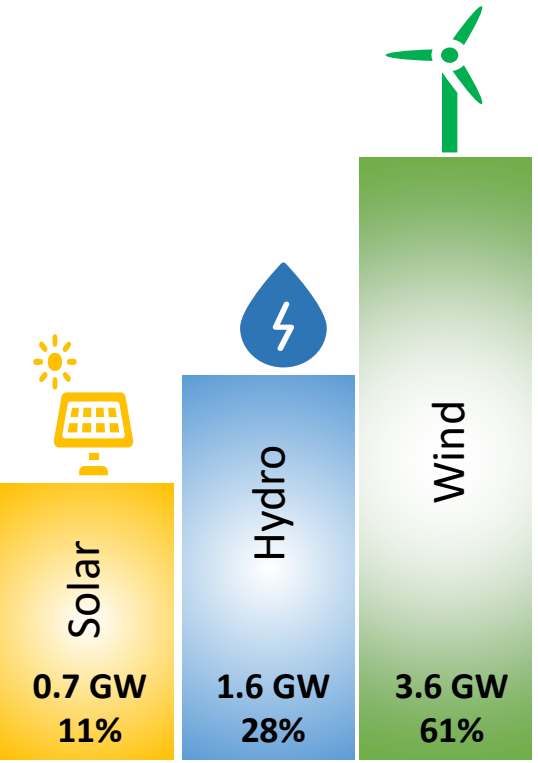
\* Corporate structure post Acquisition and restructuring. Includes 18 MW of operational solar power plant for JSW group captive. All subsidiaries shown are wholly owned subsidiaries except RE CPP

# 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

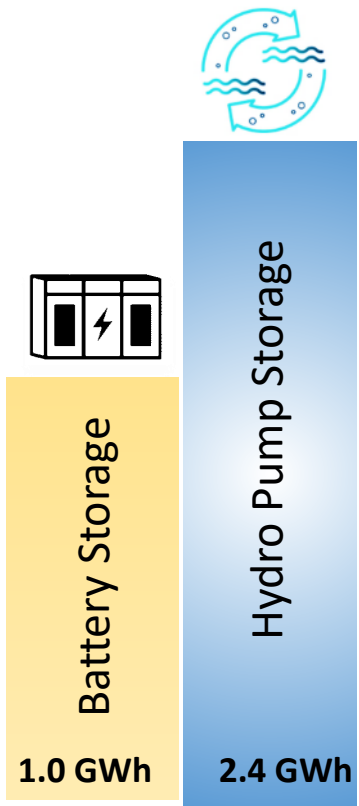
## Power Generation

**5.9 GW**  
Installed Capacity by CY24



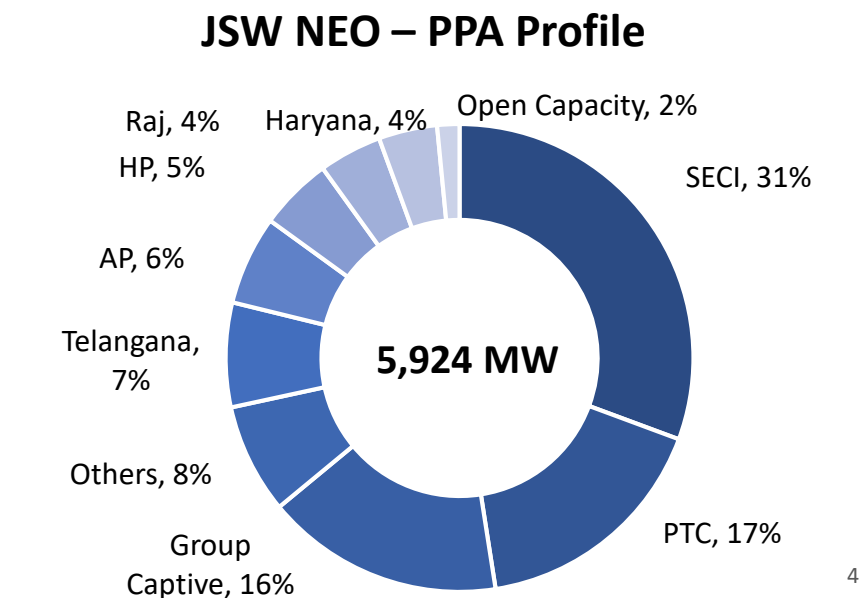
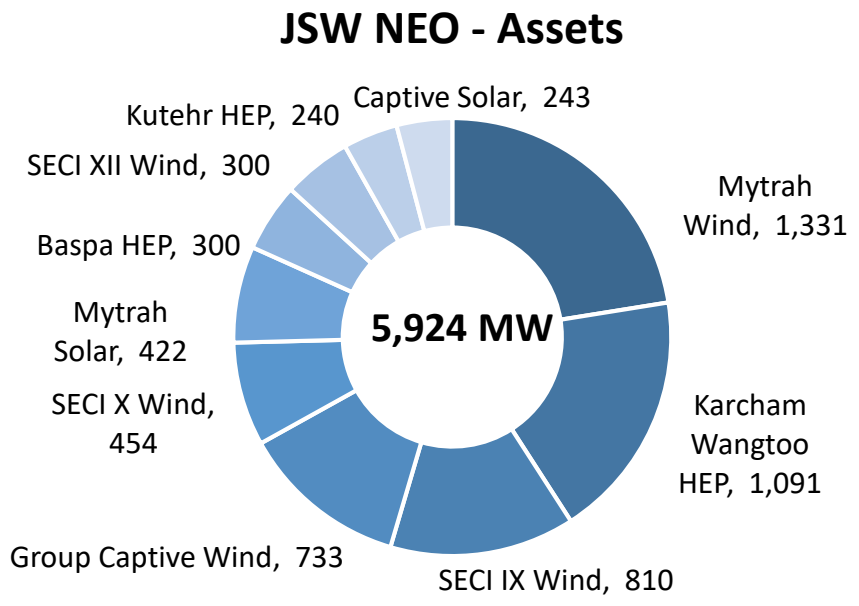
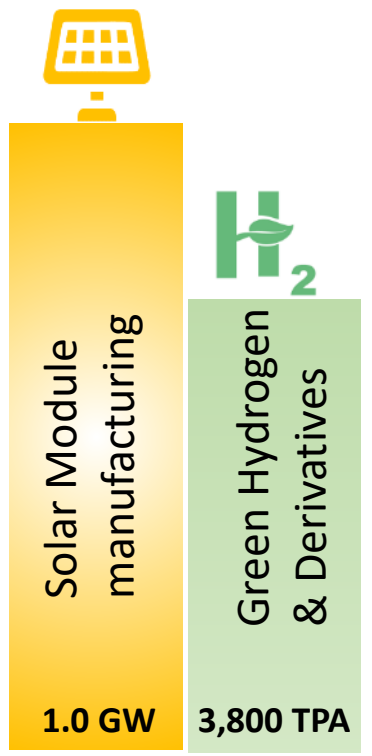
## Energy Storage

