



# SECTION 3

OUR CAPITAL-WISE  
VALUE-CREATION  
APPROACH



This section depicts our balanced approach of the six-capital model to harness the value of our people, relationships, knowledge and processes to move closer to achieving Sustainable Development Goals, and ensure holistic and sustainable value for all stakeholders.

Value has a broader meaning today. Through the six-capital approach, we build an integrated approach to balance our resources and think holistically; we describe, monitor and measure our capitals; and showcase how we strengthen our value creation journey.

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## Financial Capital

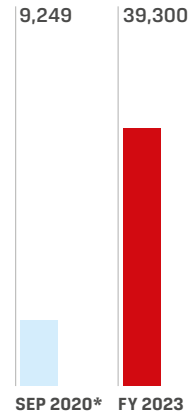


At JSW Energy, efficient management of Financial Capital ensures smooth continuity of business operations and facilitates us in achieving our business objectives effectively and also generating stakeholder value. During FY 2023, we achieved the second best-ever adjusted EBITDA and adjusted PAT (adjusted for one-offs), becoming even more resilient as an organisation in a dynamically changing environment and delivering enhanced returns to our shareholders.

<b>Description of the Capital</b>	This describes the financial resources the Company already has or obtains in the capital markets.
<b>Management Approach</b>	We create value through sustainable growth.
<b>Significant Aspects</b>	<ul style="list-style-type: none"> <li>Balanced and diversified growth</li> <li>Strong financial structure</li> <li>Operational excellence</li> <li>Sustainable results</li> <li>Regular dividends</li> </ul>

Key Performance Indicators	Material Topics	Strategy Linkage
Growth in PAT	Sourcing of raw materials	<b>S02</b> Leveraging our time tested business model
Growth in EBITDA	Energy efficiency	<b>S03</b> Capitalising on a strong balance sheet
	Supply chain management	<b>S05</b> Ensuring efficient operations of our existing assets
	Risk management	<b>S06</b> Nurturing our workforce
	Talent attraction and retention	

### Market Capitalisation (₹ in crore)



~78%

CAGR since the announcement of first green project

\* Secured first green project under SECI IX

Our constant focus is to improve returns to our shareholders by securing and managing strong operating cash flows and maintaining an optimal capital structure. We maintain a prudent financial management system and significantly enhance our operational performance to further preserve and grow the value we deliver to our stakeholders.

#### Growing our revenues through

- Prudent capital allocation
- Prudent bidding

#### Strengthening balance sheet by

- Efficient working capital management
- Pursuing growth with low-cost debt
- Efficient cost management



## Pursuing value accretive growth

In FY 2023, the Company demonstrated a stellar performance as Total Revenue increased 24% YoY at ₹ 10,867 crore, compared to ₹ 8,736 crore a year earlier. This can be attributed to higher realisation and an increase in renewable energy capacity. As a key achievement, the Company registered the second-highest ever adjusted EBITDA at ₹ 3,817 crore, which increased by 8% YoY. It also registered the second-highest adjusted PAT of ₹ 1,358 crore, which grew by 15% YoY. While, the reported PAT for FY 2023 stood at ₹ 1,478 crore.

Consolidated NetWorth and Proforma\* Net Debt (Including Mytrah Debt) stood at ₹ 18,629 crore and ₹ 22,180 crore, which resulted in a Proforma Net Debt-to-Equity ratio of 1.2x and Proforma Net Debt-to-EBITDA ratio of 4.4x. Cash generation continued to be strong with Cash PAT of ₹ 2,570 crore, up 7% YoY compared to ₹ 2,395 crore a year ago, in line with EBITDA growth. Liquidity continued to be strong with a cash balance of ₹ 4,627 crore. Finance Cost increased to ₹ 844 crore vis-à-vis ₹ 777 crore in the earlier financial year owing to additional borrowings



\* Proforma includes 30 SPVs of Mytrah Portfolio comprising of 1,753 MW

and increase in weighted average cost of debt with the rising interest rates cycle. The Board declared a dividend of ₹ 2 per share for FY 2023.

## Well-positioned to deliver future growth

JSW Energy has one of the strongest balance sheet in the energy sector, with best-in-class financial metrics and a headroom to pursue value accretive growth opportunities. Given the backdrop of strong balance sheet, a profitable cash generative operating portfolio and robust liquidity, JSW Energy is well positioned to pursue its growth aspirations. Stable cash flow generation is sufficient to drive its current growth plans, with no requirement for equity raising to deliver future growth. Also, the acquisition of Mytrah Energy renewable assets with 1,753 MW installed capacity is value accretive right from the start. Healthy internal accruals and financial flexibility is also expected to support long-term growth.

## Increasing efficiency at Plant Operations

All our manufacturing plants adhered fully to the necessary safety measures (Zero LTIFR) and ran smoothly during the year. Net Generation increased to 21.9 BUs from 20.8 BUs in the last year. The growth of 5% was driven by higher Plant Load Factor of thermal power plants and capacity addition in renewable energy. Despite already high efficiency levels that have been reached, the Company believes there is room for further margin improvement, aided by digitalisation and innovation. Also, following best practices across all operations will further lead to additional savings and increase synergies.

## Strategy 2.0 (2023-30)

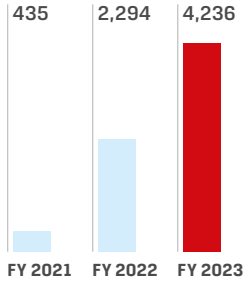
Building on its earlier strategy, JSW Energy unveiled Strategy 2.0, pivoting towards being an Energy Products & Services Company in addition to reaching 20 GW generation capacity by FY 2030. This included achieving capacity of:

- 3.8 KTPA Green Hydrogen by FY 2025
- 1 GW Wafer-Cell-Module manufacture by FY 2025
- 40 GWh / 5 GW Energy Storage by FY 2030

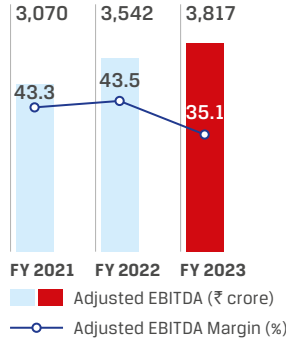
The revised growth strategy also focusses on enhancing cash returns to drive significant increase in EBITDA and PAT till 2030. The revised EBITDA and PAT targeted in 2030 is 25% higher from the earlier target communicated in FY 2021. In addition, Net Debt to EBITDA during this period is expected to be in the range of 3.5x-4.0x.

## Delivering Value to our Stakeholders

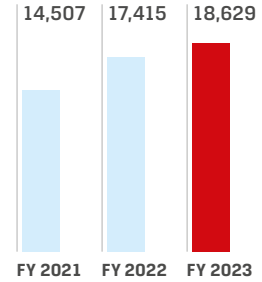
### Capex (₹ crore)



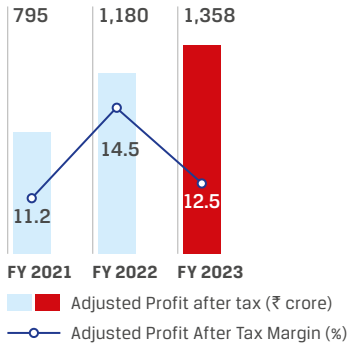
### Adjusted EBITDA\*



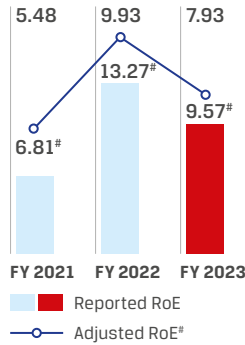
### Net Worth (₹ crore)



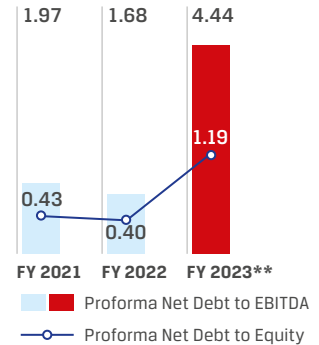
### Adjusted Profit after Tax



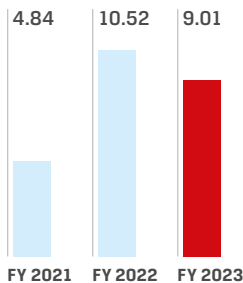
### Return on Equity (%)



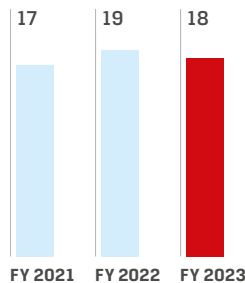
### Net Debt to EBITDA and Net Debt to Equity



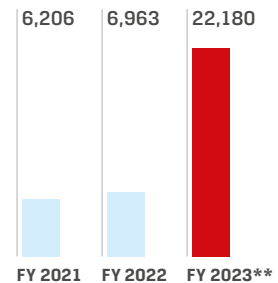
### Earnings Per Share (₹)



### Cash Profit to Adjusted Net Worth (%)



### Net Debt (₹ crore)



## Driving significant increase in EBITDA and PAT till 2030

**6.0x-6.5x**

increase in 2030 EBITDA from FY 2021 EBITDA

**7.0x-7.5x**

increase in 2030 PAT from FY 2021 PAT

**3.5x-4.0x**

Net Debt / EBITDA in 2030 vs. 4.4x in FY 2023 on Proforma basis

\* EBITDA adjusted for one-offs

\*\* Proforma includes 30 SPVs of Mytrah portfolio comprising of 1,753 MW

# Adjusted for shares of JSW Steel held by the Company & dividend thereof

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## Manufactured Capital



With a CDP leadership band rating of A-, JSW Energy is leading the renewable transition in a confident and responsible manner with an acute focus on the renewable targets, while maintaining high standards of operational efficiency in the existing power plants. We are steadily approaching our 2025 target of achieving an installed capacity of 10 GW, and subsequently enhancing the capacity to 20 GW by 2030, from our present installed capacity of 6.6 GW. This continuous growth in capacity reaffirms our vision of becoming a Net Zero organisation on, or even before, 2050.



### Description of the Capital

Manufacturing Capital encompasses our tangible assets used to carry our business activities. With a focused and quick decision making, our leadership team navigates the capital investments to manage a diverse portfolio of assets and create value for our customers.

### Management Approach

To provide continuous and reliable supply of power with increased share of renewables in the generation portfolio, aligning with our approach to combat climate change.

### Significant Aspects

- Power generation assets
- Power transmission assets
- Power distribution assets
- Encouraging a circular economy

Key Performance Indicators	Material Topics	Strategy Linkage
<ul style="list-style-type: none"> <li>• Installed capacity</li> <li>• Renewable capacity</li> <li>• Investment in Renewable portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Plant efficiency</li> <li>• Increase in renewables</li> </ul>	<p><b>S01</b> Embracing a greener future</p> <p><b>S04</b> Measuring environmental impact of our operations</p> <p><b>S05</b> Ensuring efficient operations of our existing assets</p>

We are a resilient organisation and a responsible corporate citizen, having one of India's "best-run" power plants, and maintaining a consistent focus on improving further efficiency. The plants have been recognised constantly for efficient operational capabilities. We have also improved our power generation capacity – from 260 MW in year 2000 to 6.6 GW in FY 2023. For our business activities in power generation, transmission and trading, we rely on optimum utilisation of our resources.

### Key numbers

**10**

Presence in number of States

**6,564 MW**

Total Installed Capacity

### Generation Capacity Mix

**52%**

Renewable

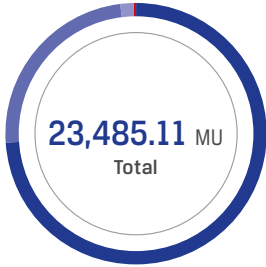
**48%**

Non-Renewable



### Gross Generation

- By Source (MUs)



- Thermal **17,396.27 MU**
- Hydro **5,636.76 MU**
- Solar **419.42 MU**
- Wind **32.66 MU**

### Increase in Power Generation Capacity

Thermal

**3,158** MW  
Capacity in FY 2023

Hydro

**1,391** MW  
Capacity in FY 2023

Total (Thermal, Hydro, Solar, Wind)

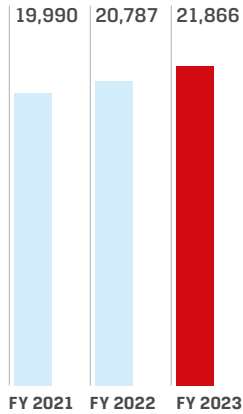
**6,564** MW  
Capacity in FY 2023

**20,000** MW  
Target Capacity in FY 2030  
(Thermal, Hydro, Solar, Wind)

## Creating and Delivering Value for our Stakeholders

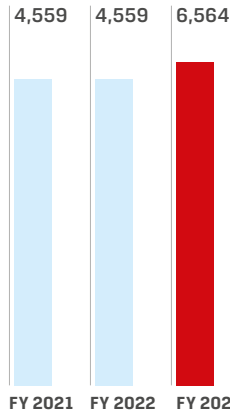
### Total Net Generation

(MUs)



### Installed Capacity

(MW)



## Our Operational Performance

### Thermal Power Plants

For our thermal power plants, we select coal which will have the lowest impact on the environment, such as, primary fuels like coal and lignite, and secondary fuels like heavy fuel oil and light diesel oil. To maximise production efficiency, we regularly maintain and refurbish the plant equipment, and ensure strict implementation of the standard operating procedures. There are no transmission losses as the customer boundary starts just after the Switchyard itself. Thus there were no transmission reliability issues with customers in FY 2023.

### Plant Load Factor (%)

	FY 2022	FY 2023
Vijayanagar	44.94	51.16
Barmer	75.86	77.01
Ratnagiri	57.31	59.39
Hydro	47.66	47.84

### Power Generation in FY2023 (MUs)

	Net Generation (MU)	Gross Generation (MU)
Vijayanagar	3,550.06	3,853.88
Barmer	6,544.35	7,285.66
Ratnagiri	5,714.72	6,242.89
Hydro	5,595.11	5,636.76

### Hydro Power Plants

Hydro power contributes nearly 21% of our total power generation capacity. Karcham Wangtoo Hydro Electric Power Plant, with an installed capacity of 1,091 MW, is India's largest private sector hydro power plant. Since its commissioning, it has achieved the highest-ever Plant Availability Factor (PAF) in FY 2023.

There are no transmission losses at Karcham Wangtoo because the customer boundary starts just after the pothead yard itself. At BASPA II there is a 15 Km transmission line upto the Jhakhri substation from where the customer boundary starts. This resulted in a transmission loss of 8.7544 MU. There were no transmission reliability issues with customer



### Solar Power Plants

Our solar power plants have a total capacity of 657 MW, and are spread across different locations in Rajasthan, Andhra Pradesh, Maharashtra and West Bengal.

### Net Generation of Solar Power Plants

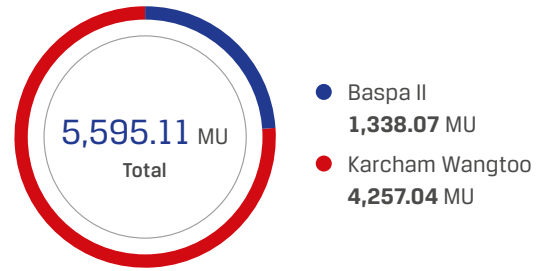
**419.28** MUs In FY 2023      **15** MUs In FY 2022

### Other Operational Assets

We have a joint venture with Maharashtra State Electricity Transmission Company Limited (MSETCL), for two 400 kV transmission lines in Maharashtra. We are also engaged in trading of power since 2006. The combined capacity of our Lignite Mines, Barmer Lignite Mining Company Limited (BLMCL) in Rajasthan is 9 MTPA. This is a joint venture with Rajasthan State Mines and Minerals Limited (RSMML), which holds 51% equity in BMCL.

There were no gas leakage issues in any of the plants as JSW Energy does not have any gas based power plants

### Hydro Power Generated NET (MU)



### Net Generation of Hydro Power Plants

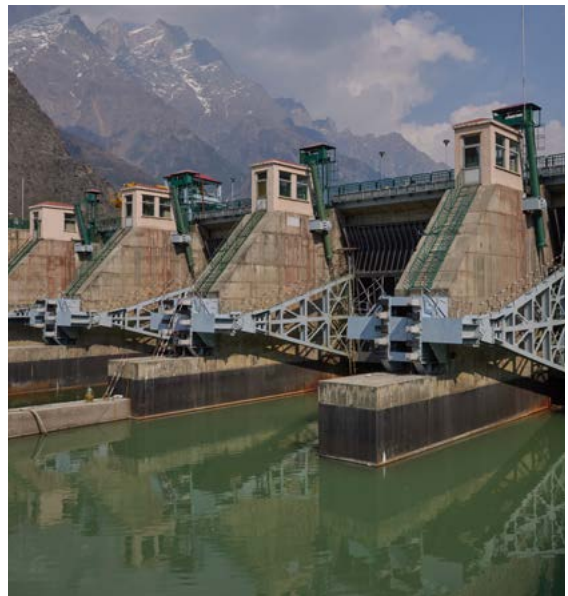
**5,595** MW In FY 2023      **5,520** MW In FY 2022

### Generation Data in FY 2023

	Karcham Wangtoo	BASPA II	Solar
Gross (MU)	4,284.84	1,351.91	1.62
Net (MU)	4,257.04	1,338.07	1.62

### Overall Plant Load Factor for Hydro Power Plants

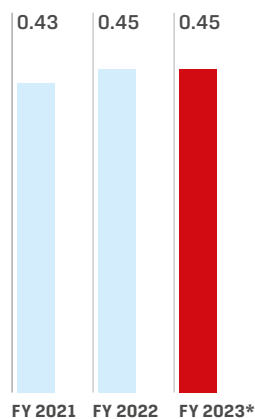
<b>47.84%</b> FY 2023	<b>47.66%</b> FY 2022
<b>46.81%</b> Karcham Wangtoo	<b>46.91%</b> Karcham Wangtoo
<b>51.44%</b> Baspa II	<b>50.24%</b> Baspa II



## Key Performance Indicators

### Specific Coal Consumption

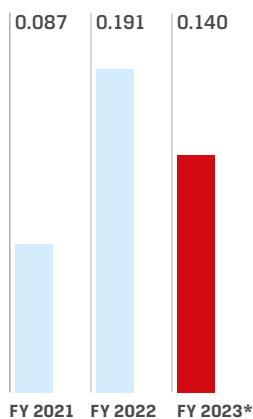
(KG/KWH)



\* Coal Consumption 45,99,008 MT  
Lignite 59,81,401 MT

### Specific Oil Consumption

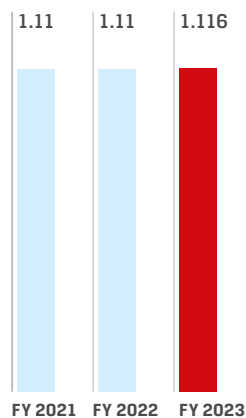
(M<sup>3</sup>/MU)



\* Oil Consumption 3,298.74 KL

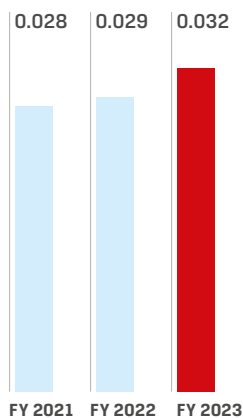
### Specific Raw Water Consumption

(m<sup>3</sup>/MWH)



### Specific DM Water Consumption

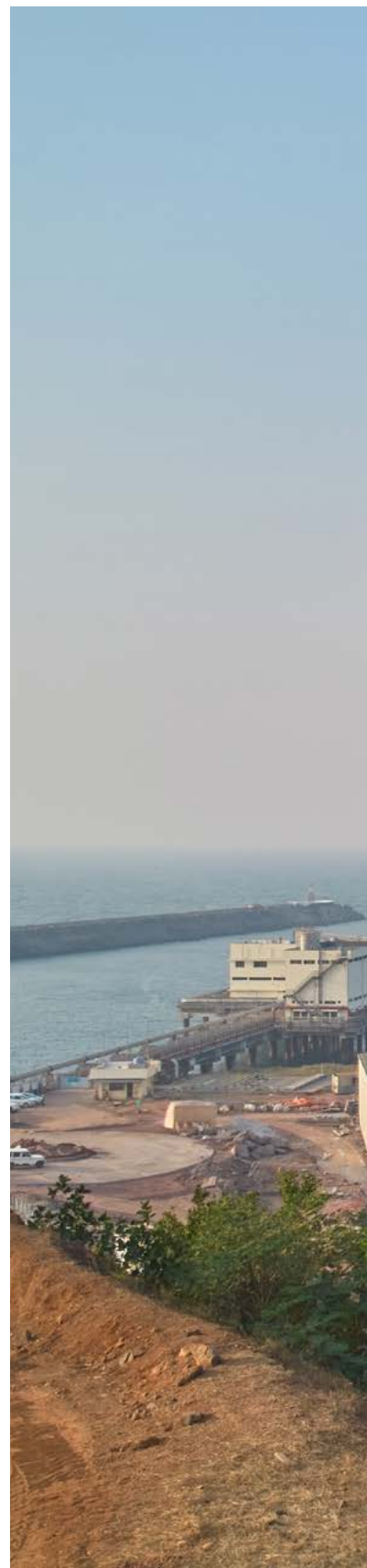
(m<sup>3</sup>/MU)



## Utilisation of Ash in FY 2023

**Total Ash Utilised: 13,89,038 MT**

	Units	Vijayanagar	Barmer	Ratnagiri	Nandyal
Total Ash	MT	2,12,958	9,47,667	2,26,158	2,253
Sold to Cement Cos RMC	MT	1,18,092	6,54,720	1,80,831	2,253
Used in making Ash Bund / Dyke	MT	56,230	0	13,591	
Used for Brick Making	MT	33,877	2,92,947	30,755	
Other Reuse	MT	4,761	0	981	
Total Utilisation	%	100%	100%	100%	





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## Human Capital



Our goal is to optimise and maximise the economic and business value of the organisation's human capital in order to gain a competitive edge. We aim at attaining our objectives of business competitiveness through our human capital, promoting diversity, prioritising safety and fostering a culture based on meritocracy and equal opportunity.