**3.4 GWh**  
locked in capacity



## Energy Products & Services

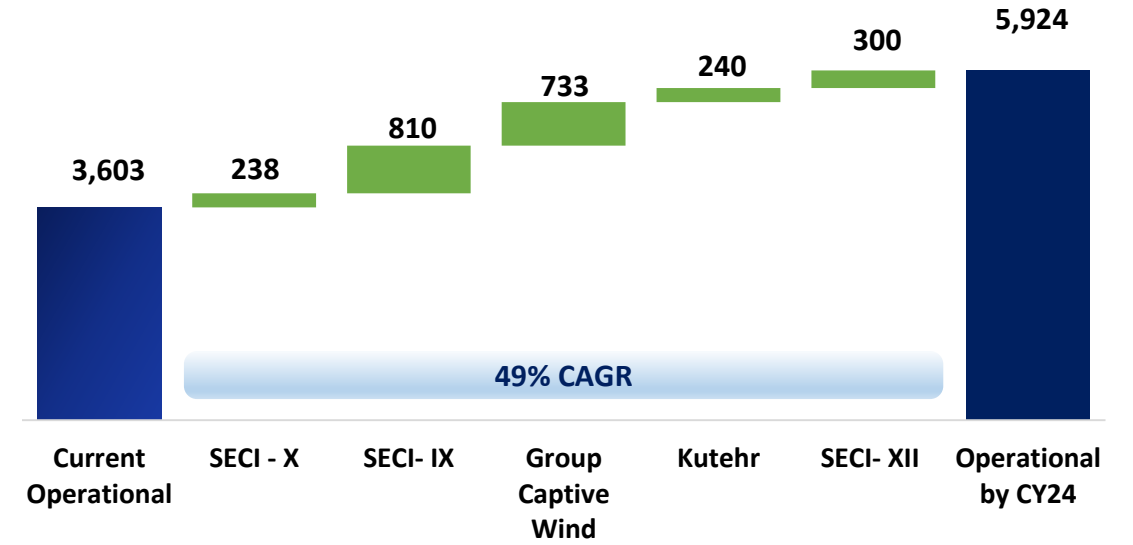
**Solar Modules & Green H<sub>2</sub>**



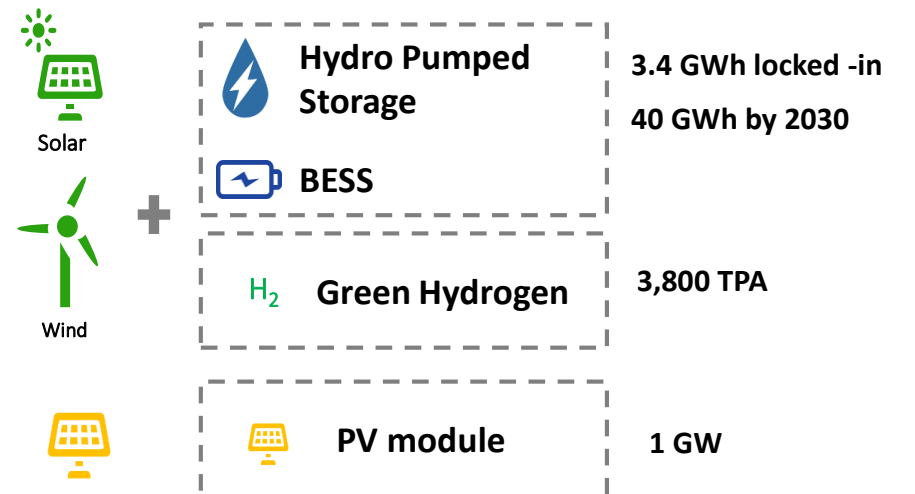


# JSW Neo – Multiple Growth Drivers

## Generation



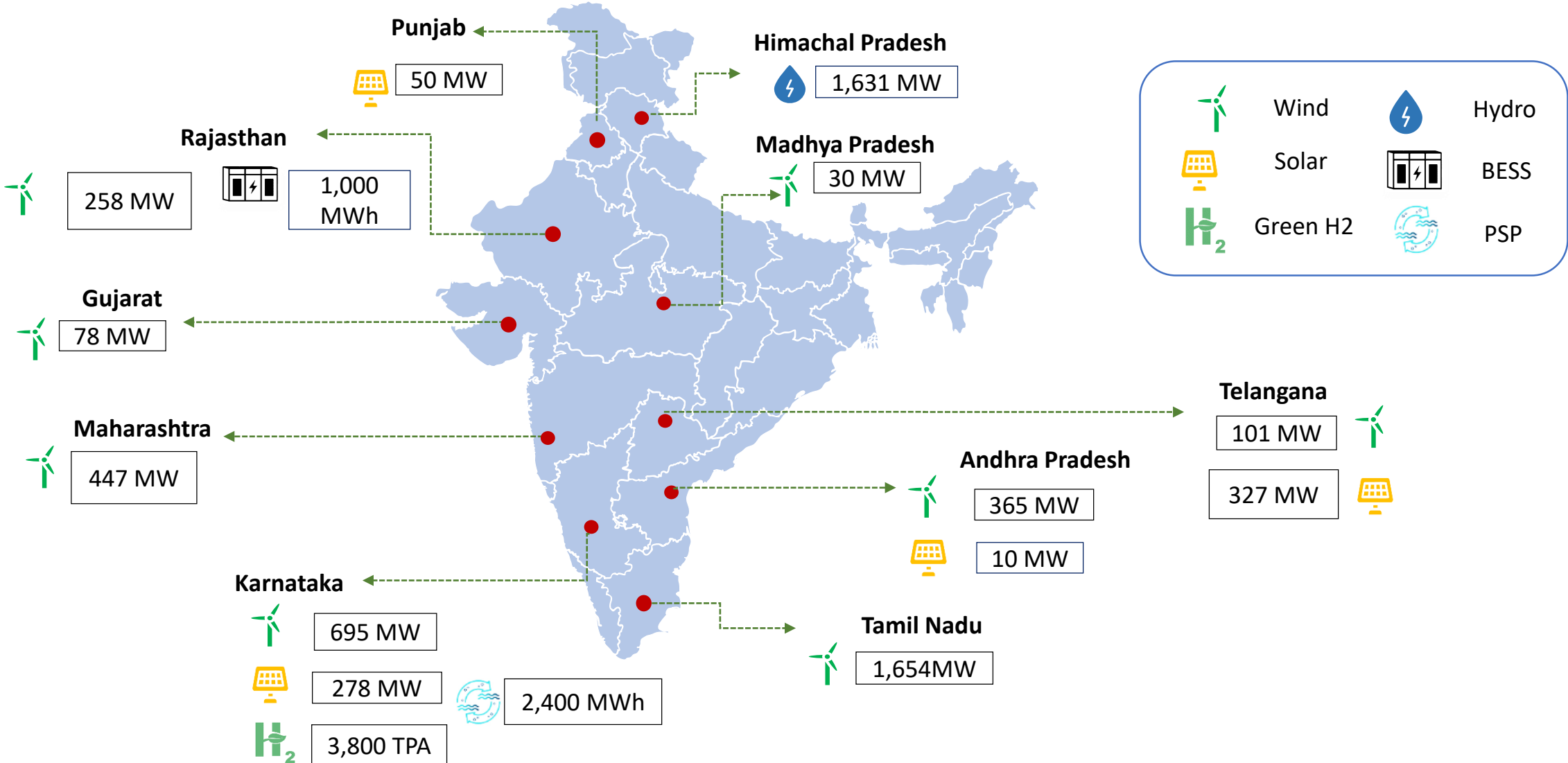
## Energy Products & Services



Acquired RE portfolio Solar Plant (Hungund, Karnataka)

# Developed a Pan India Footprint of Diverse Asset Base

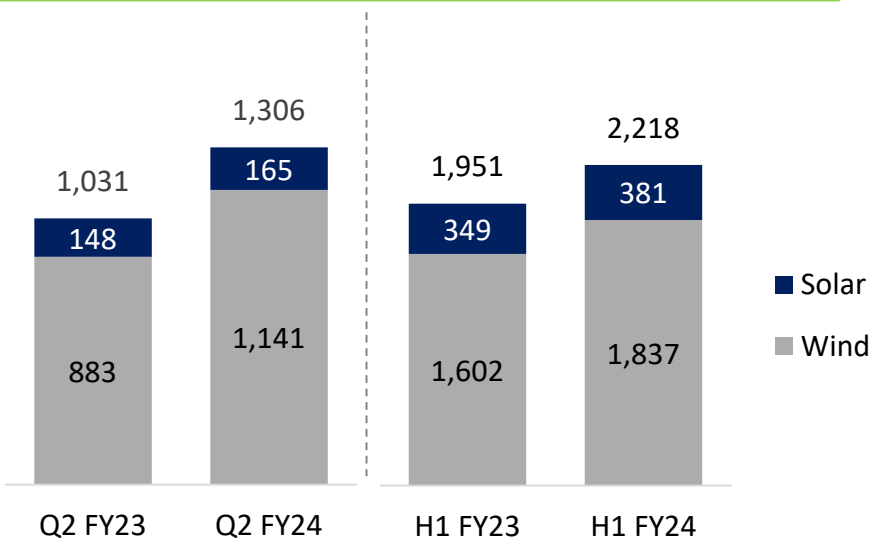
Operational Capacity by CY 24 (5,924 MW)



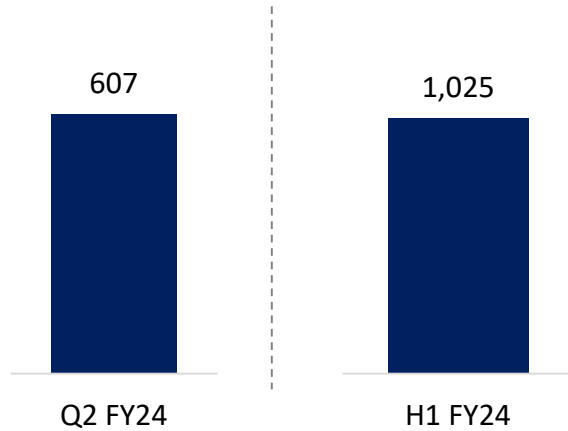
Map of India representation – scaling may not be accurate