## Description

Our Capital refers to the collective skills, knowledge, expertise, and experience possessed by our employees.

## Management Approach

We are developing a strong learning culture and setting up a high-performance team to achieve sustainable growth. We are building and strengthening our human capital, improving communication, and delivering the best results across our business operations and renewable project locations.

## Significant Aspects

Our Human Capital facilitates effective negotiation, pursuance, critical data analysis and long-term strategic planning, aiding us towards significant business growth. With an average tenure of 7.23 years in the Company, our human capital has facilitated growth in the existing business and also supported the Company's venture into new opportunities successfully.

Key Performance Indicators	Material Topics	Strategy Linkage
Manpower Hiring	Ensuring right talent at the right role	Tailor-made blended learning journeys for employees
Digital Learning Journeys	Increasing capability building	Coaching program from Coaching Federation of India (CFI) for senior leaders and successors identified for senior critical positions
Succession Planning	Creating a leadership pipeline	
Leadership Development	Recognising high performance and continuous improvement	Job rotation for employees across businesses to give them exposure in diverse functions and roles
Job Rotation		
Reward & Recognition	Creating an inclusive and safe working environment	
Employee Wellness		

Key Performance Indicators	FY 2023	FY 2022
Total employee strength	2,310	1,603
Gender diversity	104 Women	70 Women
Average hours of training per employee	17.07 hrs	14.47
Age Diversity	96 Employees Upto 25 years of Age 1,101 Employees Upto 40 Years of Age 1,113 Employees Upto Retirement age	40 Employees Upto 25 years of Age 819 Employees Upto 40 Years of Age 744 Employees Upto Retirement age
Employee satisfaction ratio	74%	74%
Lost Time Injury Rate	0.0	0.10

## Four Elements of CARE Model



At JSW Energy, we have developed "CARE Model", an HR Strategy Model to create superior employee experience. Through its four elements of Communication, Agility, Responsibility, and Elevation, the CARE Model aims to create the best experience for our internal and external stakeholders. This enables our teams to have alignment and synergy within the business at the time of launching new initiatives and also ensuring process efficiency.



## 1. Communication

This is a multi-level communication structure, encompassing multiple channels such as electronic mail, digital print media and employee mass meeting. This has been created to engage with all the categories of employees. Through our quarterly townhall meetings, such as Samwaad, Business Review Meetings, Candid Conversations, Skip Level Meetings, Peer Group Meetings, and Family Get-Togethers, we ensure proper information dissemination and increased transparency to all employees.

### Key Activities in FY 2023

**27 NO. OF SAMWAAD MEETINGS, A TWO-WAY COMMUNICATION CHANNEL BETWEEN EMPLOYEES AND THE MANAGEMENT**

**PUBLISHED 4 BOLT MAGAZINES, OUR IN-HOUSE E-MAGAZINE HIGHLIGHTING MILESTONES ACHIEVED BY THE BUSINESS AND EMPLOYEES**

**SKIP LEVEL MEETINGS, ONE-ON-ONE INTERACTIONS WITH THE BUSINESS/UNIT HEAD**

**FAMILY GET-TOGETHERS**

**BIRTHDAY CELEBRATIONS**

**FESTIVALS**

## 2. Agile

Being agile is essential for us to remain competitive and succeed in today's fast-paced business environment. Through our improved capability building practices in the organisation, we fostered greater engagement. It helped us respond faster to changes, improve decision making, increase innovation and enable greater employee engagement.

### Training & development

Amount Spent on Training - ₹1,02,42,378

Total Training hours - 39,439

1. Gender
  - i) Male Training hours - 37,108
  - ii) Female Training hours - 2,331
2. Management Level
  - a. Management Training hours - 26,502
    - i) Junior Management Training hours - 19,383
    - ii) Middle Management Training hours - 6,899
    - iii) Senior Management Training hours - 220
  - b. Non-Management training hours - 12,937
3. Type of Training
  - i) Behavioural Training hours - 9,189
  - ii) Functional Training hours - 11,640
  - iii) Safety Training hours - 13,554
  - iv) Technical Training hours - 5,056

### Employee development programs

The various programs for skill development are Future Fit Leader, Senior Leadership Development Program, "Springboard: JSW Women Leaders Program". We had launched My Development Program focusing on the behavioural needs of the employees in which employees were trained in Critical Thinking, Presentation Skills, Change management, Problem Solving and conflict Management. We have also organized offline trainings on Leading Self, Team and Conflict Management, Critical Thinking and Problem Solving at all our plant locations.

- a) **Future Fit Leader Program:** It is a highly objective, research-based process to identify true, diverse and high-potential talent. Benchmarked against competitors, this program/ process creates targeted, on-the-job learning experiences to drive performance impact. The aim is to identify employees with long term potential and nurture them to grow into critical leadership roles in the Group. Our goal is to build a strong internal talent pool for the emerging business needs while supporting the employee career aspirations. They go through their development journey with Brown University, Cornell, Indian School of Business.

**Emerging Leaders:** Partnering with XLRI to build a custom designed program focused on building critical functional capabilities.

- b) **Senior Leadership Development Program:** Top Leaders for C-Suite positions go for the custom designed Development journey of 7 days at Brown University. The objective of the process is to establish a consistent, simplified, sustainable, cross-divisional approach. The program helps in developing a global, multi-disciplinary perspective on business strategy, develop capacity to articulate a vision and a holistic growth strategy.
- c. **My Development Plan (MDP):** Under MDP, we rolled out tailor Made E-learning Journeys for employees on Critical Thinking, Presentation Skills, Change Management, Problem Solving and Conflict Management. A total of 769 employees enrolled in the aforementioned courses. The average completion of all the courses stood at 65%. Due to MDP initiative, our percentage logins increased by 55% from 670 in FY 2022 to 1040 in FY 2023.



**39,439**

Total training hours

**55%**

Increase in logins on JSW Learning Academy

**17.07**

Average training hours per employee

**3**

Future Fit Leaders

**9,632**

Online training hours

**100%**

Eligible employees covered in performance appraisal

**29,807**

Offline training hours

**90**

job rotations



### 3. Responsible

We propagated engagement through improved problem-solving practices. Our focus was on cascading policies till the last level of employees and creating continuous improvement culture through problem solving experts. We foster a culture of innovation through problem solving practices such as Kaizen, One-point Lesson, and Poka Yoke.



#### Performance Appraisal

We have KRA based performance appraisal process at JSW Energy. The assessment is held once a year (year-end) while the feedback process is twice a year.

The process of performance appraisal is as follows:

- a) Performance Planning
- b) Mid-year Review
- c) Year End Assessment (Employees and Manager Reviewer)
- d) Year End Assessment (Business): Performance Calibration process
- e) Rewards Planning: Variable Pay and Annual Increment

**395**

Number of Poka Yoke sessions conducted

**220**

Number of One-point Lesson sessions conducted

**467**

Number of Kaizen sessions conducted

## 4. Elevation

At JSW Energy, we have created a suitable system for evaluating and rewarding beneficial improvement via projects undertaken in the organisation. Employees were given various awards throughout the year, which included:

IGNITE

SAFETY HERO

KAIZEN AWARDS

SPECIAL CONTRIBUTION AWARDS

LAMHE LONG SERVICE AWARDS

EMPLOYEE OF THE MONTH

### Employee Hiring

819

Manpower hired / On boarded on roll

777

Male hired

42

Number of jobs offered to female candidates

42

Female hired

819

Number of employees offered a job

777

Number of jobs offered to male candidates

### Diversity and Inclusion

2,310

Number of employees

104

Number of women employees

6

Number of differently abled employees

### Gender Diversity

2,206 / 104

Male Vs Female

1:0.05

Male-Female Ratio

### Key Initiatives in FY 2023

#### Talent Acquisition and Management

Through our Talent Management Framework, we take efforts in identifying, building and retaining talent for our current and future business needs. Through this, we ensure consistency in talent processes across the business by leveraging our aligned efforts. We encourage our employees to be agile and multi-skilled through Energy Shakers & Movers and Job Rotations.

#### Learning and Development

Our learning and development initiatives are attuned with the organisational goals. We aim to increase our overall efficiency by providing them with the knowledge and skills they need to contribute to these goals. Our aim is to become the "Employer of Choice" by creating a culture of continuous improvement, where employees are empowered to develop their skills and knowledge, leading to better performance and results for us. We continuously aim at improving the skills of our employees. We introduced the concept of My Development Plan, under which we assigned learning journeys to the employees on Critical Thinking, Problem Solving, Presentation Skills, Change Management and Conflict Management by using blended tools such as E-Learning & Workshops.

### Leadership Development & Succession Planning:

We, at JSW Energy, are committed to hire, manage, develop and retain the best talent. With a responsibility to groom homegrown talent, we have developed avenues for Leadership Development via Future Fit Leader, Springboard and Talent Board to identify and groom high potential employees within the organisation.

### Job Rotation

JSW Energy believes in developing its internal talent pool for leadership roles in the organisation. To achieve this, it is important for employees to have an exposure and experience in diverse functions and roles. JSW Energy is committed to create and provide such opportunities to employees at different career stages aimed at building and enhancing their domain knowledge and expertise across core and complimentary functions. Width and depth of

experience acquired over a period of time leads to creating a talent pool, which is ready to lead various aspects of the organisation's growth and operations.

### Rewards & Recognition

To create a culture of performance differentiation and rewarding quality improvements, we have various Rewards & Recognition schemes at our sites. This is aimed at giving due recognition to employees who out-perform or take process improvement initiatives.

### Employee Engagement

At JSW Energy, we introduced various engagement activities, wellness drives and competitions not only for the employees, but also for their family members. Engagement activities such as Umang, celebration of festivals such as Holi, Diwali, Lohri, Christmas and many others helped employees know each other better



and develop a camaraderie between themselves to collaborate with each other during cross-functional team activities.

We also launched several initiatives to encourage their hobbies like Beats & Chord, Photography, and Literary Club & Chitrakala, among others. This enabled the employees to engage and pursue their hobbies beyond work. Our employee engagement efforts are aligned to our vision and mission statements, and to our overall business objectives and strategies. By leveraging our CARE model, we created adequate business commitment towards engaging our employees.

### Employee Well-being

Annual Health Check-ups at all of our sites ensure our employees are fit and healthy. For physical fitness, we have introduced initiatives like UMANG and Jai Vinayak at our plant sites. Apart from this, International Yoga Day was also celebrated at most of our plant sites to highlight the importance of yoga in mental and physical well-being.

**Employee Support provisions:** In today's fast paced work environment, stress has become a significant concern affecting employee well-being and productivity. Keeping this in mind, we have launched "**JSW We care**"- 1to1 Help through third part counsellor where employees can get online counselling, telephonic conversation, video appointment with the counsellor. Apart from that, we also have classroom and e-learning courses on Stress management for the employees.

### Diversity, Inclusivity and Equality

We believe in offering equal opportunity to all our stakeholders and partners by merit. We ensure that Prevention of Sexual Harassment Awareness is conducted at our sites to ensure that our internal and external stakeholders are in a safe working environment.

At JSW we are committed to adhere to the highest standards of ethical, moral and legal conduct of business operations. In order to maintain these standards, the Company encourages its employees with genuine concerns about suspected misconduct to come forward and express these concerns without fear of punishment or unfair treatment through the Whistle Blower Policy.

**Employee Value Proposition Survey:** The EVP survey was conducted to know about the strengths, weakness about the organization. The strength areas were organizational brand, job security and stability, Exciting Career opportunities, work location and enjoyable & challenging work. The enablers for the employees are organization reputation, significant contribution to organization's success, workplace safety and security, organizational reputation. The action plan will be prepared at the group level for the derailleurs found out in the survey which are flexible remote work, recognition beyond compensation, fair pay, performance based differentiation.

### Commitment to No-discrimination

JSW is fully committed to employing people solely on the basis of their ability to do the job, prohibiting any discrimination based on race, colour, age, gender, sexual orientation, gender identity and expression, ethnicity, religion, disability, family status, social origin, etc.

### Zero Tolerance for Sexual Harassment

JSW holds the responsibility to identify and prevent Sexual Harassment and to develop a culture of "zero tolerance" for any form of Sexual Harassment at the Workplace. The Company will respond promptly to reports of Sexual Harassment and will take appropriate steps to discipline behavior that violates this Policy and if necessary, facilitate legal action. An Internal Complaints Committee ("ICC") is constituted, in accordance with the provision of Section 4 of the Act, in every branch or office of the Company, to redress complaints of Sexual Harassment. Any woman who feels that she is being sexually harassed, directly or indirectly, may submit a Complaint of the alleged incident to any member of the ICC in writing with her signature within three (3) months of occurrence of incident, and in case of a series of incidents, within a period of three (3) months from the date of the last incident. The ICC may, after recording its reasons in writing, extend the time limit if it is satisfied with the circumstances that led to preventing the Complainant from making the Complaint within three (3) months.



We have provided the employees with the online/ offline training on Prevention of Sexual Harassment. 973 employees have completed the training on POSH through e-learning module/Webinar while 326 have been covered in the offline/classroom sessions. The training module covers the various facets of the POSH act such as what contributes to sexual harassment, who are complainant, respondent and what are their rights, ICC and what is its responsibility, punishment for sexual harassment etc. We have also covered 100% of the employees in the code of conduct training.

There have been zero incidents of discrimination and harassment in the last financial year.

#### **Human Rights Commitment of organisation**

At JSWEL, we are committed to respecting human rights across our operations including our value chain. In order to safeguard the rights of our employees, we promote human rights and operate in accordance with international frameworks. JSW Energy has a moral obligation to do all that it can to both actively involve itself in the protection and enhancement of human rights in areas that are within our direct control, and to work with others to protect each and every individual's rights and freedoms, and to promote and, if possible, trailblaze the concepts of inclusivity, diversity and equality, across our society. Whilst we have always sought to eliminate all forms of inequality

and discrimination, and have always worked within any relevant regulatory frameworks relating to human rights, we recognise that we have a moral, social, and economic need to do much more. We fully understand that every individual brings a different and unique set of perspectives and capabilities to our team and, as such, JSW is fully committed to employing people solely on the basis of their ability to do the job, prohibiting any discrimination based on race, colour, age, gender, sexual orientation, gender identity and expression, ethnicity, religion, disability, family status, social origin, etc. Training on Human Rights are a part of induction program of all employees and contractors. We are in the process of conducting a Human Rights due-diligence exercise across our operations including the value chain. Human Rights Awareness trainings along with identification of potential areas of risks, impacts and issues shall be done. Based on recommendations of the Risk assessment, organisation shall take actions for mitigation of human right risks.

#### **Safety – Our Highest Priority**

JSW Energy is focused on the safety of its employees and strives to achieve the highest and world-class standard of safety at all our power plants. Several safety systems and tools are being utilised to achieve "Zero Harm" and build a safe work environment at all the plants.

## Our Safety Performance in FY 2023

### ZERO FATALITIES

### ZERO LOSS TIME INJURY

### ZERO LTIFR\*

#### Safety Systems at plants of JSW Energy:

1. Safety Governance Structure – with each plant having 7 Safety Committees (with 5-7 members), 3 DICs and 1 Apex Committee.
2. Safety Observation System – with employees of all locations mapped and have to mandatorily use 16 Safety Observations per month.
3. Steering Committee Meeting – which is chaired by JMD & CEO and Safety Excellence Journey Review by Corporate Safety Team.
4. Barrier Health Management – for mitigating possible fatality high risks and strengthening safety in high-risk activities.
5. Contractor Safety Management – JSW CARES for contractor safety, where contractor is evaluated on 14 criteria ranging from safety systems, implementation, risk assessment, safety of tools and equipment, and provided a rating.
6. Permit to Work, Job Safety Analysis, Hazard Identification & Risk Analysis and Log Out and Tag Out system implementation.
7. Safety induction training – for contractor workforce and for working inside the plant, apart from specific work-related training.
8. E-Learning – includes 10 high-risk e-learning modules for employees and contractor workforce through the internal digital Learning Management System (LMS).
9. Occupation Health Centre – for regular medical check-up and other medical support activities, basic medical tests, first-aid cases, minor injuries and annual medical check-ups for workforce. At Vijaynagar plant, this is complemented by Sanjeevani Hospital run by JSW Group for any other medical emergencies.

\* Loss time injury frequency rate

10. Continuous improvement – is the way forward for safety by deploying better training, better monitoring, better safety awareness through Contractor Safety Management and achieving better safety by mitigating or strengthening safety of high-risk activities through Barrier Health Management initiative.

#### Occupational Health and Safety Training

All plants follow a structured process for mapping safety skills of employees and contractors' employees. As part of competency development program for safety, a Training Need Identification Matrix is created for each employee, with all safety trainings required for employees mapped and a Safety Training Calendar is developed with monthly training modules for specific months and additional safety trainings for the month.

#### Digitalisation in Safety Management

All safety observations, incidents, observation closures, safety compliances, incident investigation are logged in a software-based system "My Setu" and are managed by utilising this digital system. Additionally, the Contractor Safety Management is managed through an inhouse created software by plant teams. Employee competency mapping and training is tracked and monitored through an 'Excel' based software created at site locations. Further, CCTV cameras are installed at various strategic locations all plants. These are connected to the security team at a manned Command Centre where display of CCTV is monitored 24/7. Critical functions such as security gate complex, Fire Station, Main Control Room are also provided access to the display of cameras relevant to work areas.



## Social & Relationship Capital



We are committed to actively contributing to the social and economic development of the under-served communities. We also strive to maintain strong relationships with all our stakeholders based on mutual trust and respect and aim to foster stakeholder synergies. By actively listening to our stakeholders and acting on their feedback, we provide our customers with high-quality service.

## Description

Social and Relationship Capital describes our ability to share, relate and collaborate with our stakeholders, promoting community development and well-being.

## Management Approach

We promote a relation of mutual trust and respect with our stakeholders, and strive to improve the quality of life of the people in communities where we have a presence.

## Significant Aspects

### COMMUNITY SUPPORT

### SKILL DEVELOPMENT

### EDUCATION AND TRAINING

## SOCIETY

JSW Energy carries out its social development through JSW Foundation, JSW Group's social development arm. JSW Foundation provides opportunities to communities for holistic and inclusive development through interventions to provide opportunities to community members by empowering them with skills and livelihoods, addressing environmental issues, promoting sports training, and preserving national heritage, besides also working towards eradicating poverty and hunger, tackling malnutrition, and promoting social development. Together, we work towards creating an empowered society through continuous and purposeful engagement.

## Our CSR Vision TO EMPOWER COMMUNITIES WITH SUSTAINABLE LIVELIHOODS

### Our CSR Framework

JSW Energy's interventions through JSW Foundation are oriented towards achieving better outcomes in local context by adopting the SAMMS approach - Strategic, Aligned, Multi-stakeholder, Measurable and Sustainable.

## Strategies to optimise sustainable community growth

Empowering citizens with better health, education and employment opportunities, and encouraging sustainable development in key areas.

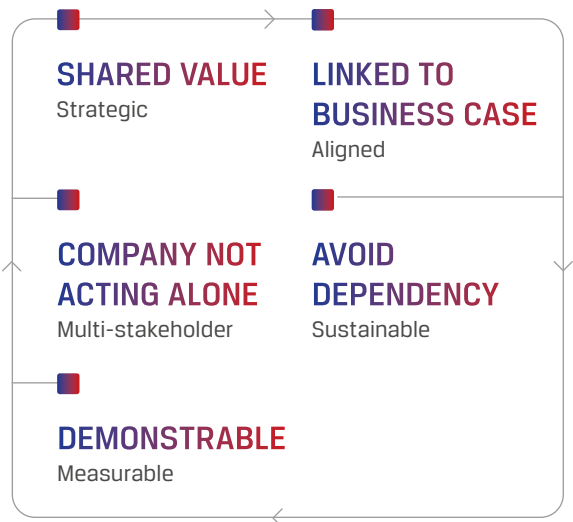
Key Performance Indicators	Material Topics	Strategy Linkage
Health and safety initiatives	Customer satisfaction	<b>S02</b> Leveraging our business model
Compliances	<ul style="list-style-type: none"> <li>Local sourcing</li> </ul>	
Customer privacy	<ul style="list-style-type: none"> <li>Cybersecurity</li> </ul>	
Proportion of local suppliers		

## Our CSR Policy


We firmly believe in strengthening the social capital. Our CSR Policy strives to solve multiple considerations through the process of social inclusion. Our aim is to empower our communities, especially women with special interventions that make them a strong and positive force of change.

Our interventions are in the fields of health, education, environment sustainability, livelihood, women empowerment, and responsible citizenship.