# Renewable Assets | Acquired RE Portfolio

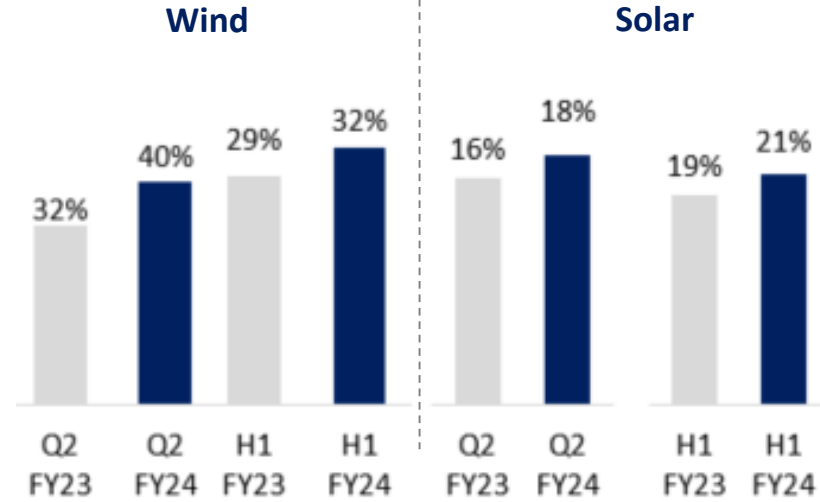
## Net Generation (MUs)



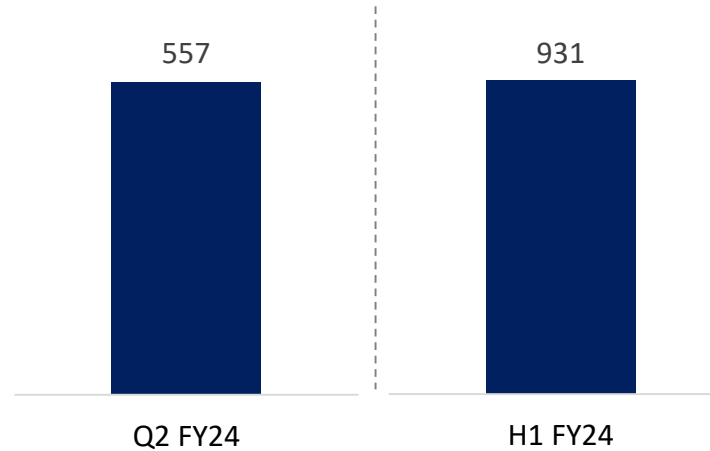
## Segmental Revenue from Operations (₹ Cr)



## PLF



## EBITDA (₹ Cr)



## Operational Highlights

- Net generation increased 27% YoY driven by 29% increase in wind generation
- CUF: Wind CUF stands at 40% due to better machine availability, incremental contribution from Maniyachi site (252 MW) and positive wind impact.
- Solar generated 165MUs at an average CUF of 18% driven by improved performance ratio and GII gain

## Financial Highlights

- Revenue of ₹ 607 Cr resulted in EBITDA of ₹ 557 Cr

## Asset Optimisation & Performance Improvement Plan - Promising Outcome Witnessed



### WIND

#### Action Plan

- Restoration of WTGs
- Improve Machine Availability (MA)
- Focused interventions –
  - 76% of generation is from 10 sites
- Transmission loss improvement
- Power curve correction



### Outcome

#### Restoration of WTGs

All WTGs which were stopped before acquisition have been restored  
Maniyachi site (252 MW) fully operational and contributed in Q2 FY24

#### Machine availability

WTGs restoration and spare availability resulted in improved Machine Availability (MA). Achieved highest 98.5% MA in a day.  
MA in H1 FY24 improved to 95.5% as compared to H1 FY23 (87.5%)

#### Focused intervention on O&M

In house spares repair and inventory management initiated, to drive quick turnaround of repair and maintenance activity  
Capability building for self O&M of wind farms- Initiated for 764 MW

#### Equipments

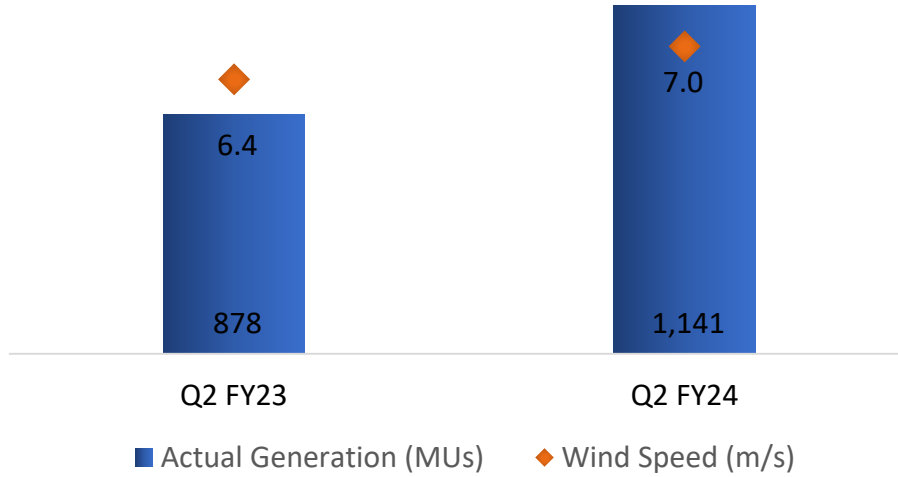
All spares and material ordered, 90% has reached site.  
Balance of plant strengthening: Material and spares for 33 KV line, PSS and USS started receiving at plants.

**Expected generation improvement by ~700 MUs**

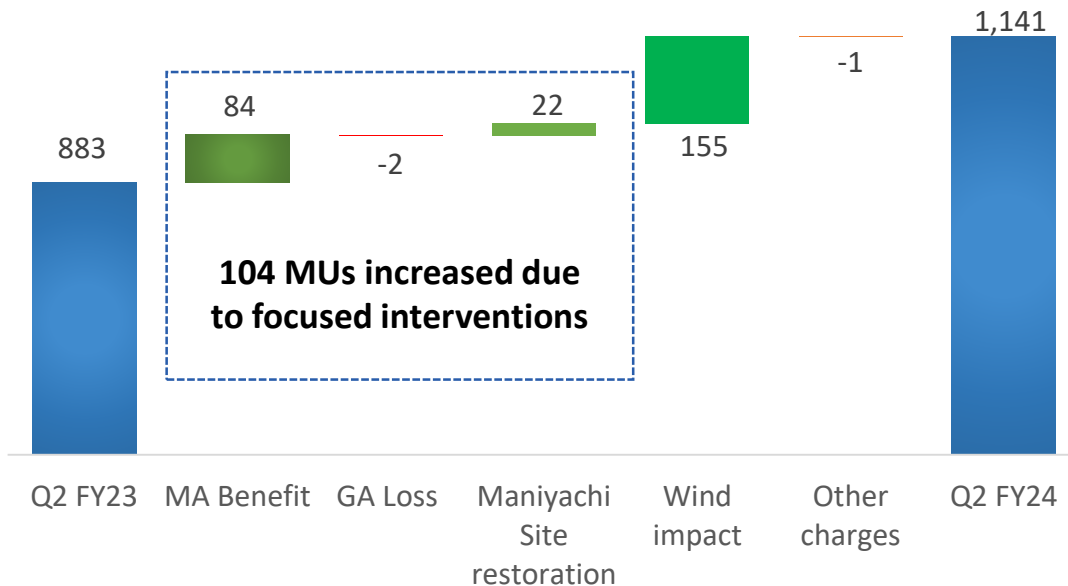


# Acquired RE Wind - progress on track

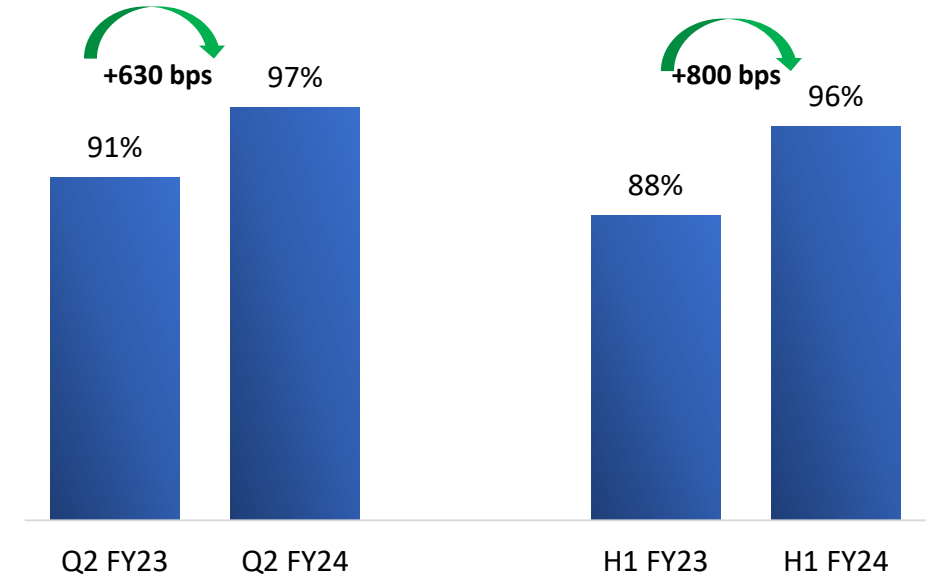
## Actual Generation vs Wind Speed



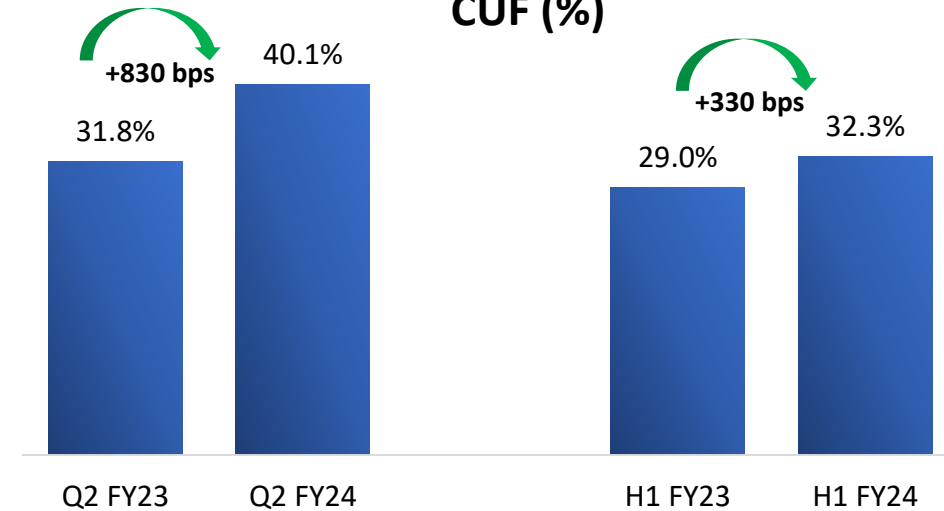
## Wind Generation (MUs)



## Machine Availability (%)



## CUF (%)



## Asset Optimisation & Performance Improvement Plan - Promising Outcome Witnessed



### SOLAR

#### Action Plan

- Improved Performance Ratio (PR) to add ~12 MUs, driven by:
    - O&M SOP implementation
    - Spares Management
    - Improve tracker availability
  - DC side Capacity augmentation (38 MW) to add ~20 MU's
- ~45 MUs improvement**



#### Operations & Maintenance

O&M SOP implemented and monitored on regular basis  
Spares are proactively planned and spares backup created accordingly

#### O&M and Performance Ratio

Performance parameters are re-negotiated with O&M vendor  
Plant performance parameters linked to performance ratio