## Better local Outcomes



- Policies on Social Development: JSW Energy - CSR Policy:

 [https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Policies/Corporate\\_Social\\_Responsibility\\_Policy.pdf](https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Policies/Corporate_Social_Responsibility_Policy.pdf)



### Total CSR Spend

**₹17.17 CRORE**

FY 2022

**₹27.91 CRORE**

FY 2023

### Number of Direct Beneficiaries impacted

**2,33,021**

Individuals positively benefitted in FY 2023

**1,75,293**

Individuals supported through hospital referrals, clinics, dispensaries and OPDs

**33,719**

Saplings planted

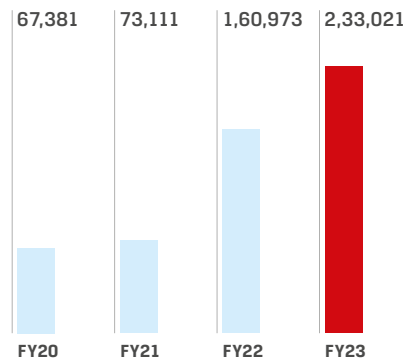
### CSR Governance

- CSR Committee
- CSR Policy

[https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Policies/Corporate\\_Social\\_Responsibility\\_Policy.pdf](https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Policies/Corporate_Social_Responsibility_Policy.pdf)

### Individuals Positively Benefitted

(Number)



**430**

Women trained under Project Charkha

**500**

Women trained in producing handicrafts

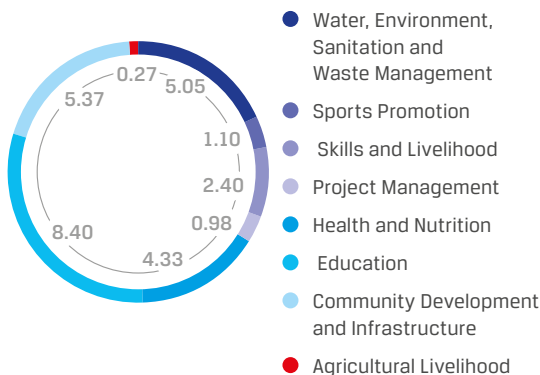
**10+**

Hectares brought under Green Cover

### Key CSR Initiatives in FY2023

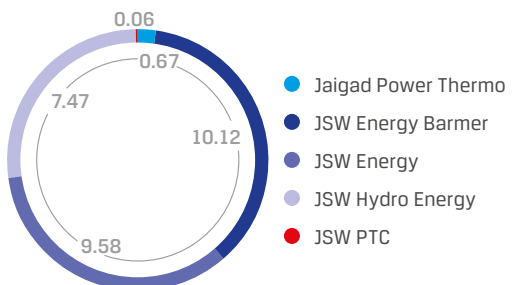
#### Thrust Areas and Spends

(₹ crore)



#### Location-wise CSR Spend

(₹ crore)



# Key CSR Programmes

## 1. Health and Nutrition

We remain committed to enhance India's health and nutrition by providing improved health services and facilities. In FY 2023, JSW Foundation initiated a host of new interventions in partnership with expert organisations.



### Key Focus Areas

- Supporting public healthcare institutions
- Building specialty care institutions
- Making healthcare services available, affordable and accessible through:
  - o Mobile Medical Units in hard-to-reach pockets
  - o General and specialised health camps at various population dense hotspots
  - o Ambulance services to reach and refer for higher level of care

### Supporting Public Health Infrastructure

In Barmer, we partnered with the District Government Hospital to support the upgradation of Operation Theatres and construction of a post-operative ward, with the capacity to cater to 3,000+ individuals annually.

### Healthcare Outreach

Through our Health Check-up and Referral programs, more than 108,972 individuals benefitted for first-level screening. Nearly 18,462 health consultations took place at community clinics supported by JSW Foundation.

### Ensuring Safe Delivery

To accelerate the pace of reduction of maternal and infant mortality, JSW Foundation undertook programs to ensure safe delivery of women. This included promotion of institutional deliveries; antenatal and postnatal care to pregnant and lactating women; and raising awareness on prevention and treatment of anaemia.

237 pregnant and lactating women supported with the program.

### Ensuring a Tuberculosis-free India

JSW Foundation is supporting a national movement to make India Tuberculosis-free. It is working towards this by leveraging local experts as well as financial and technical resources to increase cross-sectoral support for combating the disease.

# 25,000

individuals benefitted through improved supply of TB Diagnostics and Treatment

### Vision Screening and Correction

JSW Foundation collaborated with partners to perform regular eye examinations on individuals of all age groups, ranging from teenagers to elderly people. So far, we have conducted eye screenings for over 10,500 individuals. In addition, we also provide prescription glasses to those with refractive errors; we have aided 2,267 individuals in obtaining these glasses till date. Moreover, we provide assistance for cataract surgeries. We have conducted this procedure on 18 individuals till date, supporting the prevention of irreversible blindness and providing a sense of independence in old age.

### Supporting Truckers

Truckers are often neglected in the healthcare ecosystem and miss out on regular upkeep of health. We engage them by providing access to general and specific health services, such as eye check-ups and audiometry, by connecting them with hospitals and clinics.

# 9,122

truckers benefitted

### Project Shikhar

Project Shikhar is a flagship project of JSW Energy. This was started in 2016 to nurture the boxing talent of young children at Sangla valley in Himachal Pradesh and to prepare them for high-level sporting events. It was started by providing boxing kits and infrastructure support to individuals, but over time it has evolved into a full-fledged support system for young boxers. The initiative aims at fostering the ambitions of aspiring boxers in various villages.

### Services provided:

- From nutrition to equipment
- Training of local coaches
- Deployment of coaches
- Financial assistance through Shikhar Fellowship
- Exposure to world-class training institutes, such as the Inspire Institute of Sports (IIS), Ballary



# 200+

Children trained under Project Shikhar

# 341

Medals Secured by trainees

# 60+

Boxers from all 5 Shikhar centres participated in Inter-Shikhar Boxing Championship 2022

# 97

Shikharites participated in 10 competitions (in FY 2023)

## 2. Education

Access to quality education is a key imperative for children to realise their dreams and build a better future for themselves, their communities and the nation. Through our initiatives, we aim to improve the quality of education and help children develop a lifelong love for learning. We collaborate with educational institutes across levels (from anganwadi to graduation) to make quality education accessible to children.

### Focus areas

- Developing state-of-the-art infrastructure refurbishing dilapidated structures
- Holistic early childhood education interventions
- Focusing on learning outcomes
- Building capacities of the ecosystem
- Providing scholarships for higher education

### Enhancing School Infrastructure

We have implemented a number of interventions to enhance the infrastructure at schools. This includes hard and soft infrastructure components such as laboratories and libraries; refurbishing buildings and toilets; providing educational aids and sanitary dispensers.



**312** Schools Supported

**14,825** Students Benefitted

### JSW Sath-Do

JSW Sath-Do program has been implemented in partnership with Step up for India. This is aimed at enabling Grade III to Grade VII students in select government schools in Sandur block, Ballary district of Karnataka. The program works towards helping them gain the confidence to learn independently with foundational English lessons. In order to ensure that the intervention has a holistic effect on participants, we also instil the necessary skills in government teachers to facilitate them to make classes fun and playful. This helps students build their skills in reading, comprehension and conversation.

**13,272** Students from 3 schools benefitted in FY 2023

### JSW Udaan

JSW Udaan is a merit-cum-need based scholarship designed to enable and empower students to pursue higher education and attain their aspirations. In FY 2023, 757 students were granted Udaan scholarships.

### Jindal Education Trust

The Jindal Education Trust (JET) encompasses providing support to numerous educational institutions with its flagship schools, Jindal Vidya Mandir. These schools in Ratnagiri and Sholtu are providing education to about 1,168 students annually with the most modern curriculum, supported by excellent infrastructure facilities. The students in these schools are being groomed for the future with a vision of "Every Day, Every Child, A Leader".

We are honoured to have been awarded the ISO 9001:2000 certification, a key milestone in achieving our vision of educating leaders for the 21<sup>st</sup> century.

### 3. Water, Environment and Sanitation

#### WATER

We undertake an integrated approach towards water, environment and sanitation. We also implement long-term plans for sustainable water resource management and enable water security for domestic and agricultural usage in our communities.



#### Ensuring Access to Drinking Water

To increase the supply of drinking water to communities, we design need-specific and sustainable solutions for all our locations with due consideration on making these solutions sustainable over the long term.

- In the dry lands of Barmer where women and children travel 2-3 kilometres to fetch water, we have provided hand pumps thus ensuring drinking water to remote dhanis (bastis/hamlets) as well as piped drinking water to select villages to reduce the daily drudgery.
- In Tuticorin and Dharapuram in southern India, we have provided water purifiers in common areas and schools to ensure water availability and cleanliness.
- In Kutehr, where springs are the traditional sources of water, we have undertaken springshed management.

# 18,466

individuals provided access to safe drinking water in 40 villages

#### Water Resource Management

Our holistic approach to water management ensures that water is looked at as a shared natural resource. We support our communities in capturing and conserving water by constructing rainwater harvesting structures, undertaking soil and moisture conservation measures, providing treatment to check soil erosion, and empowering local communities to effectively manage created assets.

# 15.80 MILLION

Cubic Metres of additional water storage capacity created

## ENVIRONMENT

We undertake an integrated approach towards water, environment and sanitation. We also implement long-term plans for sustainable water resource management and enable water security for domestic and agricultural usage in our communities.



### Increasing Green Cover

We understand and appreciate the significance of grasslands in the desert ecosystems of Barmer, and are taking adequate steps to revitalize them. In FY 2023, we have planted and nurtured 2,000 saplings of native grass and plant species over an area of 10 hectares. Additionally, we are also creating a green oasis in the region by planting trees along a 5-kilometer stretch. This initiative has been underway for the past 5 years. In FY 2023, we have planted 5,720 saplings trees to increase the green cover.

**5,720**

Saplings planted in Barmer

Further, the Miyawaki technique has been undertaken in Tuticorin and Dharapuram to establish a dense cover of indigenous trees. This approach of planting trees in close proximity helps facilitate rapid growth of forests by improving soil quality, utilizing a variety of native plant species, and growing robust saplings.

**15,100**

Saplings planted using Miyawaki technique

## SANITATION

With rapid urbanisation, systematic management of waste from households, industries and markets is important to prevent any adverse impact this may create on the environment and public health. These challenges are even more poignant in smaller towns and villages which may lack the advanced and large-scale operations present in larger cities. JSW Foundation is aligned towards the government's Swachh Bharat Mission, with a key focus on reducing and eliminating the practice of mixed waste from its townships and Direct Impact Zones (DIZ).

At Ratnagiri, we are implementing solid waste management with a population coverage of 1,890. Total dry waste of 1,880 kg was collected in FY 2023. We also conduct beach clean-up drives periodically with participation from student and community volunteers. The waste collected is segregated as per its type, and is further processed and upcycled.

At Dharapuram, a sanitation block has been constructed which has benefitted 170 people

## 4. Skill Development and Livelihoods

We facilitate sustainable livelihoods by providing skills for economic growth and inclusive development. Our key interventions focus on marginalised communities to have secured livelihood opportunities, enhance related skills and increased income, and help them move towards economic empowerment.



### Project Charkha

Under Project Charkha, women are trained in traditional handloom weaving at JSW Foundation's Vocational Training Centre in Kinnaur valley at Himachal Pradesh to provide them with sustainable livelihoods. Kinnauri products such as shawls and stoles, made of pure woollen yarn and woven in handlooms, are popular and widely known for their intricate and fine weaving. Project Charkha develops the entrepreneurial skills of women by training them on multiple fronts.

#### Project Charkha's areas of training

- product development
- devising a viable business strategy
- product marketing
- design development
- soft skills
- facilitating market linkages

## 430+

Women trained under Project Charkha at Sholtu and Kutehr, Himachal Pradesh



### Promoting traditional handicraft

At Barmer, we are enhancing the skills and livelihoods of the rural population through nurturing of supportive ecosystems and innovations in handicrafts with 500 women artisans across 3 Gram Panchayats. Bringing together factors and conditions that will help in creating new opportunities and sustaining the ecosystem through employment / enterprise linkages requires innovative strategies. At Barmer, JSW Foundation is working towards promoting traditional handicrafts of Applique and Mukka Art.

### Agri-Livelihoods

- In Jaigad, Maharashtra, we are implementing community-based organisation driven livelihood improvement program (SHGs) aimed at improving the socio-economic status of households through organic farming, dairy and other non-farm based activities.
- In FY 2023, 200 farmers were trained in organic vegetables production. Out of these, 90 farmers were trained in dairying, and 75 households were supported with biogas. This was achieved in collaboration with the agricultural department,

animal husbandry department, gram panchayat, Abhinav Farmers Club and progressive farmers.

- Most households in Kinnaur at Himachal Pradesh are involved in horticulture. In collaboration with community members, JSW Foundation initiated community orchard development on barren Gram Panchayat land and worked on it for three years to develop and maintain the orchards. Today, orchard development is set to benefit 176 households in the community. In Sholtu, Himachal Pradesh, we developed a community apple orchard in collaboration with the horticulture department, Krishi Vigyan Kendra and the local panchayat.

Aim to plant 860 apple plants in 0.89 hectares till FY 2025

### Facilitating access to government schemes

In collaboration with Haqdarshak, we are enabling access to government programs in a number of locations. The program uses a technology platform and serves as a one-stop shop for well-researched, state-by-state schemes, complete with eligibility requirements, application procedures, and other details.

### Haqdarshak - Facilitating communities with access to government schemes

State	Between 1 <sup>st</sup> April, 2022 to 31 <sup>st</sup> March, 2023		From Beginning of the Project till 31 <sup>st</sup> March, 2023	
	Number of Beneficiaries	Amount Unlocked (₹)	Number of Beneficiaries	Amount Unlocked (₹)
Himachal Pradesh & Tamil Nadu	18,975	494,557,943	34,492	766,915,899





## Natural Capital



Efficient and sustainable utilisation of natural resources across our operations is a key parameter regularly monitored at all our power plants. We are benchmarking these KPIs with national and international peers and pursuing continual improvement in our utilisation efficiency. The leadership team is increasingly focused on investments made in the renewable space to protect the consumption of natural resources, thereby creating a positive impact on the environment. This approach also aligns with our business strategy of becoming Net Zero, on or before, 2050.

## Description

This Capital focuses on efficient utilisation of natural resources and increased participation in renewable projects to create a positive impact on the environment.

## Management Approach

Benchmarking the KPIs of GHG emissions, water consumption, waste management and air emissions to create a sustainable eco-system in the immediate vicinity of our plants.

## Significant Aspects

- Climate
- Preservation of biodiversity
- Management of environmental footprint
- Energy efficiency
- Preservation of natural resources

## Afforestation activities

### Plantations, Green Cover and Slope Stabilisation

JSW Energy has developed a culture to enhance the green cover at each project location and operating plant. Over the last year, the Vijayanagar plant has developed lush green lawns in several parts, with neatly dressed hedges and plants and their contrasting colours adding to the visual beauty and greenery of the location.

At the Ratnagiri plant location, about 2,478 new Mango saplings have been planted. This is a part of the ongoing development of a larger Mango plantation area, which will not only add to the existing eco-system, but also enhance the location's environmental quality in the years to come.

At the Barmer plant, tree plantations is a regular feature within and outside the plant location. Recently, Guava and Mango tree saplings have been planted in and around the plant.

At our hydro plants, slope stabilisation is achieved through regular plantations near our plants and communities. On special occasions, the employees come forward for plantation activities and join hands with district administration for such plantation activities.

# 33,719

Total saplings planted at several locations in FY 2023

Key Performance Indicators	Material Topics	Strategy Linkage
<ul style="list-style-type: none"> <li>• GHG emissions</li> <li>• Energy consumed</li> <li>• Energy saved</li> </ul>	<ul style="list-style-type: none"> <li>• Managing carbon emissions</li> </ul>	<p><b>S02</b> Embracing a greener future</p>
<ul style="list-style-type: none"> <li>• Water consumed</li> <li>• Water recycled</li> </ul>	<ul style="list-style-type: none"> <li>• Waste management</li> <li>• Water management</li> </ul>	<p><b>S04</b> Measuring environmental impact of our operations</p>
<ul style="list-style-type: none"> <li>• Waste generated and disposed</li> </ul>	<ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Energy efficiency</li> </ul>	<p><b>S05</b> Ensuring efficient operations of our existing assets</p>

## Sewage Waste Management

Sewage waste management system has been integrated at all the plants of JSW Energy. The domestic waste water is collected in the sewage sump and treated through the Sewage Treatment Plant (STP). The treated water is either recycled within the plant processes or is utilised in horticultural activities. The recycled water reduces the overall water consumption requirement at each plant, and in the process, contributes in reducing water stress of the region.

## Solid Waste Management

Solid waste such as plastic waste, MS Scrap and e-waste are disposed off and segregated into bio-degradable and non-biodegradable through authorised agencies. These agencies subsequently re-cycle and reuse these materials. Sludge waste generated through the PT plant at the Barmer plant is used in horticulture activities as manure to enhance plantations. This has been yielding good results in increasing the green cover.

## Environment and bio-diversity initiatives

JSW Energy has engaged a knowledge partner to conduct ecosystem and biodiversity studies at all its major operating plants and project locations. This is a part of the focused initiative to achieve 'No Net Loss' of biodiversity at all locations by 2030. At Barmer, the biodiversity and ecosystems study has already been completed, including one year's seasonal study of various species, flora and fauna around the plant. An implementation plan will soon be finalised based on the final report of the knowledge partner. The biodiversity study for other projects is also under progress since Q4 FY 2023. Phase - 1 of this is expected to be completed by June 2023, followed by another year of study at these plants. The renewable project locations of Tuticorin, Dharapuram and Sandur are also included in these biodiversity studies, along with Ratnagiri and Hydro project at Sholtu.

## Waste Management initiatives

Waste management teams at all our plants ensure that all compliances related to the handling of waste material, whether hazardous or non-hazardous, are followed in a responsible manner. All plants have tie-ups with authorised agencies for re-cycling, reuse and disposal of waste in a safe and sustainable manner. Under the hazardous waste category, all the plants mainly have waste oil generated during their maintenance activities, which needs a safe disposal through authorised agencies.

### Waste Management

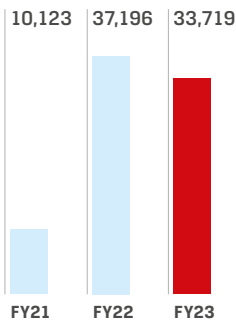
	FY 2023		
	Reused	Recycled	Safely Disposed
Plastic (Including Packaging) MT	0	0	2.43
E-Waste MT	0	6.02	0
Hazardous waste MT	0	30.085 (waste oil)+ 104.54 (battery waste)	0
Other Waste MT	1378753.48 (FlyAsh & Bottom Ash + Primary Sludge)	1.875 (Food Waste)	0.62 (Biomedical waste) +1508.31 (MS Scrap)

Small quantities of e-waste, battery waste, MS scrap waste and plastic waste is generated at most locations where these wastes are handled and disposed in a responsible manner. Under non-hazardous waste, ash is produced by thermal power plants. All plants have tie-ups with cement making and brick making companies who take away all the ash from plants, which is used as an input material for their product. In FY 2023, 100% ash has been utilised at all plants.

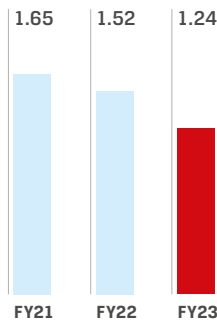
During the year, a 45,000 MT Ash Silo has been constructed at the JSW port, adjacent to JSW Energy Power plant at Ratnagiri. The Silo and all its associated infrastructure has been completed and Ash is now being filled up in the Silo. The sea route will be utilised to transport Ash to all the prospective buyers, both in the national markets and based on international requirements to other countries. In FY 2023, no environmental related penalties have been imposed upon JSW Energy Ltd. by any agency.

## Key Performance Indicators

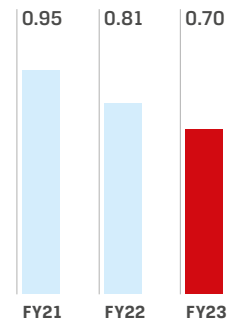
### Number of Saplings Planted



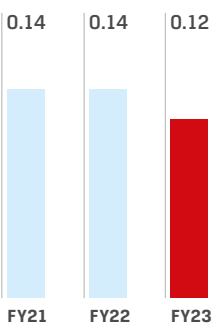
### SOX (kg/Mwh)



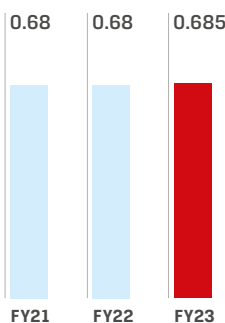
### NOX (kg/Mwh)



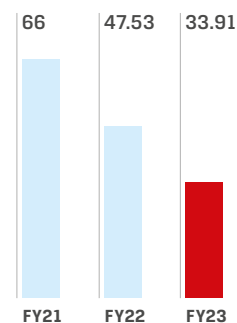
### PM (kg/Mwh)



### GHG Emissions Intensity (tCO<sub>2</sub>/MWh)



### Energy Savings (MU)



## Plant-Wise Energy Saving Initiatives

### Barmer Plant

Energy Reduction Initiative	Energy Reduction in GJ*	GHG Emissions saved due to energy saving (MTCO <sub>2</sub> e)
APH Tube Plugging done in Unit#3 (Energy savings - 573.21 KW)	10,913.43	1,102.26
APH Tube Plugging/Replacement done in Unit#7 (Energy savings - 323.61 KW)	5,218.74	527.09
APH Tube Plugging done in Unit#5 (Energy savings - 1058.14 KW)	18,906.39	1,909.54
APH Tube replacement done in Unit#4 RHS SA1 &PA1 (Energy savings - 2276 KW)	28,850.12	2,913.86
APH Tube replacement done in Unit#3 SA1 &PA1 (Energy savings - 1798 KW)	10,003.33	1,010.34
<b>Total</b>	<b>73,891.999</b>	<b>7,463.092</b>

### Ratnagiri Plant

Energy Reduction Initiative	Energy Reduction in GJ*	GHG Emissions saved due to energy saving (MTCO <sub>2</sub> e)
Augmentation of rain water harvesting system	103	-
Replacement of HP exhaust dump valve to avoid the passing of high energy steam in Unit-4	10,273	907
Improvement in Aux. Power Consumption by de-staging of BFP in Unit-1	837	205
Sequential Valve Mode of Turbine Governing Valve Operation	36,901	3,168
<b>Total</b>	<b>48,114</b>	<b>4,307</b>

### Vijayanagar Plant

Energy Reduction Initiative	Energy Reduction in GJ*	GHG Emissions saved due to energy saving (MTCO <sub>2</sub> e)
SBU1 BFP recirculation valve logic modification has given a saving of 311 kwh at 90MW	12.96	1184.4
SBU1 PA fan auto pressure set point based on coal flow has given a saving 15 kwh	0.33	30.2
SBU1 U2 BFP stopping at low load	21.97	2,007.8
SBU2 U1 to reduce slip losses in turn to reduce BFP Power Consumption	20.05	1,832.5
SBU2 U1 Low load operation CEP VFD locking speed reduced from 700 to 600 to avoid throttling losses	1.67	152.4
SBU2 U1 Two mill Operation at low (<120 MWh & coal flow < 58 TPH)	6.00	548.4
SBU2 U1 Two mill Operation at low (<120 MWh & coal flow < 58 TPH & reduced header pressure Up to 5.5 Kpa and 3 mill operation reduced header pressure up to 7.0 Kpa	23.80	2175.6
SBU2 U1 Rectification of blade pitch mechanism malfunction, Secondary Air Flow reduced to 480 to 440 tph	1.66	151.4
SBU2 U1 Reducing secondary air Flow and reducing PA flow by two mill operation	8.26	755.0
SBU2 U1 ESPT Power Consumption Optimisation by stopping 4 <sup>th</sup> and 10 <sup>th</sup> filed in both passes during Low load operation hours	1.94	177.5
SBU2 U1 Ash handling Compressor stopping up to max 12 hrs, according to load condition in turn to reduce power consumption	1.82	166.6
SBU2 U1 Switching OFF 2 CT fans stopped for power optimisation during 90 MWh operation at < 92 Kpa vacuum	10.02	915.9
Cooling towers blade replacement in SBU1 (6 Nos.)	0.53	48.5
<b>Total</b>	<b>110.469</b>	<b>10,146.120</b>

\* Giga-Joules

# BIODIVERSITY INITIATIVES AT BARMER

A CASE STUDY

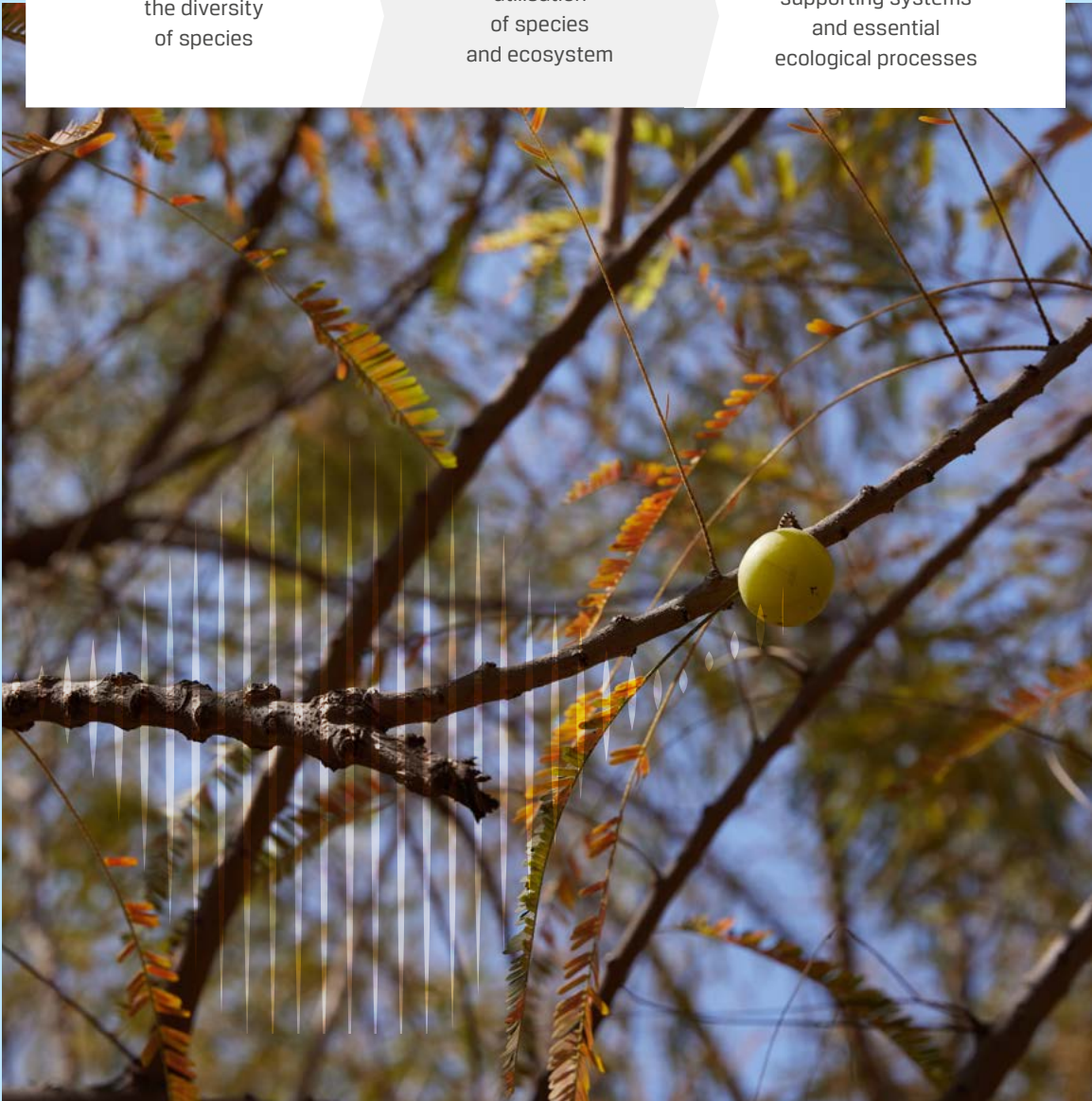
Biodiversity conservation refers to protection, upliftment and management of biodiversity, in order to derive sustainable benefits for the present and future generations

## Key objectives of Biodiversity Conservation:

To preserve the diversity of species

Sustainable utilisation of species and ecosystem

To maintain life-supporting systems and essential ecological processes



The following are the important strategies followed for Biodiversity Conservation:

1. Analyse impacts and dependency of our operations on Biodiversity & Ecosystem Services to develop and implement a robust biodiversity management plan
2. All four types of ecosystems in and around the plant area preserved
3. Poaching and hunting of wild animals is prohibited
4. Pollutants to ecosystem are not allowed
5. Deforestation is strictly prohibited
6. Environmental laws are strictly followed
7. IUCN (International Union for Conservation of Nature) RED-LIST and WPA (Wildlife Protection Act) Schedule-1 species are identified and conserved in their natural and artificial habitats

8. Awareness is created regarding biodiversity conservation and its importance

9. Plantations drive is rigorously done and is evident in plants

Even as JSW Energy's Barmer plant is located in Thar Desert, we managed to achieve an overwhelming 39.4% (132 acres) of the green belt. This provides key ecosystem services such as improving air quality, carbon sequestration, nutrient recycling, runoff control, temperature regulation, noise reduction and biodiversity protection. The greenbelt consists of 76 species of trees, shrubs and herbs.

**Some species available at the Greenbelt:**

## Trees

Neem, Sesame, Flowers: Kaner and Tikoma and ornamental types

## Fruits

Mango, Banana, Orange, Sweet Lemon, Guava and Pomegranate

## Leaf Plants

Olive, other plants: Amla, Ber, Dates and Sugarcane

Two reservoirs of JSW Energy act as a habitat for several aquatic animals, thereby supporting aquatic biodiversity. In addition, we also fixed water points at several places at each plant, which further plays a key role in protecting the ecosystem.

- Breeding and nesting site for 20 species, with 46 migratory birds
- Conserving 7 nos. of IUCN RED-LIST species and 15 nos. of WPA Schedule-1 species

**Biodiversity at JSW Barmer:**

- Total 164 fauna species consisting of Birds (121 species), butterfly and Insects (30 species), mammals (8 species) and reptiles (5 species).



## Intellectual Capital



JSW Energy pursues innovation as one of its main pillars for successfully facing the future energy scenario, promoting energy efficiency, decarbonisation and the electrification of the economy. Investment in our intellectual capital will be a vital enabler in our journey towards becoming a net zero company by 2050.

We are one of India's leading private sector energy companies making consistent enhancements to our ongoing operations. Technology and a culture of continuous improvement are our key enablers towards achieving our strategic goals of industry and cost leadership.

Our intellectual capital composes of intangible, knowledge-based assets, which are a strategic element of the Company. This includes our adaption to newer technologies, exploring digitalisation in its many forms for efficiency and development of new products and services. This also includes disruptive technologies and business models that enable the Company to transition towards becoming a modern and innovative renewable power company.

During the year, we onboarded BCG's expert team to drive the digitalisation process across existing thermal business and the renewable vertical. The BCG team is assisting the Company in analysing the organisations' requirements, existing resources and the ability to scale to recommend the right digital processes. The team is also working on the experience transformation guideposts that can help the business effectively use digital technology. This also includes the tools and platforms for optimum utilisation, and help in moving towards automation at all levels.

During our journey, we deployed few digital projects covering our renewable and thermal business, which have already started yielding results for business process automation. We have conceptualised state-of-the-art technology enabled "integrated digital cockpit" for the renewable vertical at Hyderabad, for the thermal plant at Vijayanagar, and for Hydro project at Dehli to cater to the current and future digitalisation demands, as we move forward.

Technology enabled culture with continuous improvement are the key elements to achieve the strategic goals of industry leadership, improve speed and efficiency, increase production, decrease costs, and provide a better customer experience. We will continue to enhance our production processes, cost competitiveness, and environmental performance with highest safety standard through capability building and collaboration with technology and research partners. Amidst changing customer needs, with renewables gaining pace and increasing regulatory risks, we strive to innovate and adapt to change continuously.

### Key Initiatives in FY 2023

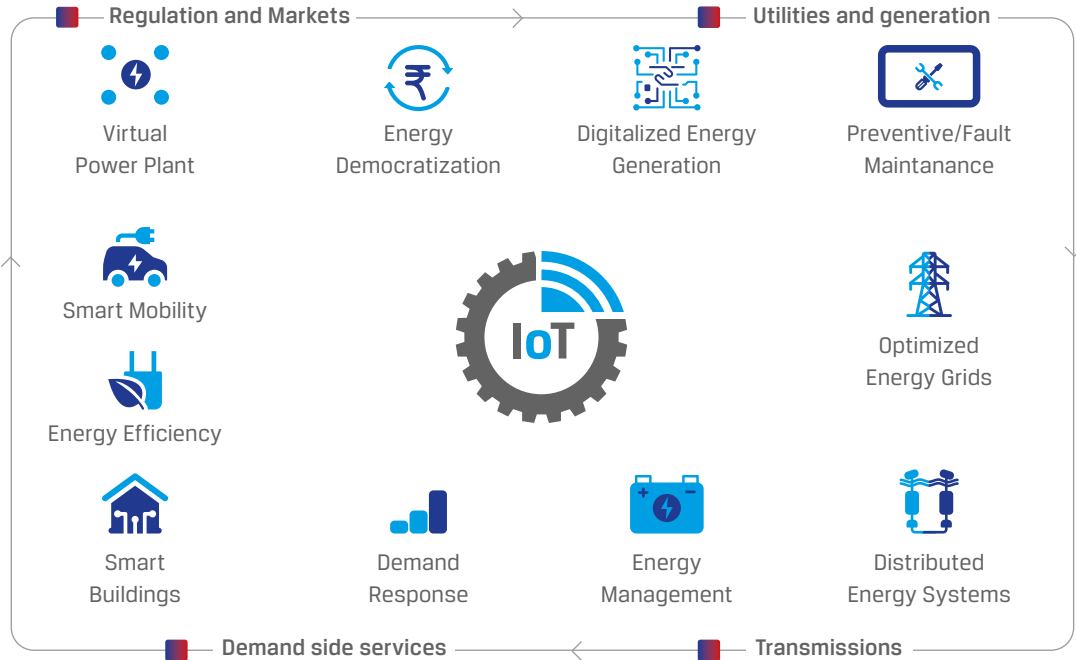
During FY 2023, we strengthened our processes with integration between OT & IT systems done as per the ISA/IEC 62443 standards, duly complying with the Ministry of Power guidelines and thereby we got certified with ISO 27001:2013 for JSW Energy business function.

We are moving at a fast pace in adopting the industry's best technology and practices in the IT & OT function area. This is aimed at having better and effective utilisation of the plant parameters on the IT network for effective and timely decision making by the respective process owners who have access to such data on a real-time basis on their handheld devices. As we move forward, our journey will continue to focus on IOT 4.0 technology readiness, compatibility, complexity, executive management support, firm size, regulatory support and security concerns.





### Better local Outcomes



On the digitalisation front, we focused more on understanding the complete processes at plant levels and also did consolidation of the set of activities being handled in different mode. This helped the team understand the potential improvement expected to deliver post the implementation of activities, and accordingly, targeted the immediate result-oriented projects.

We have taken up the implementation of two projects comprising of Integrated Supply Chain Management (i.e., iSCM) for the renewable portfolio which shall be utilised for complete sourcing of materials to the installation and commissioning of assets at project site level.

The second project was related to Coal Value in Use (i.e. Coal-VIU) which is being exclusively used for the thermal business vertical. The majority of the cost spent on raw materials is on sourcing of coal till the consumption at plant level, which directly benefits the business process system in terms of optimisation of men, material and resources at various stages of project execution as well as for the running plants and project sites.

In this journey, we implemented two major processes under the digitalisation flagship. These projects can improve the implementing innovative enhancements through Process Improvements, System Updating and IT System & Infrastructure Upgradations, along with deployment of the two digitalisation projects.



### Spent Analysis in FY 2023

Total technological upgradation investment

**₹11.10 CRORE**

Total digitalisation investment

**₹22.40 CRORE**

### Initiatives planned for FY 2024

We are working on various other projects aimed at further digitalisation. We are working to ensure some of these projects are executed in the financial year 2024. Some of these key projects are as mentioned below.

1. Setting up Integrated Digital command control for Renewables at Hyderabad, Thermal at Vijayanagar and Hydro at Delhi.
2. Deployment of Heat Rate Optimization at Ratnagiri plant for a unit to start for which the contract has been awarded to M/s TCE and work shall commence from Jun 2023.
3. A similar project has been considered for the Thermal - Vijayanagar Plant for Heat Rate optimisation, which is currently under review and finalisation of the vendor.
4. Development and deployment of Coal Inventory for the thermal business vertical.
5. Extension of OSI PI system with current development at Vijayanagar plant to other thermal plants covering Barmer and Ratnagiri. The contracts for these two projects are getting finalised.
6. Strengthening of OSI PI system at the central location, thereby having uniform structure and process for all thermal business verticals on a common platform for better availability and ease of maintenance.



# MANAGEMENT DISCUSSION & ANALYSIS



## ECONOMIC REVIEW

### World Economic Overview

The global economy grew 3.4% in 2022 with nascent signs of recovery seen in the second half of the year. A gradual recovery post the pandemic was beginning to take shape with unwinding of supply chain disruptions, however, the Russia-Ukraine conflict resulted in inflationary pressure and slowed the pace of recovery. In view of pent-up demand spike, lingering supply disruptions, and commodity price spikes, monetary action was taken by various central banks.

Central banks across the globe have resorted to raising policy rates to tackle inflationary pressure. With strong policy action from various central banks, food and energy prices have come down, but underlying price pressures are proving sticky, with labour markets tight in a number of economies.

In 2023, global growth is estimated to slow down to 2.8% and improve slightly to 3.0% in 2024. The global economic recovery is showing signs of uncertainty with persistent high debt levels, ongoing geopolitical conflict and financial sector turmoil - unexpected failures of two specialised regional banks in the United States in mid-March 2023 and the collapse of confidence in a major European bank. Growth in advanced economies is expected to slow down from 2.7% in 2022 to 1.3%

and 1.4% in 2023 and 2024 respectively. However, the performance of emerging markets is expected to be slightly better with growth being maintained from 4.0% in 2022 to 3.9% in 2023 and slight improvement to 4.2% in 2024. In the medium term, it is imperative to focus on structural factors impeding supply and take appropriate steps to strengthen multilateral cooperation. This will help in creating a more resilient world economy.

Source: IMF World Economic Outlook April 2023

### Indian Economic Overview

Despite sluggish global economy, India is poised to become the world's fastest-growing economy. India has set an ambitious target of becoming a USD 5 trillion economy by 2025 and more than double its annual exports to USD 2 trillion by 2030 aided by rise in value-added manufactured products and services exports. The Indian government is undertaking a slew of measures towards achieving these targets, including promotion of Make in India, Production Linked Incentives (PLI) scheme, Housing for All, rural electrification, refurbishing foreign trade policy, extended Emergency Credit Linked Guarantee Scheme, etc. China plus one strategy coupled with more liberal trade policy like new export hubs, ease of doing business and online approvals is poised to aid manufacturing sector growth in India.

According to the estimates by National Statistics Office (NSO), India's GDP growth is estimated at 7.2% for FY 2023. Despite GDP growth came in slightly lower than the last year, India remains one of the fastest-growing economies among the major economies. Growth in FY 2023 is primarily attributable to rise in private consumption and capital formation which have helped in generating employment, reflected in the declining urban unemployment rate.

FY 2023 has witnessed a strong rebound of private consumption and higher capital expenditure, which in turn resulted in providing boost to production activity. World's largest vaccination drive involving over 2 billion doses served to lift consumer sentiments and enabled people to spend on contact-based services, such as restaurants, hotels, shopping malls, and cinemas gave boost to consumption. Well-capitalised public sector banks led to increase in the credit supply and the credit growth to MSMEs. Robust government capital expenditure coupled with sustained increase in private capital expenditure is expected to continue with strengthening of corporate balance sheets. Measures taken by the Government and RBI, along with the easing of global commodity prices, aided in controlling retail inflation level below the RBI's upper tolerance target of 6%, in March 2023.

The Union Budget 2023-24 aimed at strengthening India's economic status in the 75<sup>th</sup> year of India's independence. The Vision for 'Amrit Kaal' was articulated in the Budget which centred around opportunities for citizens with focus on youth, growth & job creation and strong & stable macro-economic environment. Seven priorities, termed Saptarishi, were adopted to guide the country towards 'Amrit Kaal', thus providing a blueprint for an empowered and inclusive economy. The priorities being, inclusive development, reaching the last mile, infrastructure & investment, unleashing the potential, green growth, youth power and financial sector.

**Indian GDP growth is expected to be brisk in FY2024 at 6.5%, led by strong credit disbursal, higher Rabi crop output and intensive capital investment cycle. The expansion of public digital platforms and several measures like PM GatiShakti, the National Logistics Policy, and PLI schemes are expected to provide the needed boost to manufacturing output.**

Indian GDP growth is expected to be brisk in FY2024 at 6.5%, led by strong credit disbursal, higher Rabi crop output and intensive capital investment cycle. The expansion of public digital platforms and several measures like PM GatiShakti, the National Logistics Policy, and PLI schemes are expected to provide the needed boost to manufacturing output. However, the depreciating rupee coupled with tight monetary policy by the US Fed pose risk to pace of economic growth.

Source: NSO, Press Information Bureau (pib.gov.in)

## INDUSTRY REVIEW

### Climate Change mitigation – progress or stagnant?

The year witnessed global energy crisis, triggered by Russia-Ukraine conflict. It has sparked unprecedented momentum for renewables globally with a focus on energy security. Fossil fuel supply disruptions have underlined the energy security benefits of domestically generated renewable electricity, leading many countries to strengthen policies supporting renewables. The year has seen higher fossil fuel prices worldwide and has resulted in improved competitiveness of solar PV and wind generation against other fuels.

The global emission growth in 2022 was lower than the global GDP growth. This was due to record growth in wind and solar, which reached a 12% share in the global electricity mix, up from 10% in 2021. As per IEA, renewables are set to account for over 90% of global electricity capacity expansion over the next five years. The major capacity expansions will be driven by China, India, the European Union, and the United States, which are all implementing and introducing favourable policies, regulatory and market reforms in reaction to the energy crisis. Renewable source of energy is set to become the largest source of global electricity generation by 2025, surpassing coal. It is expected that renewable power share will increase to 38% in total global mix by 2027.

India's ambitious target of 500 GW of non-fossil capacity by 2030 is supported through favourable policy framework. The new installations are expected to be led by solar PV capacity underpinned by strengthening of domestic supply chain through production linked incentives (PLI) for manufacturing advance solar PV modules. This will be complimented by the wind capacity additions over the period.

### Global Energy Outlook

In 2022, total energy consumption grew by meagre 0.9% due to high prices and a contraction in gas and oil supplies from Russia. As per the Economist Intelligence Unit, moderate global economic growth coupled



with high energy prices is expected to cause a 1.3% increase in total energy consumption in 2023. With OPEC+ members looking to cut production to prevent sharp drop in oil prices a reduction in energy supplies is likely. The EU sanctions on oil will completely come into force in 2023, leading to fall in oil and gas output from Russia.

World electricity demand remained resilient in 2022 as the demand grew by 2% YoY. The electrification of the transport and heating sector continue to accelerate globally. In 2022 Electricity demand rose in India and The United States while demand in China was affected by Covid-19 restrictions. IEA projects global electricity demand to grow at 3% over 2023-2025 while India's electricity demand to grow at annual growth of 5.6%. Till 2025, over 70% of the growth in global electricity demand is most likely to come from China, India and Southeast Asia combined as these economies expand.