#### Tracker availability

Tracker availability improved to 99% in this quarter

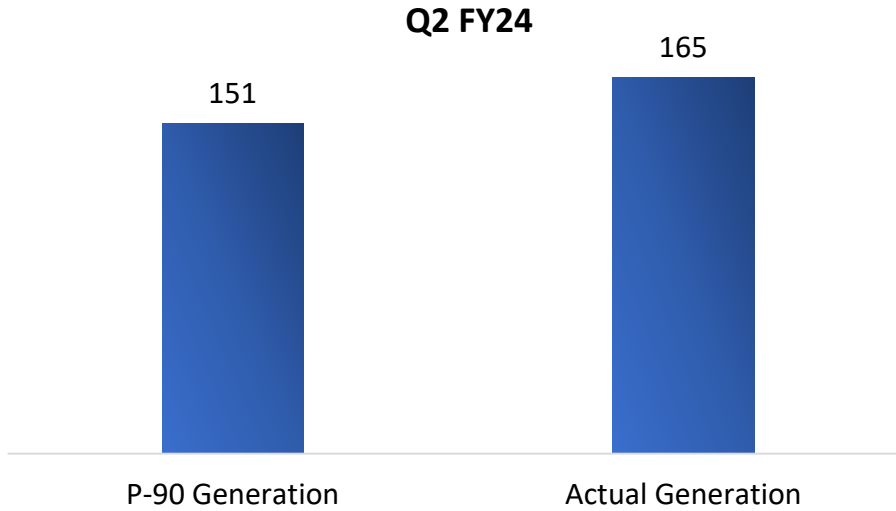
#### Augmentation & Restoration (38 MW DC)

Order for modules is placed & delivery started, Module erection work under progress.

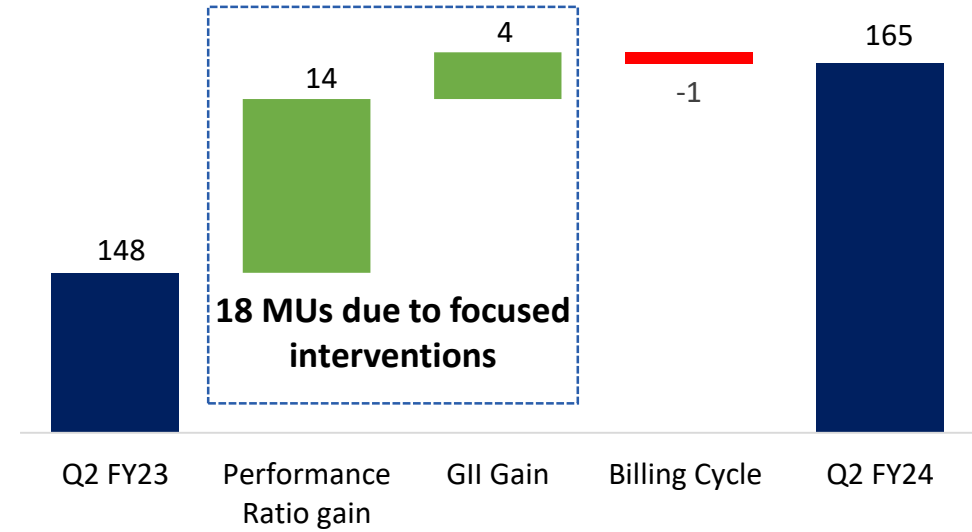
**Expected generation improvement by ~45 MUs**

# Acquired RE Solar - progress on track

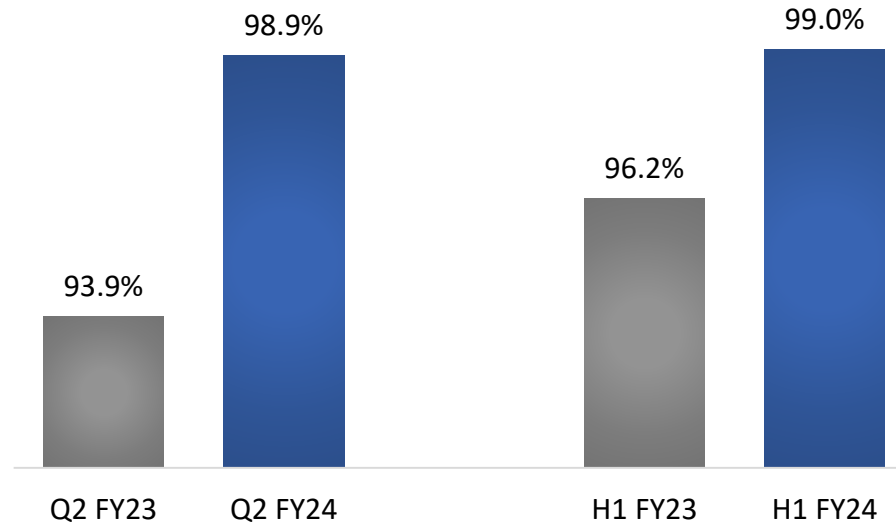
### P-90 vs Actual Generation (MUs)



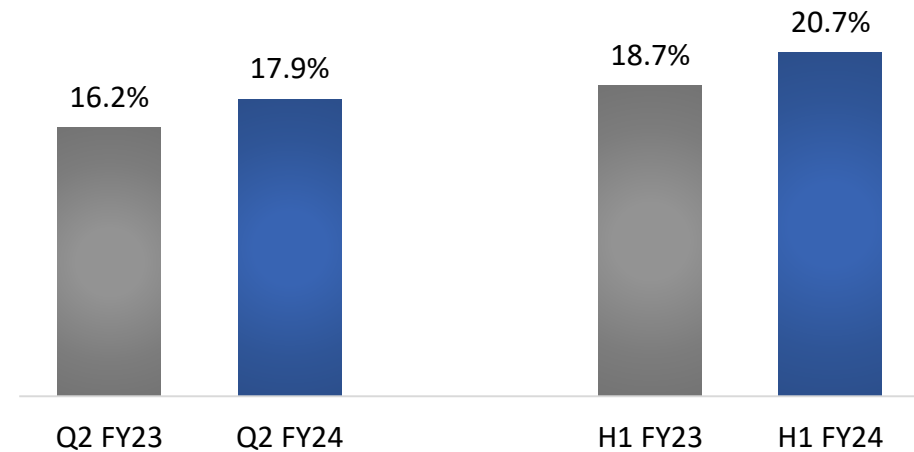
### Solar Generation (MUs)