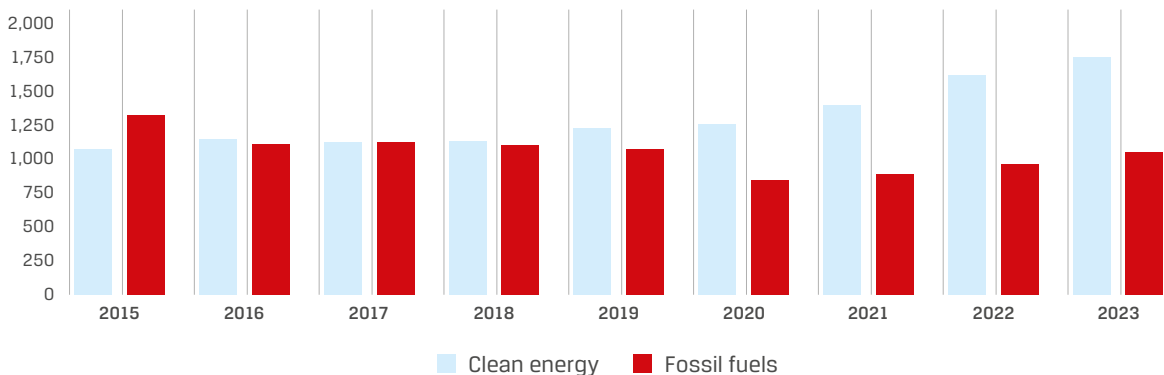
Global energy discussions have been focussed on decarbonising the energy systems and transition to net

zero. In the year gone by, the importance of two other aspects of security and affordability of energy came to the forefront. Government support has stepped up significantly in the recent past in most economies. But given the vast scale of the decarbonisation challenge, greater support is required, both in terms of policy and finance, on a global level.

The share of renewables in the global power generation mix is expected to increase to 38% in 2027 from 29% in 2022. This will result in substantial decrease in the shares of coal- and gas-fired generation resulting in curtailment of emissions of global power generation. These are likely to plateau by 2025 and thereon CO2 intensity will continue to decline. Global energy investment is estimated around USD 2.8 trillion in 2023, more than USD 1.7 trillion would be towards clean energy.

Renewables and nuclear energy will dominate the growth of global electricity supply over the next three years, together meeting on average more than 90% of the additional demand.

**Global energy investment in clean energy and in fossil fuels**  
(billion USD (2022))



Sources: EIU, IEA

In 2023, solar and wind energy consumption is expected to rise 11% as more projects come online. Renewable energy consumption is forecasted to grow at 10% CAGR during the coming decade. Asia is expected to continue to be the world's biggest market for renewable energy investment. China, India, Japan and South Korea will dominate Asian growth. However, commodity price boom is expected to divert some investment towards fossil-fuel projects, along with higher interest rates may lead to an increase in the cost of financing renewable energy projects.

### Climate Change Conference COP27

The United Nations Climate Change Conference COP27 witnessed a significant agreement to provide "loss and damage" funding for vulnerable countries impacted by climate disasters. The members worked on chalking out the way forward for the communities whose lives and livelihoods were impacted by the very worst impacts of climate change. COP27 resulted in countries delivering multiple decisions to reaffirm their commitment to limit global temperature rise to 1.5 degrees Celsius above pre-industrial levels, to cut greenhouse gas emissions and adapt to the inevitable impacts of climate change. The countries committed to enhancing financial, technological and capacity building support needed by developing countries.

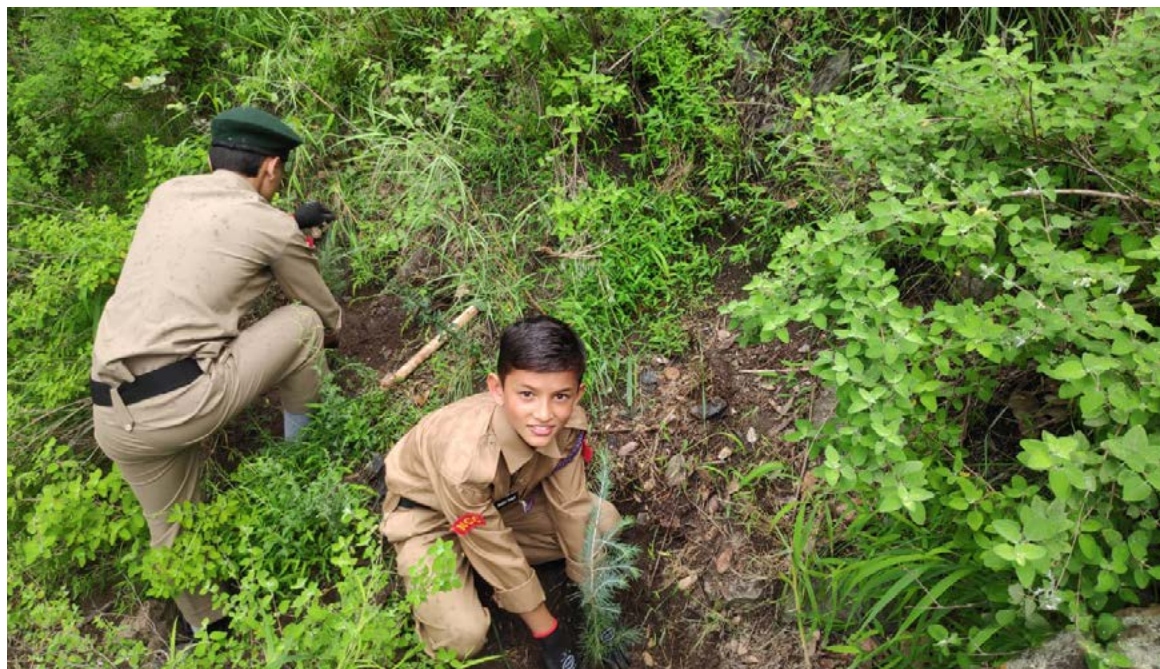
With an aim to help the vulnerable communities adapt to climate change through concrete adaptation solutions, new pledges, worth USD 230+ million, were made to the Adaptation Fund. COP27 significantly advanced

the work on mitigation by setting up a mitigation work programme, aimed at urgently scaling up mitigation ambition and implementation. The Sharm el-Sheikh Implementation Plan, the cover decision highlighting a global transformation to a low-carbon economy, is projected to need investments of USD 4-6 trillion on an annual basis.

The progress of developed country parties to mobilise jointly USD 100 billion per year by 2020 was discussed at length. Developed countries were urged to meet the promised funding and multilateral development banks and international financial institutions were called on to mobilise climate finance. Considering the needs and priorities of developing countries, deliberations continued on setting a 'new collective quantified goal on climate finance' in 2024.

Multiple decisions aimed to re-emphasise the critical importance of empowering all stakeholders to engage in climate action were taken. Countries also launched a package of 25 new collaborative actions in five key areas: power, road transport, steel, hydrogen and agriculture. To protect life on the planet by early warning systems within the next five years, a USD 3.1 billion plan was announced. The Global Shield against Climate Risks was launched by the G7 and the V20 (Vulnerable Twenty), with new commitments of over USD 200 million as initial funding.

Delegates at COP27 wrapped up the second technical dialogue of the first global stocktake, a mechanism to raise ambition under the Paris Agreement.





### India optimistic about 'One earth, One family, One future'

With a hope that the fight against climate change will unite the world as one family, India is moving strongly on its path of climate action for global good. At COP27, India invited the global community to be a part of Mission LiFE for individual, family and community-based actions. India assumed the Presidency of the G20 in December 2022 with the motto of 'One earth, One family, One future'. The journey towards a planet safe for humanity, is a collective effort to be undertaken with equity and climate justice as our guiding principles. Within one year of announcing its intent to achieve net zero emissions by 2070 at Glasgow, India submitted its Long-Term Low Emissions Growth Strategy indicating low carbon transition pathways in key economic sectors of Energy and Electricity, Transport, Urban Design, Industries and Forestry. Responding to the call for increased ambition in 2030 climate targets, our country has embarked on far-reaching new initiatives in renewable energy, e-mobility, ethanol-blended fuels, and green hydrogen as an alternate energy source.

In August 2022, we updated our Nationally Determined Contribution (NDC) according to which our country has an enhanced target to reduce emissions intensity of its GDP by 45% by 2030 from 2005 level, and achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.

Government of India is implementing several programmes and schemes including the National Action Plan on Climate Change (NAPCC) which comprises missions in specific areas of solar energy, energy efficiency, water, sustainable agriculture, Himalayan ecosystem, sustainable habitat, green India, and strategic knowledge for climate change.

India is positively seeking to foster strong international cooperation through action and solutions-oriented coalitions like International Solar Alliance and Coalition of Disaster Resilience Infrastructure, both of which were launched and nurtured by India. Despite very low contribution to the world's cumulative emissions at less than 4% and annual per capita emissions are about one-third of the global average, India is committed to contribute to zero emission mission significantly.

However, the decarbonisation strategy of India is laid upon the commitment made by the developed countries to provide adequate climate finance, technology transfer and capacity building support to the developing countries.

### India's Clean Energy Transition

Investment in renewable energy hit record levels in India in FY 2022, according to a new report from the Institute for Energy Economics and Financial Analysis. A total of USD 14.5 billion was invested in renewable energy, up by

125% compared to FY 2021 and 72% higher than in the pre-pandemic period of FY 2020. The investment done in renewable energy in FY 2023 is expected to further surpass FY 2022. In 2023 USD 20 billion is expected to be invested in the sector. The government is taking actions to accelerate the deployment of renewable energy capacity, in line with the target of 50% installed capacity from non-fossil source by 2030 announced in the updated Nationally Determined Contributions.

The government established a plan for the integration of this additional capacity within the transmission grid that includes grid expansions and additional storage capacity. Measures to hasten renewable capacity additions are, to increase renewable purchase obligations with a greater focus on wind, hydro power and energy storage to facilitate round-the-clock power from renewable energy sources. The green open access electricity rules are expected to boost renewable energy procurement.

The Energy Conservation (Amendment) Bill 2022 promoting energy efficiency and conservation mandates the use of non-fossil sources for designated industrial and commercial consumers, and establishes carbon markets. The Energy Conservation Code for buildings will apply to office and residential buildings with a connected load of 100 kilowatt or above. India also encourages the production of green hydrogen/ ammonia through waivers of inter-state transmission charges for a period of 25 years under the green hydrogen policy.

## Indian Power Sector

### Power Demand & Generation

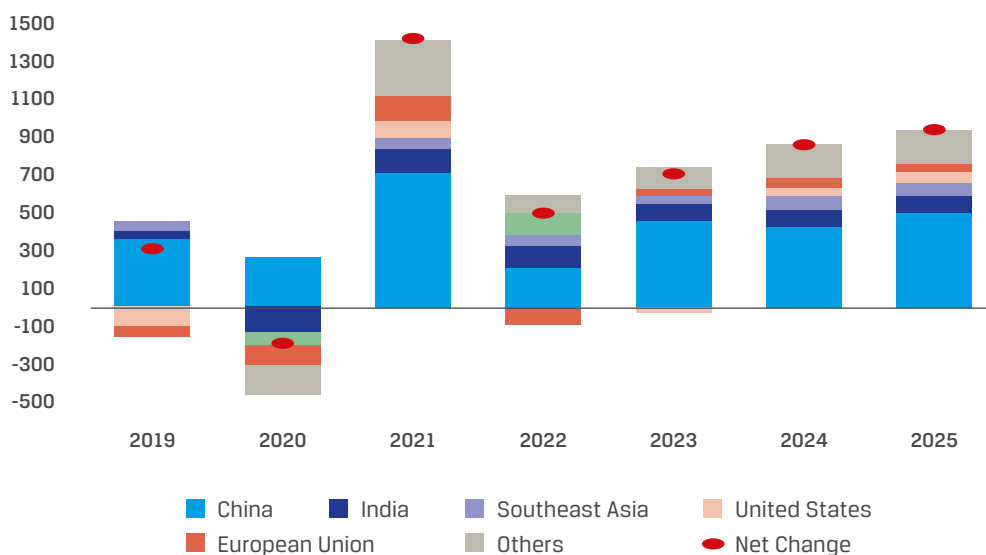
India is among the largest producer and consumer of electricity worldwide with a total installed electricity capacity of over 416 GW at the end of FY 2023. The growth in electricity demand is underpinned by population growth, urbanisation, industrialisation, improved standard of living with gain in access to electricity. India is among the leading producer of renewable energy, with 41% of the total installed capacity comprises renewable sources. At the end of FY 2023 India has installed capacity of 172 GW of renewable including Hydro which generates 22.5% of total energy produced in the country.

Energy demand in our country is rapidly growing as the country continues to urbanise and the manufacturing sector witnesses high pace growth. The growing energy demand is met through various energy sources, with coal being the largest supply source.

Source: CEA

In FY 2023, total power demand increased by 9.6% to reach 1,512 BUs which was substantially higher than the average annual growth rate of 5.3% seen during 2015-2019. The growth is mainly attributable to a combination of robust post-pandemic economic recovery and exceptionally high summer temperatures. According to International Energy Agency (IEA), power demand in India is likely to grow at an annual rate of 5.6% between 2023 and 2025.

Year-on-year change in electricity demand by region, 2019-2025 (TWh)





As of the end of FY 2023, India had an installed capacity of 416 GW, of which 237 GW comes from fossil-fired power plants (coal, gas and oil), 47 GW from hydro, 125 GW from renewable energy plants such as solar and wind, and the rest from nuclear power plants. Currently, total renewable capacity under construction is more than 68 GW and MNRE is expected to tender 50 GW in FY 2024.

Demand in BUs	FY 2023	FY 2022	YoY %
North	463	418	10.8%
West	476	429	10.9%
South	371	351	5.9%
East	183	164	11.4%
North-East	19	18	4.2%
<b>All-India</b>	<b>1,512</b>	<b>1,380</b>	<b>9.6%</b>

Generation in BUs	FY 2023	FY 2022	YoY %
Thermal	1,206	1,115	8.2%
Hydro	162	152	6.9%
Renewables	204	169	20.2%
Wind	72	69	4.7%
Solar	102	73	40.1%
Others (Nuclear+Import)	53	55	-3.7%
<b>All-India</b>	<b>1,624</b>	<b>1,490</b>	<b>9.0%</b>

(Source: Electricity Market Report, March 2023, IEA)

## Thermal Energy

India has installed thermal capacity of 237 GW, as on 31<sup>st</sup> March, 2023, comprised mainly of coal. Thermal energy continues to be the largest source occupying 57% share of the total installed capacity in the country. The growth in thermal capacity was mere 1.2 GW during FY 2023 signifying India's strong commitment to renewable energy sources.

With renewable capacity additions picking pace, thermal power continues to remain crucial power source to meet growing base and peak demand. In April 2022, the Ministry of Power had directed state generating companies and independent power producers to meet a 10% blending requirement, mandating 10% of coal demand to be met by imported coal. This was required to ensure adequate coal stocks before the onset of monsoons. In August 2022, the government withdrew these blending requirements when adequate stock levels at power plants were reached. Since coal power plants are important to meet base load requirements, they have been instructed to run at full capacity in accordance with section 11 of the Electricity Act, 2003. In February 2023, the power ministry has already mandated all coal-based power generators to blend 6% of imported coal keeping in view the growing requirements.

## Renewable Energy

The Indian government aims 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. With this in view, there has been a strong and continuous focus on renewable energy capacity addition. In FY 2023, India's renewable energy sector witnessed annual new capacity addition of 15.3 GW with Solar capacity additions constituting 12.8 GW.

### 1. Hydro

Hydro power is systemically important from the grid perspective so as to meet the flexibility requirements and peaking power supply. To promote hydro power, the government has outlined policy measures to promote investments in the segment by notifying Hydro Power Purchase Obligation (HPO) norms, long-term trajectory for HPO as well as tariff rationalisation measures. Hydro power provides significant help in reducing carbon emissions and achieve last-mile connectivity of electricity.

India's total hydro installed generation capacity stood at 46.9 GW, as on 31<sup>st</sup> March, 2023, constituting 11% of the total installed capacity. The government has set a target of 68 GW hydro power generation capacity by 2031-32.

### 2. Solar

India's total solar installed generation capacity as on 31<sup>st</sup> March, 2023 stood at 66.8 GW as compared to 54.0 GW as on 31<sup>st</sup> March, 2022. The contribution of solar energy increased to 16% of total installed generation capacity, from 14% on 31<sup>st</sup> March, 2022.

According to the Union Ministry of New & Renewable Energy, in FY 2023, the solar power segment added a total new capacity of 12.8 GW similar to FY 2022. New solar capacity additions in FY 2023 made up for 84% of the total renewable power capacity installed.

India is expected to add 298 GW of new utility-scale solar capacity by 2031-32. Solar energy generation has become central to the National Action Plan on Climate Change. The National Solar Mission is one of the key initiatives to promote solar power expansion/generation. In addition, Government of India has allotted a total of ~48 GW under production linked scheme via two tranches, for domestic manufacturing of advance solar modules, with a cumulative support of more than ₹18,500 crore.



### 3. Wind

India ranks fourth in the wind power capacity globally. The Government of India has been taking several steps to increase the installation of wind energy capacity in the country by promoting wind power projects through private sector investment.

In the wind sector, about 2.3 GW of new capacity was added in FY 2023, about 105% higher than the 1.1 GW capacity added in FY 2022.

India's Central Electricity Authority (CEA) has projected an increase in wind power capacity of 42.6 GW from in FY 2023 to 122 GW by 2031-32, amounting to more than 8 GW of new installations per year in next 7 years. In addition, Central and State Governments are working together in utilising the enormous potential of its 195 GW of offshore energy.

### Energy Storage

#### 1. Hydro Pumped Storage (PSP)

As the share of renewable energy increases in overall generation, energy storage is emerging as key solution to address the intermittency of renewable power thereby leading to reliable grid integration of renewable power. Pumped storage project (PSP), a hydroelectric energy storage, is proven technology which enables load balancing through energy storage. It is a configuration of two water reservoirs at different elevations that can generate power as water moves down from one to the other (discharge), passing through a turbine. Pumped storage hydro plants provide several benefits, such as peak shaving, frequency regulation,

load balancing, backup reserve, black start capability, etc. Additionally, they offer very fast ramping up/down and peak/off-peak balancing support on account of their inherent flexibility. PSP is thus widely recognised as an ideal supplier of regulation and contingency reserve ancillary services, thereby helping in managing renewable energy grid integration.

Due to growing concerns regarding energy security, the increasing requirement for load management of grid networks during peak hours and the escalating need for efficient energy storage, Indian PSP market is witnessing robust growth. The Indian government is encouraging pumped hydro storage establishments by providing budgetary support for infrastructure enabling, separate environment clearance by treating them differently from traditional hydro plants, waiver of ISTS charges for PSP and introducing Energy storage obligation. Closed-loop pumped hydro storage systems are witnessing good growth on account of their minimal environmental impact across natural habitats. The Central Electricity Authority predicts that India will need 175.2 GWh / 26.7 GW pumped storage projects by 2031-32.

#### 2. Battery Energy Storage System (BESS)

As renewable energy share increases in the Indian power sector, the need for battery storage is becoming increasingly important as they offer a flexible grid integration opportunity. Energy storage helps in the integration of renewable energy and unlocking the benefits of local generation and a clean, resilient energy supply. Renewable sources tend to flood the grid with

power at the same time, creating pressure to curtail extra power giving rise to the need for battery energy storage systems. Such systems prove extremely useful at peak load durations. As per Central Electricity Authority (CEA), India would likely need a BESS capacity of 236.2 GWh / 47.2 GW by 2031-32.

The current power supply tenders have evolved to include energy storage system (ESS) to ensure round-the-clock and peak power requirement through renewable power. In FY 2023, SECI floated largest ever single location BESS tender for 1 GWh / 500 MW where JSW Energy emerged as a successful bidder for entire capacity.

Source: Optimal Generation Mix, CEA

### Advanced Solar Module

Government of India has allocated Production Linked Incentives (PLI) aimed at promoting domestic manufacturing in strategic sectors. The scheme offers financial incentives to companies that establish or expand manufacturing facilities in specific industries.

Under the Solar PLI Tranche-II, the Government of India has introduced incentives for setting up Solar Photovoltaic (PV) Module manufacturing facilities in the country with an outlay of ₹19,500 crore. Solar PV modules are essential components in solar power generation, and by encouraging their local production, the government aims to reduce reliance on imports and boost the domestic manufacturing ecosystem. The import of solar modules is discouraged by the Government of India by import duties. Currently, the domestic manufacturing capacity is limited and technology-wise still evolving.

### Green Hydrogen

A sustainable future is imperiled by climate change. Finding sources of energy alternative to Thermal energy is crucial as Energy sector is one of the major sectors contributing to global warming. In addition to replacing fossil fuels in industry, Green Hydrogen is expected to play crucial role in creating cleaner future, it can also be used for clean transportation, decentralised power generation, aviation, and maritime transportation.

Green hydrogen is produced through electrolysis of water using renewable energy, which results in a clean and sustainable energy carrier.

For industries, like steel, cement, and the chemical industry, Green Hydrogen is the solution for decarbonising needs. Derivatives of Green hydrogen, such as Green Ammonia and Green Methanol, are long-term energy carriers and can be used as Green feedstock

or Green transportation fuel. Almost all hydrogen produced today is 'grey', which means it comes from natural gas production. Grey hydrogen is comparably less expensive than green hydrogen in the absence of a price on carbon emissions, but continuing its use will make it more difficult to maintain environmental sustainability. The majority of current Green hydrogen projects are in the pre-commercial stage, and those that have already been erected have lesser capacities.

Since it is predicted that hydrogen costs would drop dramatically by 2030, there will be a five-fold rise in demand for hydrogen, reaching ~30 MT by 2050, with 80% of that demand projected to be green in nature. The 'National Hydrogen Mission' launched in August 2021 has made an effort to scale up the production of Green Hydrogen and harmonise its energy transformation initiatives with international best practices in technology, with support in policies and regulatory. By 2030, India's target is to reach 5 million tonnes per year of Green Hydrogen. The Ministry of Power (MoP) announced the 'Green Hydrogen Policy' in February 2022 as the first piece in a set of policy instruments to support ongoing efforts in this direction. The Green Hydrogen policy plans to create 35–40 GW of Electrolyzer capacity for uses such as cement, fertiliser, steel, heavy-duty transportation, and refining. India's potential for green hydrogen will be realised with the aid of domestically built, less expensive electrolyzers, low cost renewable energy, and policy support.

### Company Overview

One of India's leading independent power producers, JSW Energy (the Company), is the energy arm of India's leading conglomerate, JSW Group. The Company is an integral part of the energy transition journey that India is embarking, further supported by its foray into energy products and services through energy storage solution, green hydrogen and its derivatives. The Company is efficiently embracing a greener future by leveraging its robust business model and healthy balance sheet position. Its success is further strengthened by judicious capital allocation, astute management, focussed socio-economic initiatives, new-age innovation and a strong workforce.

Starting small with one power plant in Karnataka over two decades ago, we have built our way out to have a widespread presence across 10 India states. With focus on business continuity, in addition to geographical distribution, we strive to de-risk our business through multiple fuel sources and power off-take arrangements. Our energy generation capacity is a mix of thermal, hydel, wind and solar power with a

total capacity of 9.8 GW out of which 6.6 GW is installed and 3.2 GW is under construction and is expected to be commissioned by calendar year 2024. Our total renewable capacity of 5.9 GW constitutes 61% of total capacity. In the energy storage space, the Company has a locked-in capacity of 3.4 GWh of projects across both pumped storage (2.4 GWh) and Battery Energy Storage (1 GWh). The Company is establishing its presence in the energy products and services space by creating 1 GW manufacturing capacity of advance solar modules under PLI scheme and contracted 3.8 KTPA of Green Hydrogen production facility to be used for green steel manufacturing.

During the year, JSW Energy has completed the acquisition of renewable assets of Mytrah Energy (India) Private Limited (MEIPL) of 1,753 MW comprising of 1,331 MW of wind capacity and 422 MW of solar capacity operating primarily in the southern, western and central parts of India. The enterprise value of the transaction is ₹10,150 crore adjusted for net working capital. The assets have a proven operational track record and long-term PPA with an average remaining life of ~17 years. In FY 2023, the Company also completed acquisition of Ind-Barath pursuant to NCLT order through IBC at an attractive purchase consideration of ₹1,048 crore. Ind-Barath has 700 MW under-construction thermal capacity located near the coal rich belt of IB valley of Mahanadi Coalfields with ease of water access.

The Company is well known in the power sector for executing projects with a quick turnaround time and at least possible costs. With transparency in operations, strong corporate governance, astute business decisions and judicious capital allocation strategies, JSW Energy continues to deliver sustainable growth, and create value for all its stakeholders. This year embarks our journey towards an integrated and sustainable growth and our transition from 'Pure Play' power generating company to 'Energy Products and Services' company.

### Strategy 2.0

The Company has an ambitious target of reaching 20 GW of installed generation capacity and 40 GWh / 5 GW of energy storage by 2030 along with 1 GW of solar module manufacturing by April 2025. This growth will result in balance sheet size to grow at 22% CAGR from FY 2023-30. These targets are in line with our mission to become carbon neutral by 2050. The Company is well on track to achieve its capacity growth target of 10 GW much ahead of the stated timeline of FY 2025 and being future-ready with increased share of renewables and new energy solutions.

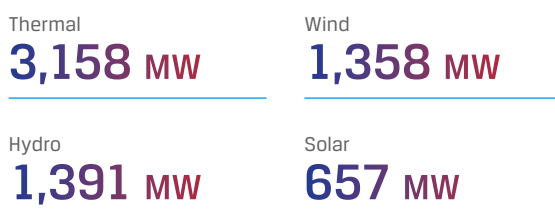
JSW Energy is currently constructing 2,266 MW of Wind projects, 240 MW of Hydro project and 700 MW of Thermal project. The company has secured 3.4GWh of energy storage capacity via hydro pumped storage plant (PSP) and battery energy storage system (BESS). The Company has already established tie-ups for 72 GWh of PSP in various states. All these new age projects are driving the Company towards a new age power company having presence across supply chain of renewable power.

### Business Segments

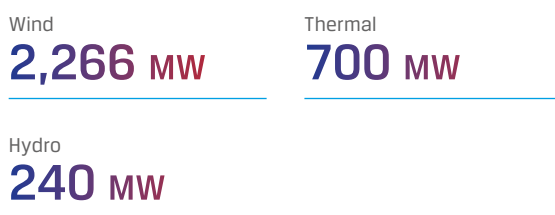
#### Power Generation

The Company is primarily engaged in business of power generation through thermal and renewables. Total installed power generation capacity of 6.6 GW and an under-construction capacity of 3.2 GW results in total portfolio of 9.8 GW. (Renewable: 61%, Thermal: 39%)

#### Installed Capacity: 6,564 MW



#### Under-Construction Capacity: 3,206 MW



#### Power Transmission

Stable electricity supply is made possible through an efficient power transmission system. Jaigad Power Transco Limited (JPTL) is a 74:26 joint venture between the Company and Maharashtra State Electricity Transmission Company Limited. Under JPTL, we have two operational 400 kV transmission lines.

#### Power Trading

Almost two decades ago, JSW Energy launched JSW Power Trading Company Limited (JSWPTC) as part of its vision to become a full-spectrum power company. Having established itself as a leading power trading company in India, JSWPTC has obtained a category "IV"



licence issued by Central Electricity Regulatory Commission to trade in power across India. It is a member of Indian Energy Exchange (IEX), Power Exchange of India Limited (PXIL) and Hindustan Power Exchange Limited (HPX).

### Operational Review

The Company's net generation in FY 2023 stood at 21,866 MUs as compared to 20,787 MUs in FY 2022. It generated a total income of ₹10,867 crore in FY 2023 as compared to ₹8,736 crore in FY 2022. The deemed PLF was 64% for FY 2023 as against 62% for FY 2022.

### Thermal Power Plants

#### Vijayanagar

**Capacity:** 860 MW

**PLF:** The plant comprises two Strategic Business Units (SBUs) – SBU 1 and SBU 2. In FY 2023, the plant achieved an average actual PLF of 51% as against 45% in FY 2022.

**Total Gross Power Generated:** 3,854 MUs

**Net Power Generated:** 3,550 MUs

**Power Sales:** Long-term sales to JSW Steel Limited, JSW Cement Limited, JSW Paints limited, JSW Severfield Structures Ltd, Epsilon Carbon Private Limited under power purchase agreements (PPA) and short-term/merchant sales to distribution companies and on power exchanges in India.

#### Key Strengths of the Plant:

- Located in high power demand areas of South India

- Operationally strong plant leading to high fuel efficiency, lower O&M cost and higher PLF efficiency
- Provision to blend up to 50% of domestic coal with imported coal increases operational flexibility

#### Ratnagiri

**Capacity:** 1,200 MW

**PLF:** In FY 2023, the plant operated at an average deemed PLF of 84% as against 73% in FY 2022

**Total Gross Power Generated:** 6,243 MUs

**Net Power Generated:** 5,714 MUs

**Power Sales:** Long-term sales to Group captive consumers, Maharashtra State Electricity Distribution Company Limited (MSEDCL) and other third-party industrial consumers under PPA. Short-term/merchant sales to distribution companies and on power exchanges in India.

#### Key Strengths of the Plant

- Strategic location near the Jaigad port to help cost saving in coal transportation
- High recovery and robust ROE as 91% capacity tied up under long-term PPAs
- Provision to blend up to 50% of domestic coal with imported coal increases operational flexibility

#### Barmer

**Capacity:** 1,080 MW

**PLF:** In FY 2023, the plant achieved an average deemed PLF of 80% as against 81% achieved in FY 2022

**Total Gross Power Generated:** 7,286 MUs

**Net Power Generated:** 6,544 MUs

**Power Sales:** To Rajasthan DISCOMs

**Key Strengths of the Plant:**

- Assured fuel (lignite) availability sourced from pit-head captive lignite mines under a Fuel Supply Agreement
- Full recovery of fuel cost and fixed cost, including ROE ensured by the long-term PPA with DISCOMs for full capacity

**Nandyal**

**Capacity:** 18 MW

**PLF:** In FY 2023, the plant achieved an average deemed PLF of 98% as against 99% achieved in FY 2022

**Key Strengths of the Plant:**

- 100% LT PPA under Group Captive scheme (18 MW)

**Ind-Barath**

**Capacity:** 700 MW

**Status:** Under construction

**Expected commissioning:** FY 2024

**Hydro Power Plants**

**Baspa-II**

**Capacity:** 300 MW

**PLF:** The plant achieved an average PLF of 51% for FY 2023 as against 50% in FY 2022

**Total net power generated after auxiliary consumption:** 1,338 MUs

**Power sales:** To Himachal Pradesh State Electricity Board (HPSEB)

**Key Strengths of the Plant:**

- 100% LT PPA with HPSEB ensuring full recovery of fixed cost

**Karcham Wangtoo**

**Capacity:** 1,091 MW

**PLF:** The plant achieved an average PLF of 47% for FY 2023 as against 47% in FY 2022

**Total net power generated after auxiliary consumption:** 4,257 MUs

**Power sales:** Uttar Pradesh, Rajasthan, Haryana, and Punjab DISCOMs through long-term PPA with PTC India Limited

**Key strengths of the plant:**

- LT PPA with PTC India Limited for 1,000 MW, which in turn has PSA with various discoms ensuring full recovery of fixed cost, including ROE under the Central Electricity Regulatory Commission (CERC) regulations

**Kutehr Hydroelectric Project**

**Capacity:** 240 MW

**Expected commissioning:** September 2024

JSW Energy (Kutehr) Limited, is a wholly-owned subsidiary of JSW Neo Energy.

Kutehr Hydroelectric Project (3x80 MW Kutehr HEP) with 240 MW capacity is located in the upper reaches of Ravi Basin in district Chamba of Himachal Pradesh. Signed 35-year PPA with Haryana Power Purchase Center.

**Solar Power Plants**

**225 MW Vijaynagar; 25-year PPA with JSW Steel**

**Status:** Completed

Commenced operations from April 2022

**10 MW Solar Plant**

Ground based and rooftop solar power projects across various locations with captive power tie-up within JSW Group

**422 MW Mytrah Solar plants**

Punjab, Telangana and Karnataka

**Status:** Operational

Asset optimisation and performance improvement plan under progress

**Wind Power**

**733 MW Wind Plant; Signed 25-year PPA with JSW Steel**

Karnataka, Maharashtra and Tamil Nadu

**Status:** Under construction

**Expected commissioning:** Progressively during FY 2024

**1,260 MW Wind plants in Tamil Nadu; SECI IX (810 MW); Signed 25-year PPA with SECI**

**Status:** Under construction

Progressive commissioning from Q1 FY 2024

**SECI X (450 MW); Signed 25-year PPA with SECI**

**Status:** Under construction

Progressive commissioning started in Q3 FY 2023. 27 MW capacity was part-commissioned In FY 2023; Balance to be commissioned in a phased manner

### SECI XII (300 MW); Signed 25-year PPA with SECI

**Status:** Under construction

**Expected commissioning:** March 2025

### 1,331 MW Mytrah Wind Plants

Karnataka, Maharashtra, Tamil Nadu, Andhra Pradesh, Telangana, Madhya Pradesh, Gujarat and Rajasthan

**Status:** Operational

Asset optimisation and performance improvement plan under progress

### Storage Projects:

#### Battery Energy Storage System: 1.0 GWh / 500 MW

**Status:** Received LoA from SECI

**Expected commissioning** by Calendar year 2024

#### Pumped Hydro Storage: 2.4 GWh / (300 MW x 8hrs)

**Status:** Received Lols from Power Company of Karnataka Ltd

**Expected commissioning:** 36 months from signing of PPA

### Electrons to Molecules

#### Solar PV Module Manufacturing: 1GW/annum

**Status:** Allotted capacity under PLI scheme for Wafer-Cell-Module manufacturing

**Expected commissioning:** April 2025

Strategic Intent to use solar modules for captive consumption

### Green Hydrogen

**Status:** Contracted 3.8 KTPA of capacity for production of green hydrogen to be used for production of green steel

**Expected commissioning:** FY 2025 (18-24 months)

## Financial review including financial ratios

### Table of standalone financial performance -

#### Revenue from Operations

Parameters	FY 2022	FY 2023	% change
Sale of Power	2,624.72	4,343.86	65%
Interest Income on Assets under Finance Lease	48.58	19.62	-60%
Sale of Goods	26.11	363.24	1291%
Sale of Services	934.89	1,002.21	7%
Other Operating Revenue	8.45	10.30	22%
<b>Total</b>	<b>3,642.74</b>	<b>5,739.23</b>	<b>58%</b>

In FY 2023, the sale of power increased 65% from ₹2,625 crore to ₹4,344 crore, primarily due to higher

long term and merchant sales. Revenue from the sale of services increased 7% to ₹1,002 crore from ₹935 crore in FY 2022, due to additional job work arrangements tie up and higher mining income.

### Other Income

(₹ crore)

Parameters	FY 2022	FY 2023	% change
Interest Income	148.47	48.69	-67%
Dividend Income from Long-term Investments	45.52	121.52	167%
Net Gain on Sale of Investments	9.82	44.38	352%
Other Non-operating Income	24.45	65.26	167%
<b>Total</b>	<b>228.26</b>	<b>279.85</b>	<b>23%</b>

Other income increased in the current financial year primarily due to increase in dividend income which is offset by decrease in interest income as late payment surcharge collected in FY 2022 amounted to ₹126 crore.

### Cost of Fuel

(₹ crore)

Parameters	FY 2022	FY 2023	% change
Cost of Fuel	2,041.09	3,643.63	79%

### Expenses

(₹ crore)

Parameters	FY 2022	FY 2023	% change
Employee Benefit Expense	124.10	134.73	9%
Finance Costs	127.00	259.80	105%
Depreciation and Amortisation Expense	327.69	317.42	-3%
Other Expenses	406.93	399.44	-2%

The finance cost increased 105% to ₹260 crore due to increase in borrowings and one time fair value adjustment for investment in Optionally Convertible Debentures of subsidiary. The employee cost in FY 2023 increased 9% YoY to ₹135 crore. Other expenses decreased 2% YoY.

### EBITDA and Profit after Tax (PAT)

(₹ crore)

Parameters	FY 2022	FY 2023	% change
EBITDA	1,272.77	1,486.83	17%
Profit/(Loss) after tax	<b>569.82</b>	<b>711.02</b>	<b>25%</b>

The EBITDA increased to ₹1,487 crore in FY 2023 from ₹1,273 crore in the previous year majorly on account of higher generation and higher other income. The Company's standalone PAT increased 25% YoY to ₹711 crore in FY 2023 vis-à-vis a PAT of ₹570 crore in FY 2022 flowing from the higher EBITDA and exceptional income of ₹120 crore in FY 2023.

## Ratio

Parameters	FY 2022	FY 2023	% change	Reason
Debtors Turnover (number of days)	42	41	-2%	Decrease was primarily on account of increase in turnover.
Inventory Turnover (number of days)	88	71	-19%	Decrease was due to increase in cost of goods sold.
Interest Coverage Ratio	13.76	11.73	-15%	Decrease is due to increase in interest expenses.
Current Ratio	2.92	0.53	-81%	Decrease was primarily on account of increase in current liabilities (mainly increase in current borrowings) & decrease in current assets (mainly decrease in other financial assets).
Debt Equity Ratio	0.09	0.46	389%	Increase was primarily on account of increase in borrowings.
Operating Profit Margin (%)	25.94	20.38	-21%	Decrease is due to increase in turnover on account of higher fuel costs (mainly pass through in revenue).
Net Profit Margin (%)	14.72	11.81	-20%	

## Consolidated Financial Performance

The Company's total income from operations increased by 24% YoY to ₹10,867 crore from ₹8,736 crore YoY, due to higher realisation (as higher fuel costs are pass through in nature for LT PPAs) and increase in renewable capacity. EBITDA at ₹3,817 crore was 8% higher YoY vis-à-vis ₹3,542 crore in FY 2022 after adjusting for the impact of Karcham Wangtoo tariff order in last year. The Company continues to deliver strong EBITDA which was 2<sup>nd</sup> highest ever on the back of stable cashflows from long-term portfolio, superior O&M practices, and gains from buoyancy in the short term / merchant markets.

Consolidated adjusted PAT was 2<sup>nd</sup> highest ever at ₹1,358 crore up 15% YoY vis-à-vis ₹1,180 crore in FY 2022. The reported PAT for FY 2023 stood at ₹1,478 crore vs ₹1,729 crore in FY 2022 which includes the impact of Karcham Wangtoo tariff order. The Consolidated Net Worth and Proforma\* Consolidated Net Debt as on 31<sup>st</sup> March, 2023 were ₹18,629 crore and ₹22,180 crore respectively, resulting in a Proforma\* Net Debt to Equity ratio of 1.2x and Proforma\* Net Debt/EBITDA of 4.4x.

\* Proforma includes 30 SPVs of Mytrah Portfolio comprising of 1,753 MW

## Income & Expense (Consolidated)

Parameters	FY 2022	FY 2023	% change
Revenue from Operations	8,167.15	10,331.81	27%
Other Income	568.69	535.24	-6%
Fuel Cost	3,493.95	5,569.70	59%
Purchase of Stock-in-trade	80.21	367.60	358%
Employee Benefits Expense	264.15	307.60	16%
Finance Costs	776.91	844.30	9%
Depreciation and Amortisation Expense	1,131.05	1,169.23	3%
Other Expenses	759.84	805.07	6%

## EBITDA and Profit after Tax (PAT)

(₹ crore)

Parameters	FY 2022	FY 2023	% change
EBITDA	4,137.69	3,817.08	-8%
Profit for the year	1,728.62	1,477.76	-15%
Other Comprehensive Income	1,576.99	31.78	-98%
Total Comprehensive Income	3,305.61	1,509.54	-54%

## Risk Management and Mitigation

JSW Energy Limited follows the globally recognised 'COSO' framework of Enterprise Risk Management. ERM brings together the understanding of the potential upside and downside of all those factors which can affect the organisation with an objective to add maximum sustainable value to all the activities of the organisation & to various stakeholders.

**The Company recognizes that the emerging and identified risks need to be managed and mitigated to:**

- Protect its shareholders and other stakeholder's interest,
- Achieve its business objective, and
- Enable sustainable growth.

**Pursuant to the requirement of Regulation 21 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and Companies Act, 2013, the Company has Risk management framework in place. It has constituted a sub-committee of Directors to oversee Enterprise Risk Management framework to ensure:**

- Execution of decided strategies with focus on action and





- Monitoring risks arising out of unintended consequences of decisions or actions related to performance, operations, compliance, incidents, processes, systems and the same are managed appropriately

**The Risk management process and structure is given below:**

- Department Heads at Plants: Identification, assessment, response and tracking of risks is done by the Risk Owners (Department Heads) at respective locations
- Plant Heads: Risk identified by the Risk Owners at the plant level is reviewed by the respective Plant Head. Plant level integration across the Plants is done to ensure consistency in risk identification and benchmarking
- Senior Management at Corporate: Risks at all the plants, contingency planning and Organisational risks requiring review of macro environment, policies, processes are discussed at the corporate level

- Board of Directors: Oversee the Risk strategy and Risk Management framework, reviews the key risks and mitigation plans
- All these activities are coordinated by the Chief Risk Officer




### **Business Continuity Plan**

The Company has a Business Continuity Policy duly approved by the Board. All the major generation plants have formulated Business Continuity Plans (BCP). The main objective of BCP is to maintain business continuity during / post disruptive incidents with an aim to minimise impact on:

- Human life and other living beings
- Environment and related eco systems
- Economic losses
- All stakeholders (such as investors, employees, local communities)

The Company has been conducting awareness and training sessions and mock drills across the Plants on BCP.