### Plant Availability (%)

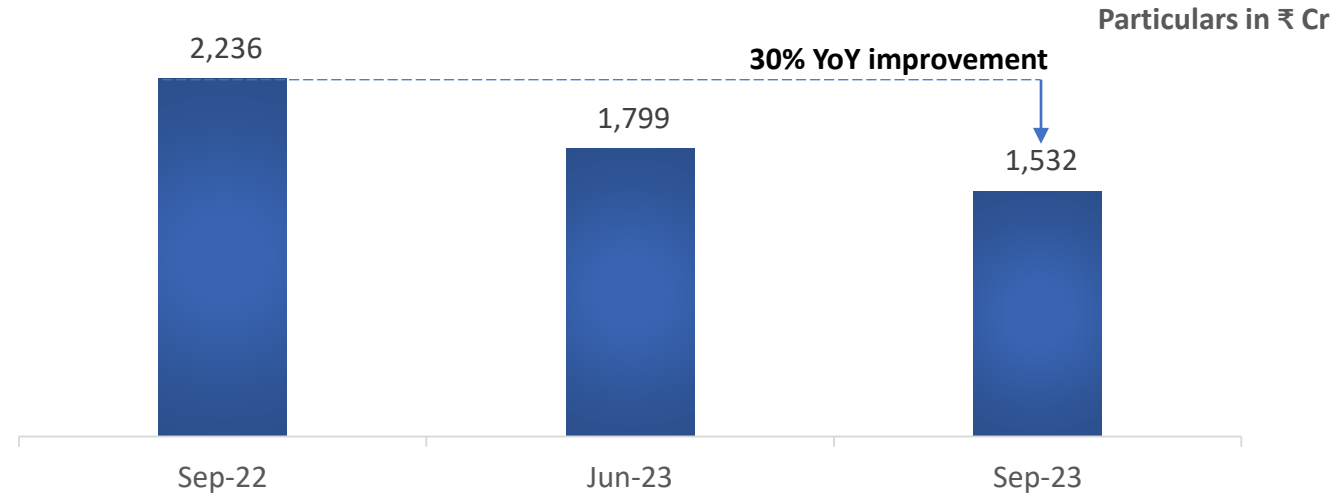


### CUF (%)

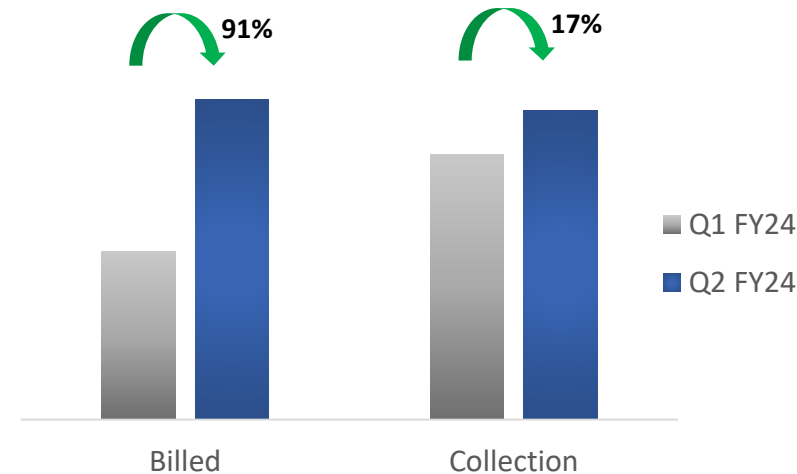


# Receivables Cycle Improving

## 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

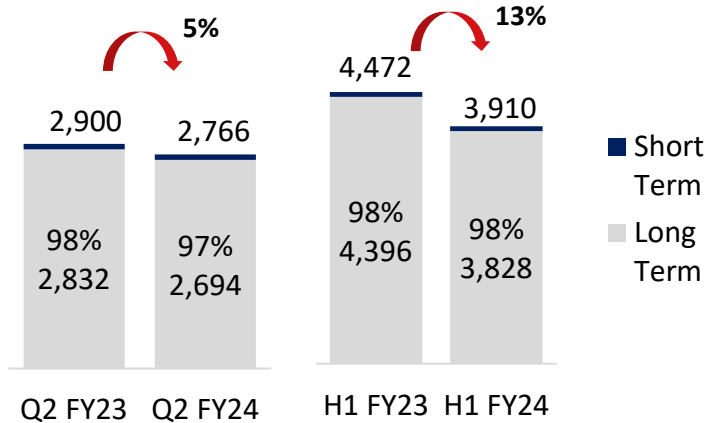
Continued focus on collection efficiency supports further reduction in the receivables