Type of Risk / Opportunity	Risk Movement	Impact	Risk Response Strategies
Demand fluctuations - Offtake risk		Demand-supply dynamics impacting power demand & tariff rates	<ul style="list-style-type: none"> <li>✓ The Company has already tied up 85% of its capacity through PPAs and long-term contracts</li> <li>✓ Power demand is growing at approximately 5-6%, creating a good opportunity in merchant power sector</li> <li>✓ The untied power is being sold on exchanges/short term contracts</li> <li>✓ Untied power of Vijayanagar would be tied up after proposed expansion of JSW Steel plant at Vijayanagar</li> </ul>
Raw material availability & cost		During the year, there was high volatility in coal prices due to Russia-Ukraine conflict and other geopolitical reasons. This has also resulted in higher coal demand from gas-based power plants in Europe due to scarcity of gas supply from Russia. Prices peaked to USD 327 per tonne in June 2022.	<ul style="list-style-type: none"> <li>✓ The imported coal prices have softened to USD 213 per tonne in December 2022</li> </ul> <p>The Company continues to manage this risk through -</p> <ul style="list-style-type: none"> <li>✓ Broadening sourcing options - different geographies, multiple vendors</li> <li>✓ Buying cheaper Indonesian coal</li> <li>✓ Prudent hedging strategies to mitigate the foreign exchange fluctuations risk</li> <li>✓ Various contract options like long-term contracts and monthly / quarterly / spot contracts for cost effectiveness</li> </ul>
Regulatory changes		Ministry of Environment and Forests (MoEF) notified regulations for 100% utilisation of ash and legacy ash in an eco-friendly and time-bound manner. Any non-compliance would attract financial penalty.	<ul style="list-style-type: none"> <li>✓ The Company's plants have been disposing most of their fly ash to cement manufacturers and brick manufacturers</li> <li>✓ The legacy ash is being used/would be used in highway expansion projects, land filling during Group companies' expansions; which are permissible eco-friendly ways defined in the MOEF notification</li> <li>✓ The legacy ash would fully be put to use much before the defined timeframe</li> </ul>
Recovery of dues from DISCOMs		Due to poor financial health, payments from the Discoms against our power supply are delayed. This impacts the working capital cash flow.	<ul style="list-style-type: none"> <li>✓ Regular follow-up for the overdue payments</li> <li>✓ The Company has availed bill discounting facility from bank for Discom bills. The interest cost would be borne by Discoms</li> </ul>
Increasing interest rates		The RBI has increased repo rate 6 times during FY 2023. Globally, central banks have increased interest rates to control inflation. Central banks are likely to continue this trend in near future to control inflation.	<ul style="list-style-type: none"> <li>✓ Evaluation of growth projects are done on conservative basis over life of PPA. Hence, underline cash flows and return metrics over a long term have adequate protection from short term volatility</li> <li>✓ The Company has followed a balanced approach in structuring its finances by having mix of fixed and floating rate of interest and mix of INR and foreign currency loans</li> <li>✓ The Company has been renegotiating credit spreads and refinancing to arrest the impact of rate increase</li> </ul>

Type of Risk / Opportunity	Risk Movement	Impact	Risk Response Strategies
Cyber security		Cyber security risk could result in substantial reputation and financial loss arising from: Theft of corporate information Theft of financial information (e.g. Financial results, bank details etc.) Ransom ware – Cyber extortion Disruption to business	<ul style="list-style-type: none"> <li>✓ Implementation of multi factor authentication for remote VPN access</li> <li>✓ Alternate disaster Recovery secure VPN created for resiliency</li> <li>✓ Strengthening Incident Response process</li> <li>✓ On boarding of an Incident Response Retainer services</li> <li>✓ Google Advanced phishing and malware protection features</li> <li>✓ Periodic critical security updates of Operating System (OS) for all the remote endpoints</li> <li>✓ Information security Awareness campaigns</li> <li>✓ Controlling System vulnerability through Vulnerability Assessment and Penetration testing for all public facing assets</li> <li>✓ Implementation of Firewall hardening Rule Sets</li> </ul>
Forex risk		Recent geopolitical events have led to volatility in USD-INR rate.	<ul style="list-style-type: none"> <li>✓ The Company's robust hedging policy is reviewed by the Board and hedging is done accordingly</li> <li>✓ The Company has already hedged outstanding liability on CAPEX</li> <li>✓ The Company has also hedged liability of green bonds as per scheduled payment dates</li> </ul>
Environment and climate Change		We face significant regulatory and reputational risks related to environment protection and climate change. To mitigate these risks, the Company must adapt, invest in renewables, reduce carbon footprints, and embrace sustainable practices.	<ul style="list-style-type: none"> <li>✓ Increasing Renewable Energy portfolio</li> <li>✓ Use of better quality raw materials</li> <li>✓ Increased use of wastewater &amp; maintaining ZLD status</li> </ul>

## HR Management

JSW Energy considers human capital critical for strategic business growth. In order to achieve the Organisational Objectives of growth, agility and increased productivity, HR policies play a crucial role. While the Company continued to undertake the various employee engagement activities it conducted in FY 2022, during the year under review, several new HR initiatives were conducted to enhance business efficiency and keep employee morale high. CARE (Communication, Agility, Responsibility and Elevation) continued to be at the centre stage of HR policies enabling the Company to provide a holistic growth environment and a superior employee experience. CARE has been an important aspect of JSW Energy being an engaging workplace.

## The CARE Model of JSW Energy

CARE is a unique model implemented at JSW Energy which works on the principle that "a well-Communicated employee who is Agile, becomes Responsible and is Elevated". The implementation of this model has resulted in grander employee engagement.

- **Communication:** A multi-level communication structure with multiple channels enables employee engagement at various levels. In addition to employee engagement, the structure also enables grievance redressal mechanisms. Knowledge management enables to plough back organisational learning in solving business problems. Quarterly townhall named as Samwaad, Business Review Meetings, Candid Conversations, Skip Level Meetings, Peer Group Meetings, Family Get-together etc. enable dissemination of information and transparency in communication.

- Agile:** To create analytical problem-solving facilitators and experts, the Company has adopted a 3-tier analytics training programme. Enhanced capability building practices thus results in better employee engagement. Agility enables the Company to stay competitive in the fast paced business environment.
- Responsible:** With a view to create engagement within the organisation, multiple problem-solving practices have been designed. Problem-solving experts enable the Company strive to cascade the policies to the last level of employees. Other activities like the Kaizen culture, the QC activities were also introduced in the shop-floor.
- Elevated:** All improvements in the organisation are evaluated and duly rewarded. Multi-level R&R system for Kaizens, employee of the month, IGNITE, Safety hero, Special Contribution Awards, and LAMHE Long Service Awards were instituted to engage contributing employees.

### Employee Safety

At JSW Energy, all stakeholders have to mandatorily comply with "10 JSW Critical Safety Rules". This helps to cover critical safety practices and control injuries and illnesses. Employees are encouraged to anticipate, address and mitigate any hazards at the workplace if deemed to be unsafe.

#### The details of the safety measures undertaken during the year include:

- Building a safe work environment
- Occupational health and safety training
- Digitisation in safety management

### TQM

Total Quality Management, "TQM", is an integral part of JSW Energy's sustainable journey enabling accomplishment of stated objectives. TQM is a part of the business culture DNA and it promotes the "Better Every day" culture. The Company was able to successfully clear the management diagnosis conducted by Japanese Union of Scientists and Engineers (JUSE) during the Deming challenge journey, which helped to strengthen the TQM practices at all locations and businesses. With a zest to achieve their best, various teams adopted rigorous training of analytical quality measures, such as "J2 refresher". The "Q-star program", is another similar initiative which has enabled the Company to create several competence level experts.

TQM strengthens the capabilities of front line employees, thereby encouraging them to participate in several regional, national and international quality competitions. In FY 2023, JSW Energy QC teams participated and won 35 awards in CCQC (regional), 35 awards in NCQC (national) and 9 awards in ICQCC (International) competition and doubled the total medal tally to 79 quality awards. The Company has been able to adopt a culture of continuous improvement with the help of TQM, furthering sustainable growth for the Company. Across all plants, "Daily-Sunrise Meeting", a layered communication structure for daily work management, has helped in increasing employee engagement and involvement in the business improvement process.





#### TQM includes several new practices like:

- organising business plans
- conduction of performance assessments
- reviewing in the TQM way
- benchmarking peer industries
- visiting quality benchmark industries
- inter-plant quality cross learning, and
- implementing quality management tools for the business

#### CSR

Our agenda of inclusive social and economic growth is carried out through JSW Foundation, the social development arm of the JSW Group. We strive to provide equal opportunities to communities at large and engage with local communities to carry out social development activities. We aim to create a value-based empowered society through continuous and purposeful engagement with the local communities. The different social issues addressed through the Foundation include hunger and poverty eradication, tackling malnutrition, promoting social development, women empowerment, addressing social inequalities by empowering the vulnerable sections of the society, various environmental issues, preservation of national heritage and promotion of sports training.

#### CSR Framework

JSW Foundation supports, plans and executes our CSR interventions. The Board appoints a CSR Committee which approves and administers all the initiatives and conducts periodic reviews, as per the CSR policy. Reviews are conducted at different levels throughout the organisation, depending on the importance of synergy and interdependence. Various intervention strategies are adopted to promote sustainable growth of both community and individuals. The strategies adopted in this regard are as follows:

- Direct Influence Zone (DIZ): These are the villages in the immediate vicinity of the plant locations and given utmost priority. Each plant has the autonomy to define their own DIZ as per the policy. Plants also have the provision to expand the scope as per the scale of operations. In addition, certain programs are allowed to be expanded to Indirect Influence Zone (IIZ), areas beyond the geographical purview of DIZ.
- Programs are designed based on specific measurable impacts assessed through different quantitative and qualitative methods. Either the Foundation directly or in partnership with the government and civil society groups at various levels, implements these programs.
- In each sector, interventions are designed to cover social mobilisation, advocacy at various levels, and/or appropriate policy changes.

**For details of the CSR initiatives undertaken by the Company during FY 2022, please also refer to:**

- Annexure B to the Board's Report for the Annual Report on the CSR activities, starting on Page 248
- Our Sustainability Report's Chapter on Social Development starting on Page 76
- Our Business Responsibility Report starting on Page 162.

**Internal Control**

The Company has designed a robust internal control system in accordance with the size and nature of its business and complexity of its operations. A few significant features include:

- Annual budget preparation along with regular monitoring
- Integrated ERP system deployment to manage smooth transaction processing and to ensure integrity of accounting system
- Well documented authorisation matrix, policies, procedures and guidelines covering all important operations of the Company
- Deployment of compliance tool to ensure compliance with laws, regulations and standards
- Testing of internal financial controls over reporting by internal auditors and statutory auditors to ensuring reliability of financial information
- Protection of the Company's assets / resources against any loss through adequate insurance
- A comprehensive Information Security Policy and continuous updating of IT systems
- Review by the Board appointed Audit Committee comprising of Independent Directors who are experts in their field

The Audit Committee periodically reviews all audit plans to ensure adequacy of internal controls. It reviews significant audit findings and ensures audit recommendations are effectively implemented.

**Internal Audit**

JSW Energy has an integral Internal Audit function that inculcates best global standards and practices of international majors into its operations. The Company has a strong Internal Audit Department that reports to the Audit Committee comprising Independent Directors

who are experts in their respective fields. The Company successfully integrated the COSO framework with its audit process to enhance the quality of its financial reporting compatible with business ethics, effective controls and governance. The Company extensively practices delegation of authority across its team, which creates effective checks and balances within the system to identify and correct all possible gaps. The Internal Audit team has access to all information in the organisation facilitated by the ERP implementation across the organisation.

The Internal Audit Department prepares risk-based audit plans whereby the frequency of audit is decided based on the risk ratings of the respective areas/ functions. The audit plan is approved by the Audit Committee and executed by the Internal Audit team. It is reviewed periodically to include areas that have assumed significance in line with emerging industry trends and growth of the Company. In addition, the Audit Committee also places reliance on internal customer feedback and other external events for the inclusion of additional areas into the audit plan besides regularly reviewing significant Internal Audit findings.

**Internal Financial Control**

As per Section 134(5)(e) of the Companies Act 2013, the Directors have overall responsibility for ensuring that the Company has implemented a robust system and framework of Internal Financial Controls. The Company had already developed and implemented a framework for ensuring Internal Controls over Financial Reporting. This framework includes entity-level policies, processes controls, IT General Controls and Standard Operating Procedures (SOP).

The entity-level policies include anti-fraud policies (such as code of conduct, conflict of interest, confidentiality and whistleblower policy) and other policies (such as Organisation structure, Insider Trading policy, HR policy, IT security policy, Treasury policy and Business continuity and disaster recovery plan). The Company has also prepared a risk control matrix for each of its processes such as procure to pay, order to cash, hire to retire, treasury, fixed assets, inventory and manufacturing operations. These Internal Financial Controls are reviewed by the Internal and Statutory Auditors every year.

# BUSINESS RESPONSIBILITY AND SUSTAINABILITY REPORT

## SECTION A: GENERAL DISCLOSURES

### I. Details of the listed entity

1. **Corporate Identity Number (CIN) of the Listed Entity** - L74999MH1994PLC077041
2. **Name of the Listed Entity** - JSW Energy Limited
3. **Year of incorporation** - 1994
4. **Registered office address** - JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai – 400 051
5. **Corporate address** - JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai – 400 051
6. **E-mail** - jswel.investor@jsw.in
7. **Telephone** - +91 22 42861000
8. **Website** - www.jsw.in
9. **Financial year for which reporting is being done** - 2022-23
10. **Name of the Stock Exchange(s) where shares are listed** -
  1. BSE Limited
  2. National Stock Exchange of India Limited
11. **Paid-up Capital** - ₹1644,67,56,680
12. **Name and contact details (telephone, email address) of the person who may be contacted in case of any queries on the BRSR report** -
  - a) **Director responsible for BRSR:** Mr. Prashant Jain (DIN: 01281621)  
Joint Managing Director & CEO  
Email: jswel.investor@jsw.in  
Phone: 022-42861000
  - b) **BRSR Head:** Mr. Aditya Agarwal  
Head - Renewable  
Email: aditya.agarwal@jsw.in  
Phone: 022-42861000
  - c) **Supported By:** Mr. Prabodha Acharya (Group Chief Sustainability Officer)  
E-mail: prabodha.acharya@jsw.in  
Phone: 022-42861000
13. **Reporting boundary** - Are the disclosures under this report made on a standalone basis (i.e., only for the entity) or on a consolidated basis (i.e., for the entity and all the entities which form a part of its consolidated financial statements, taken together) – Disclosures are made on a consolidated basis.

## II. Products/services

### 14. Details of business activities (accounting for 90% of the turnover):

S. No.	Description of Main Activity	Description of Business Activity	% of Turnover of the entity
1.	Generation of Thermal & Hydro Power, Power Transmission and Power Trading	Production of Power / Electricity	100%

### 15. Products/Services sold by the entity (accounting for 90% of the entity's Turnover):

S. No.	Product/Service	NIC Code	% of total Turnover contributed
1.	Electricity/ Power	351	100%

## III. Operations

### 16. Number of locations where plants and/or operations/offices of the entity are situated:

Location	Number of plants	Number of offices	Total
National	52	15	67
International	0	1	1

### 17. Markets served by the entity:

#### a. Number of locations

Locations	Number
National (No. of States)	12
International (No. of Countries)	1

#### b. What is the contribution of exports as a percentage of the total turnover of the entity? - Not Applicable

#### c. A brief on types of customers - The Company supplies energy and related services to several business customers which are mainly the state discoms. As an energy company, it interacts and engages with B2B customers such as various distribution utilities and Commercial & Industrial customers. Engagement provides a better understanding of customer requirements and how continuous improvement in service can be delivered.

## IV. Employees

### 18. Details as at the end of Financial Year:

#### a. Employees and workers (including differently abled):

S. No.	Particulars	Total (A)	Male		Female	
			No. (B)	% (B / A)	No. (C)	% (C / A)
<b>EMPLOYEES</b>						
1.	Permanent (D)	2,310	2,206	95.5%	104	4.5%
2.	Other than Permanent (E)	NIL	NIL	NIL	NIL	NIL
3.	<b>Total employees (D + E)</b>	2,310	2,206	95.5%	104	4.5%
<b>WORKERS</b>						
4.	Permanent (F)	0	0	0	0	0
5.	Other than Permanent (G)	2,430	2,310	95%	120	5%
6.	<b>Total workers (F + G)</b>	2,430	2,310	95%	120	5%



**b. Differently abled Employees and workers: NIL**

S. No	Particulars	Total (A)	Male		Female	
			No. (B)	% (B / A)	No. (C)	% (C / A)
<b>DIFFERENTLY ABLED EMPLOYEES</b>						
1.	Permanent (D)	6	6	100%	0	0%
2.	Other than Permanent (E)	0	0	0%	0	0%
3.	<b>Total differently abled employees (D + E)</b>	<b>6</b>	<b>6</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<b>DIFFERENTLY ABLED WORKERS</b>						
4.	Permanent (F)	NIL	NIL	NIL	NIL	NIL
5.	Other than permanent (G)	NIL	NIL	NIL	NIL	NIL
6.	<b>Total differently abled workers (F + G)</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>

**19. Participation/Inclusion/Representation of women**

	Total (A)	No. and percentage of Females	
		No. (B)	% (B / A)
Board of Directors	9	1	11.1%
Key Management Personnel	3	1	33.3%

**20. Turnover rate for permanent employees and workers**

(Disclose trends for the past 3 years)

	FY 2022-23 (Turnover rate in current FY)			FY 2021-22 (Turnover rate in previous FY)			FY 2020-21 (Turnover rate in the year prior to the previous FY)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Permanent Employees</b>	4.79%	0.49%	5.28%	4.44%	0.32%	4.76%	2.03%	0.18%	2.21%

**V. Holding, Subsidiary and Associate Companies (including joint ventures)**
**21. (a) Names of holding / subsidiary / associate companies / joint ventures**

S. No.	Name of the holding / subsidiary / associate companies / joint ventures (A)	Indicate whether holding / subsidiary / Associate / Joint Venture	% of shares held by listed entity	Does the entity indicated at column A, participate in the Business Responsibility initiatives of the listed entity? (Yes/No)
1	JSW Energy (Barmer) Limited	Subsidiary	100%	Yes
2	JSW Power Trading Company Limited	Subsidiary	100%	Yes
3	JSW Energy (Raigarh) Limited	Subsidiary	100%	No
4	JSW Neo Energy Limited	Subsidiary	100%	No
5	Jaigad PowerTransco Limited	Subsidiary	74%	Yes
6	Ind-Barath Energy (Utkal) Limited	Subsidiary	95%	No
7	JSW Hydro Energy Limited	Subsidiary	100%	Yes
8	JSW Energy (Kutehr) Limited	Subsidiary	100%	Yes
9	JSW Renewable Energy (Vijayanagar) Limited	Subsidiary	74%	No
10	JSW Renewable Energy (Amba River) Limited	Subsidiary	100%	No
11	JSW Renewable Energy (Cement) Limited	Subsidiary	100%	No
12	JSW Renewable Energy (Coated) Limited	Subsidiary	100%	No
13	JSW Renewable Energy Technologies Limited	Subsidiary	100%	No
14	JSW Renewable Energy (Dolvi) Limited	Subsidiary	100%	No
15	JSW Renew Energy (Raj) Limited	Subsidiary	100%	No
16	JSW Renew Energy (Kar) Limited	Subsidiary	100%	No
17	JSW Renew Energy Limited	Subsidiary	100%	No

S. No.	Name of the holding / subsidiary / associate companies / joint ventures (A)	Indicate whether holding / subsidiary / Associate / Joint Venture	% of shares held by listed entity	Does the entity indicated at column A, participate in the Business Responsibility initiatives of the listed entity? (Yes/No)
18	JSW Renew Energy Two Limited	Subsidiary	100%	No
19	JSW Renew Energy Three Limited	Subsidiary	100%	No
20	JSW Renew Energy Four Limited	Subsidiary	100%	No
21	JSW Renew Energy Five Limited	Subsidiary	100%	No
22	JSW Renew Energy Six Limited	Subsidiary	100%	No
23	JSW Renew Energy Seven Limited	Subsidiary	100%	No
24	JSW Energy PSP One Limited	Subsidiary	100%	No
25	JSW Energy PSP Two Limited	Subsidiary	100%	No
26	JSW Energy PSP Three Limited	Subsidiary	100%	No
27	JSW Green Hydrogen Limited	Subsidiary	100%	No
28	Mytrah Vayu (Pennar) Private Limited	Subsidiary	100%	No
29	Bindu Vayu Urja Private Limited	Subsidiary	100%	No
30	Mytrah Vayu (Krishna) Private Limited	Subsidiary	100%	No
31	Mytrah Vayu (Manjira) Private Limited	Subsidiary	73%	No
32	Mytrah Vayu Urja Private Limited	Subsidiary	100%	No
33	Mytrah Vayu (Godavari) Private Limited	Subsidiary	100%	No
34	Mytrah Vayu (Som) Private Limited	Subsidiary	100%	No
35	Mytrah Vayu (Sabarmati) Private Limited	Subsidiary	100%	No
36	Mytrah Aadhya Power Private Limited	Subsidiary	100%	No
37	Mytrah Aakash Power Private Limited	Subsidiary	100%	No
38	Mytrah Abhinav Power Private Limited	Subsidiary	100%	No
39	Mytrah Adarsh Power Private Limited	Subsidiary	100%	No
40	Mytrah Agriya Power Private Limited	Subsidiary	100%	No
41	Mytrah Advaith Power Private Limited	Subsidiary	100%	No
42	Mytrah Akshaya Energy Private Limited	Subsidiary	100%	No
43	Nidhi Wind Farms Private Limited	Subsidiary	100%	No
44	Mytrah Ainesh Power Private Limited	Subsidiary	100%	No
45	Mytrah Vayu (Bhavani) Private Limited	Subsidiary	100%	No
46	Mytrah Vayu (Chitravati) Private Limited	Subsidiary	100%	No
47	Mytrah Vayu (Hemavati) Private Limited	Subsidiary	100%	No
48	Mytrah Vayu (Kaveri) Private Limited	Subsidiary	100%	No
49	Mytrah Vayu (Maansi) Private Limited	Subsidiary	100%	No
50	Mytrah Vayu (Palar) Private Limited	Subsidiary	100%	No
51	Mytrah Vayu (Parbati) Private Limited	Subsidiary	100%	No
52	Mytrah Vayu (Sharavati) Private Limited	Subsidiary	100%	No
53	Mytrah Vayu (Tapti) Private Limited	Subsidiary	100%	No
54	Mytrah Tejas Power Private Limited	Subsidiary	100%	No
55	Mytrah Vayu (Adyar) Private Limited	Subsidiary	100%	No
56	JSW Energy Natural Resources Mauritius Limited	Subsidiary	100%	No
57	JSW Energy Natural Resources South Africa Limited	Subsidiary	100%	No
58	Royal Bafokeng Capital (PTY) Limited	Subsidiary	100%	No
59	Mainsail Trading 55 Proprietary Limited	Subsidiary	100%	No
60	South African Coal Mining Holdings Limited	Subsidiary	69.44%	No
61	SACM (Breyten) Proprietary Limited	Subsidiary	69.44%	No
62	South African Coal Mining Equipment Company Proprietary Limited	Subsidiary	69.44%	No
63	Umlabu Colliery Proprietary Limited	Subsidiary	69.44%	No
64	Barmer Lignite Mining Company Limited	Joint Venture	49%	No
65	Toshiba JSW Power Systems Private Limited	Associate	5.30%	No

## VI. CSR Details

21. (i) **Whether CSR is applicable as per section 135 of Companies Act, 2013:** Yes
- (ii) **Turnover (in ₹):** 10,867.05 crore
- (iii) **Net worth (in ₹):** 18,628.81 crore

## VII. Transparency and Disclosures Compliances

### 22. Complaints/Grievances on of the principles (Principles 1 to 9) under the National Guidelines on Responsible Business Conduct:

Stakeholder group from whom complaint is received	Grievance Redressal Mechanism in Place (Yes/No)  (If Yes, then provide web-link for grievance redress policy)	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
		Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks
Communities	Yes	NIL	NIL		NIL	NIL	
Investors (other than shareholders)	Please Refer link <a href="https://www.jsw.in/sites/default/files/assets/industry/Sustainability/21.%20Grievance_Redressal_Mechanism.pdf">https://www.jsw.in/sites/default/files/assets/industry/Sustainability/21.%20Grievance_Redressal_Mechanism.pdf</a>	NIL	NIL		NIL	NIL	
Shareholders		NIL	NIL		5	0	
Employees and workers		NIL	NIL		NIL	NIL	
Customers		NIL	NIL		NIL	NIL	
Value Chain Partners		NIL	NIL		NIL	NIL	
Other (please specify)		NIL	NIL		NIL	NIL	

### 23. Overview of the entity's material responsible business conduct issues

Please indicate material responsible business conduct and sustainability issues pertaining to environmental and social matters that present a risk or an opportunity to your business, rationale for identifying the same, approach to adapt or mitigate the risk along-with its financial implications, as per the following format.