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

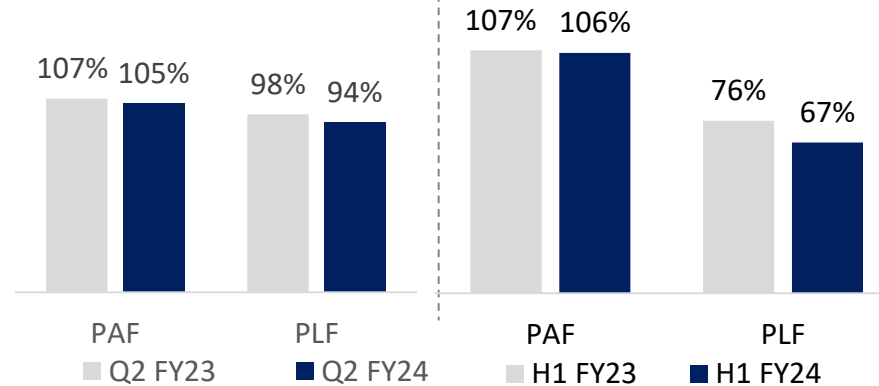


# Renewable Assets | Hydro Q2 FY24 Highlights

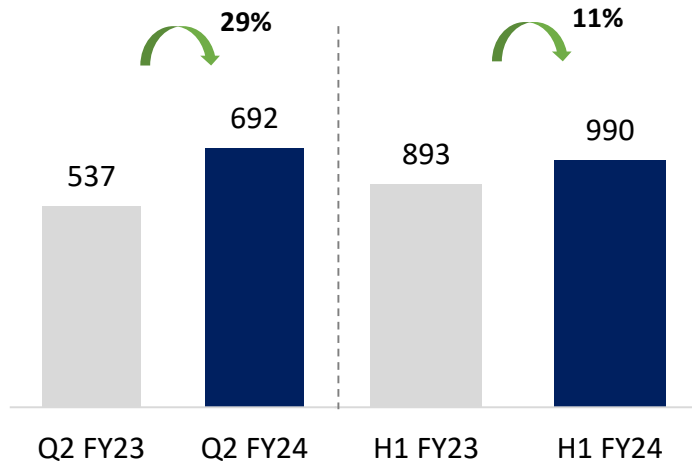
## Net Generation (MUs)



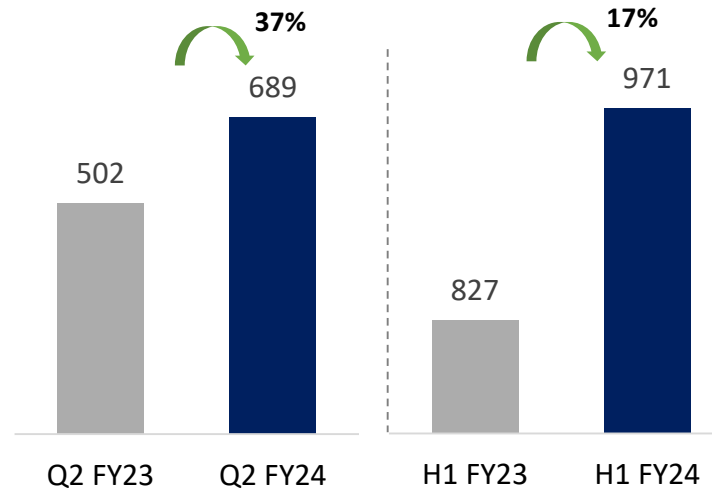
## Hydro : PAF and PLF



## Segmental Revenue from Operations (₹ Cr)



## EBITDA (₹ Cr)



## Operational Highlights

- Net generation at Hydro Assets (Karcham and Baspa) down due to unusual monsoon and high silt conditions in the river
- Plant availability factor at 105% remains significantly above the normative PAF

## Financial Highlights

- Total EBITDA, excluding the true-up impact of ₹ 174 Cr, was up 3% YoY

# Under Construction Projects



Acquired RE Solar Plant (Hungund, Karnataka)

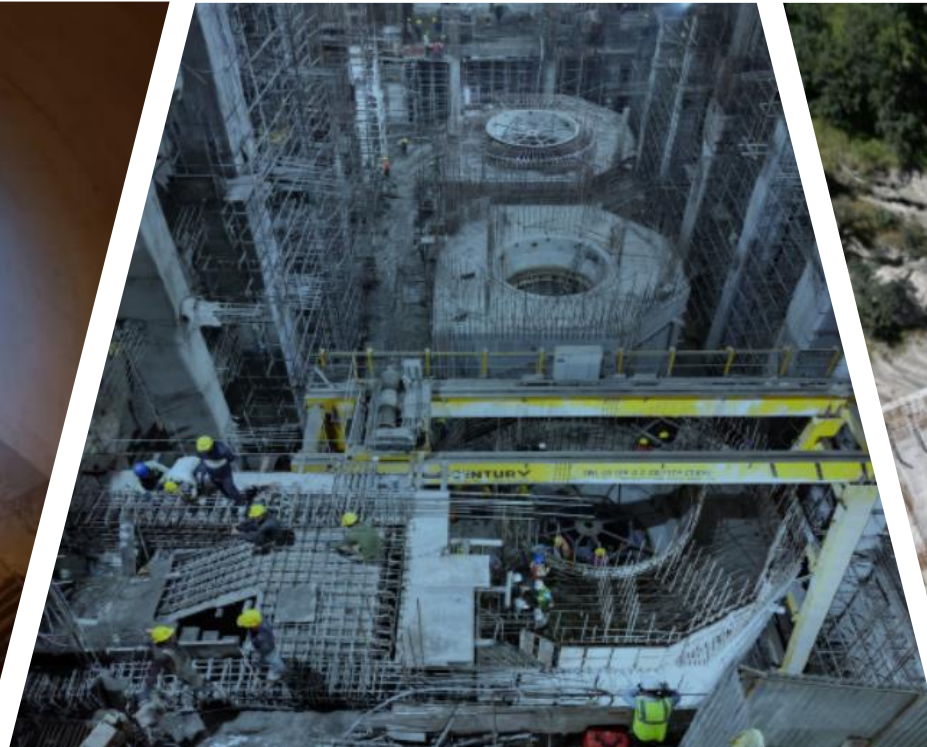


## **Wind Projects (SECI IX,X, XII and Group Captive)**

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- 216 MW commissioned by end of Q2 FY24
- Expected commissioning by CY 2024





## Tunneling & Concreting

- Completed ~ 99.4% (21 km) tunneling work (up from ~ 95.9 % in Q1)
- Power house and control room concreting in progress (55% completed)

## Electro-mechanical works

- Spiral Case erection work of all units completed

## Concreting Barrage

- Completed ~76 % of Concreting of Barrage
- Erection of Barrage gates to start





## Mechanical

- Boiler light up work completed
- Coal and ash handling work in progress

## Electrical Works

- Transmission tower foundation, erection and stringing work in progress
- Switchyard overhauling work started