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	The rationale for identifying the risk/opportunity	In case of risk, an approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
1	Economic Performance	0	Refers to activities directly impacting the financial performance of the company, investment gains and losses, operating costs	Diligent tax policy to avoid tax risk and adopting sustainable ways to increase operational efficiency.	Positive Implications

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	The rationale for identifying the risk/ opportunity	In case of risk, an approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
2	Data Privacy and Cyber Security	R	Process of implementing measures and systems designed to securely protect and safeguard information and the systems utilising various forms of technology. This also implies that businesses should not use private data obtained beyond the intended use	Cyber insurance and adapting globally interconnected oversight framework including data mapping, global privacy impact assessment, privacy by design, third party contractual oversight, training and awareness programmes, governance, procedures and a mechanism for monitoring regulatory compliance for every geography.	Negative Implications
3	Business Model Resilience	0	Industry's capacity to manage risks and harness opportunities to drive long-term value with quick and beneficial response towards global transitions	NA	Positive Implications
4	ESG based Enterprise risk management	R	Process of identifying potential ESG events and developments that may affect the entity, and would require right actions to manage them within the risk appetite.	Enterprise Risk Management Framework with ESG focus and Obligations Register.	Negative Implications
5	Responsible Investment	0	Investment approach that recognises the generation of long-term sustainable returns and is dependent on stable, well-functioning and well-governed social, environmental and economic systems	NA	Positive Implications
6	Public Policy	R	Refers to the significant issues that would require the organisation's participation and support for public policy development and political causes. Excessive contributions to political campaigns, lobbying expenditures and contributions to trade associations and other tax-exempt groups may damage companies' reputations and create corruption risks.	Political risk insurance and seek support of public policy advocacy.	Negative Implications
7	Occupational Health & Safety	R	Creation of safe and healthy working environment for all the employees including contract workers	Zero tolerance policy for safety breaches and risk awareness programmes.	Negative Implications
8	Supply Chain Management	0	Management of a company's supply chain to mitigate the risks with the effective evaluation of supplier sustainability for the identification of ESG risks and strict adherence to Supplier Code of Conduct. It also extends to harnessing the opportunities of promoting the local suppliers	NA	Positive Implications
9	Customer Relationship Management	0	Timely identification of changing customer sentiments and addressing their needs effectively.	NA	Positive Implications

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	The rationale for identifying the risk/opportunity	In case of risk, an approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
10	Local Considerations	O	This aspect deals with the identification and mitigation of adverse impacts arising out of business operations on local communities, and creating opportunities for enhancing the positive community impacts via community development initiatives	NA	Positive Implications
11	Labour Management	R	Organization's programs to enhance diversity while providing equal opportunity to all employees, fair and equal pay, and good labour practices promoting the well-being of the employees	Diversity Equity Inclusion (DEI) handbook and DEI policy and focused governance structure to oversee practices and concerns pertaining to this aspect, Equal Opportunities Procedure	Negative Implications
12	Human Capital Development	O	Trainings and programmes for the employee skill enhancement via vocational, soft skill enhancement, and sabbaticals to improve the performance and develop an innovative and empowered workforce	NA	Positive Implications
13	Innovation and Digitisation	O	Creates value for both organisation and other stakeholders through digitisation which increases the efficiency, speed, and ease of operation while adopting to new business models	NA	Positive Implications
14	Human Rights	R	Human Rights are non-discriminatory rights inherent to all human beings, regardless of gender, nationality, place of residency, sex, ethnicity, religion, color or any other categorization. This aspect involves the training of employees on human rights, assessment of business operations on human rights, and screening the investment agreements and contracts for human right elements.	Third-party human rights assessment, Whistle-blower Committee and compliance training covering human rights	Negative Implications
15	SocioEconomic Compliance	O	Compliance with all local and national laws and regulations in social and economic area.	NA	Positive Implications
16	Water & Effluent Management	R	Management of issues related to water withdrawal, water consumption, while effluents refer to the water discharge and its management with reference to the impact creation.	Monitoring system to assess eco-efficiency. Optimize water usage by techniques like rain water harvesting etc.	Negative Implications
17	Biodiversity	R	Management and monitoring of business activities resulting in significant impacts in the protected areas or areas with high biodiversity value around the operating locations. It also entails the strategies used by an organisation for the prevention and remediation of activities leading to biodiversity loss	Biodiversity Risk Assessment and Mitigation Plans to be adopted for moving towards No Net Loss of Biodiversity	Negative Implications

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	The rationale for identifying the risk/opportunity	In case of risk, an approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
18	Emissions	R	Discharge of Greenhouse gases, Ozone depleting substances (ODS), NOx and SOx into the environment. Emissions Management refers to the organisation's strategy for reducing the emissions and increasing the operational eco-efficiency which can enhance the organisation's competitiveness through effective cost management and reduced environmental liabilities	Supply Chain Decarbonisation Programme, Carbon Capture and Storage (CCS) technologies	Negative Implications
19	Waste Management	R	Includes the aspects on waste generation, waste disposal and the associated impacts. It also extends to enhancing the circularity measures across business operations.	Recycling, Reuse and disposal as per applicable norms	Negative Implications
20	Climate Strategy	O	In view of changing climate scenario, Climate strategy is focussed on identification of the risks associated with climate change and their management. It also focussed on harnessing opportunities such as renewable energy to meet India's 2070 Net Zero commitments.	NA	Positive Implications
21	Environmental Compliance	O	Compliance with local and national regulations in environmental area.	NA	Positive Implications
22	Materials	O	Enhancing the resource efficiency and increasing the usage of materials with recycled and reclaimed content across business operations	NA	Positive Implications
23	Energy Management in operations	R	Includes the aspects on energy consumption, energy intensity, employing energy saving measures and employing renewable energy options for greening the business operations.	Improving Energy Efficiency measures in operations	Negative Implications
24	Life cycle Management of Assets	O	Long-term management of assets and power plants for enhancing the reliability, product quality and operational eco-efficiency of assets. Ascertaining second life/end of life options for the assets.	NA	Positive Implications
25	Enhancement of Renewable Power	O	Supply of Renewable clean power will help reduce CO2 emissions	NA	Positive Implications

## SECTION B: MANAGEMENT AND PROCESS DISCLOSURES

This section is aimed at helping businesses demonstrate the structures, policies and processes put in place towards adopting the National Guidelines on Responsible Business Conduct (NGRBC) Principles and Core Elements.

Disclosure Questions	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9
<b>Policy and management processes</b>									
1. a. <b>Whether your entity's policy/policies cover each principle and its core elements of the NGRBCs. (Yes/No) ^</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b. <b>Has the policy been approved by the Board? (Yes/No)</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c. <b>Web Link of the Policies, if available</b>	<a href="https://www.jsw.in/groups/sustainability-policies">https://www.jsw.in/groups/sustainability-policies</a>								
2. <b>Whether the entity has translated the policy into procedures. (Yes / No)</b>	Guidelines & procedures have been developed inline covering all the 9 principles related to the respective policy								
3. <b>Do the enlisted policies extend to your value chain partners? (Yes / No)</b>	Yes								
4. <b>Name of the national and international codes/ certifications/labels/ standards (e.g., Forest Stewardship Council, Fairtrade, Rainforest Alliance, Trustea) standards (e.g., SA 8000, OHSAS, ISO, BIS) adopted by your entity and mapped to each principle.</b>	The policies are based on NGRBC, in addition to conformance to the spirit of international standards like ISO 9001, ISO 14001, ISO45001, ISO 50001, ISO26000, SA8000, IFC Performance Standards, OECD Guidelines, UNGC guidelines and ILO Principles, ILO Convention on Human Rights, Report on Affirmative Action by CII, National Action Plan on Climate Change, National Environmental Policy, UN Sustainable Development Goals, Global Reporting Initiative, Carbon Disclosure Project (CDP) and Dow Jones Sustainability Index (DJSI).								
5. <b>Specific commitments, goals and targets set by the entity with defined timelines, if any.</b>	The Company has set a target of becoming a net-zero Company by 2050 by deploying innovative and advance carbon-free platforms in renewables, storage and green hydrogen. It also aims to march towards its mission of achieving 20 GW operational capacity by 2030 by primarily expanding its footprint in the Renewable Energy space, in a deliberate yet calibrated manner through both organic and inorganic means.								
6. <b>Performance of the entity against the specific commitments, goals and targets along-with reasons in case the same are not met.</b>	In order to become Net Zero by 2050, the organization has set Targets for Environment Sustainability through its 'TEN Commitments' which is available on the website. More specific and quantified targets for the Environment Sustainability are provided in the Annual Integrated Report of the Organisation under the Sustainability reporting. The FY20 baseline and FY23 performance can be seen in the table provided in the Integrated Report, Sustainability report section.								
<b>Governance, leadership and oversight</b>									
7. <b>Statement by director responsible for the business responsibility report, highlighting ESG related challenges, targets and achievements (listed entity has flexibility regarding the placement of this disclosure) - Attached as Annexure Please refer to annual report</b>	Refer to Message from Chairman and Managing Director on Page number 32.								
8. <b>Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies).</b>	The Sustainability Committee of the Board is responsible for implementation and oversight of the BR policies.								

Disclosure Questions	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9
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**9. Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies).** Yes. The Board Sustainability Committee is responsible for implementation of the Policies. The Committee comprises of three Directors, out of which two are Independent Directors and one Executive Director, along with four Permanent Invitees. The broad terms of reference of the Sustainability Committee are the adoption of National Guidelines on Responsible Business Conduct (NGRBC) relating to Social, Environmental and Economic Responsibilities of Business in business practices of the Company, review the progress of initiatives under the purview of business responsibility (sustainability) and to periodically assess the ESG performance of the Company

**Note 1**
**Principle-Wise Policies<sup>^</sup>**

P1	P2	P3	P4	P5	P6	P7	P8	P9
Policy on Business Conduct	Policy on Business Conduct	People Policy	Policy on Business Conduct	Human Rights policy	Climate change Policy	Policy on Business Conduct	Policy to Make our World a Better Place	Policy on Business Conduct
Code of conduct for Board & Senior Management	Climate change Policy	Health & Safety Policy	Grievance Redressal Mechanism	Indigenous People and Resettlement Policy	Energy Policy	Policy to Make our World a Better Place	Policy on Social Development	Quality Policy
Code of Practice and Fair Disclosure of unpublished sensitive information	Energy Policy	Policy on Labour Practice & Employment	Policy to Make our World a Better Place	Policy to Make our World a Better Place	Raw Material Conservation Policy		Indigenous People and Resettlement Policy	
Determination of materiality of an Event & Information & Authorized KMP	Raw Material Conservation Policy	Policy on Board Diversity			Water Resource Management Policy		Cultural Heritage Policy	
Dividend Distribution Policy	Water Resource Management Policy	Remuneration Policy			Waste Water management Policy		Corporate Social responsibility Policy	
Policy for determining material subsidiaries	Waste Water management Policy	Policy to Make our World a Better Place			Waste management Policy			
Archival Policy for preservation of documents	Waste management Policy				Air Emissions management Policy			
Policy on related party transactions	Air Emissions management Policy				Biodiversity Policy			
Remuneration Policy	Biodiversity Policy				Local Considerations Policy			
Whistle-blower Policy & Vigil mechanism	Local Considerations Policy				Policy to Make our World a Better Place			
Terms & Conditions for the appointment of Independent Director	Policy to Make our World a Better Place							
Policy to Make our World a Better Place								



**10. Details of Review of NGRBCs by the Company:**

Subject for Review	Indicate whether review was undertaken by Director / Committee of the Board/ Any other Committee									Frequency (Annually/ Half yearly/ Quarterly/ Any other – please specify)								
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9
<b>Performance against above policies and follow up action</b>	As a practice, BR policies of the Company are reviewed periodically or on a need basis by department heads, business heads and executive directors. During this assessment, the efficacy of the policies is reviewed and necessary changes to policies and procedures are implemented.																	
<b>Compliance with statutory requirements of relevance to the principles and rectification of any non-compliances</b>	The Company is in compliance with the extant regulations as applicable.																	

	P1	P2	P3	P4	P5	P6	P7	P8	P9
<b>11. Has the entity carried out independent assessment/ evaluation of the working of its policies by an external agency? (Yes/No). If yes, provide name of the agency.</b>	The processes and compliances, however, may be subject to scrutiny by internal auditors and regulatory compliances, as applicable. From a best practices perspective as well as from a risk perspective, policies are periodically evaluated and updated by various department heads, business heads and approved by the management or board. An internal assessment of the workings of the BR policies has been done.								

**12. If answer to question (1) above is "No" i.e., not all Principles are covered by a policy, reasons to be stated:**

Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
The entity does not consider the Principles material to its business (Yes/No)									
The entity is not at a stage where it is in a position to formulate and implement the policies on specified principles (Yes/No)									
The entity does not have the financial or/human and technical resources available for the task (Yes/No)									
It is planned to be done in the next financial year (Yes/No)									
Any other reason (please specify)									

**SECTION C: PRINCIPLE WISE PERFORMANCE DISCLOSURE**

This section is aimed at helping entities demonstrate their performance in integrating the Principles and Core Elements with key processes and decisions. The information sought is categorized as "Essential" and "Leadership". While the essential indicators are expected to be disclosed by every entity that is mandated to file this report, the leadership indicators may be voluntarily disclosed by entities which aspire to progress to a higher level in their quest to be socially, environmentally and ethically responsible.

## PRINCIPLE 1 Businesses should conduct and govern themselves with integrity, and in a manner that is Ethical, Transparent and Accountable

### Essential Indicators

#### 1. Percentage coverage by training and awareness programmes on any of the Principles during the financial year:

Segment	Total number of training and awareness programmes held	Topics / principles covered under the training and its impact	% of persons in respective category covered by the awareness programmes
Board of Directors	2	The topics covered include the Committee Meetings which have discussions topics on all principles of BRSR including climate change, biodiversity, water, Sustainability Key Performance Indicators, Global trends on sustainability and best Practices in industry, external ratings and disclosures, Stakeholder engagement and Materiality, climate change Risks and Opportunities etc.	100%
Key Managerial Personnel	1	<p><b>Topics 1. Value Workshop</b> Building a shared &amp; deeper understanding of our values and identifying opportunities to strengthen practice of each value</p> <p><b>Impact:</b> Created a shared understanding of values and its importance to business &amp; people -</p> <ul style="list-style-type: none"> <li>- What each value means &amp; what it does not</li> <li>- Behaviours that demonstrate practice and violation of each value</li> <li>- Relevance of each value to the business &amp; people and its 'negotiability'</li> </ul>	100%
Employees other than BoD and KMPs	979	<p><b>Technical Training:</b> Training Name: Cooling Towers, SKF Bearing Life Improvement Seminar, Training on MIV System, Hot work permit system, Machine Guarding, Boiler Water Chemistry, Boiler efficiency and Turbine Heat rate calculation. Impact: Employees improved their job knowledge and skills at all levels of the organization, improved the morale of the workforce and helps them to identify with organizational goals. They Increased their efficiency and productivity.</p> <p><b>Behavioural Training:</b> Training Name: Conflict Management, Managing Stress and Emotion, Leading self and others and Conflict Management, Critical Thinking and Problem Solving. Impact: Employees enabled to balance their work and life without stress and manage their time and emotions well. They were motivated and ready to take accountability of the given task and develop their leadership skills.</p> <p><b>Functional Training:</b> Training Name: Code of Conduct for Prevention of Insider Trading, Ace your Tax: Higher Tax-Saving Avenues, Microsoft Azure Cloud Services Basics, Session on EPF process. Impact: Employees improved their job knowledge and skills.</p> <p><b>Safety Training:</b> Training Name: Training on LOTO (Lock-Out Tag-Out) &amp; Gap Analysis Survey, Fire Prevention &amp; Fire Fighting, Awareness among People for Safety at work place &amp; Safety Pledge, Awareness of HSE Policy &amp; Sustainability, Work at Height, PTW (Permit to Work), Training on CPR (Cardio-Pulmonary Resuscitation) <b>Impact:</b> Employees gained a solid knowledge of safety topics associated with their jobs and also enhanced skills and knowledge regarding safety both inside and outside the plant.</p>	78%
Workers	2,430	<p><b>Safety Trainings Topics Covered</b></p> <ul style="list-style-type: none"> <li>Stop the Pandemic</li> <li>Work Environment</li> <li>Electrical Safety</li> <li>Conveyor Safety</li> <li>Confined Space Entry</li> <li>PPE</li> <li>Fire Fighting training</li> <li>Road Safety</li> <li>Lifting tools &amp; tackles</li> </ul> <p><b>Impact:</b> Fire and Safety Workplace safety training provided workers with the skills and knowledge they need to do their jobs safely. It informed them of the risks and hazards associated with different work activities. It also taught them how to detect, report, and tackle workplace safety incidents properly resulting in less accidents and fatalities at units.</p>	100%

2. **Details of fines / penalties /punishment/ award/ compounding fees/ settlement amount paid in proceedings (by the entity or by directors / KMPs) with regulators/ law enforcement agencies/ judicial institutions, in the financial year, in the following format (Note: the entity shall make disclosures on the basis of materiality as specified in Regulation 30 of SEBI (Listing Obligations and Disclosure Obligations) Regulations, 2015 and as disclosed on the entity's website):**

Nil

3. **Of the instances disclosed in Question 2 above, details of the Appeal/ Revision preferred in cases where monetary or non-monetary action has been appealed.**

Case Details	Name of the regulatory/ enforcement agencies/ judicial institutions
NOT APPLICABLE	

4. **Does the entity have an anti-corruption or anti-bribery policy? If yes, provide details in brief and if available, provide a web-link to the policy.**

JSW Energy has developed and implemented a robust Policy on Business Conduct available on <https://www.jsw.in/investors/energy/jsw-energy-sustainability-policies>. The policy aims to ensure that all employees conduct themselves in accordance with the highest standards of honesty, integrity and fairness, exercising utmost good faith, judgement and due care in the performance of their duties. It also aims to ensure that the Company has in place the most effective systems to support its employees in delivering the highest standards of business ethics. The Company also has people policies that address anti-corruption & the Company takes every possible measure to monitor & prevent such behaviour. The policy is also extended to all value chain partners in order to promote ethical conduct of business. The Company has defined and openly shared a Code of Practice setting the minimum expectations from suppliers and business partners in relation to ethical conduct of their businesses. The Policy discourages the offering of, promising of, or giving of a bribe or other undue advantage to obtain or retain business or other benefits, either directly or indirectly.

5. **Number of Directors/KMPs/employees/workers against whom disciplinary action was taken by any law enforcement agency for the charges of bribery/ corruption:**

	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Directors	Nil	Nil
KMPs		
Employees		
Workers		

6. **Details of complaints with regard to conflict of interest:**

	FY 2022-23 (Current Financial Year)		FY 2021-22 (Previous Financial Year)	
	Number	Remark	Number	Remark
Number of complaints received in relation to issues of Conflict of Interest of the Directors	Nil	NA	Nil	NA
Number of complaints received in relation to issues of Conflict of Interest of the KMPs	Nil	NA	Nil	NA

7. **Provide details of any corrective action taken or underway on issues related to fines / penalties / action taken by regulators/ law enforcement agencies/ judicial institutions, on cases of corruption and conflicts of interest**

Not Applicable

## Leadership Indicators

### 1. Awareness programmes conducted for value chain partners on any of the Principles during the financial year:

Total number of awareness programmes held	Topics / principles covered under the training	% of value chain partners covered (by value of business done with such partners) under the awareness programmes
4	<p><b>Topic 1: Environment Awareness &amp; Plantation</b>  <b>Impact:</b> To ensure our customer is aware &amp; sensitive to the environment sustainability - opportunities &amp; Risks arising because of the climate change scenarios and is able to understand and support the climate change initiatives.</p> <p><b>Topic 2: Worker Safety</b>  <b>Impact:</b> To ensure that the value chain partners are aware of the Risks &amp; Hazards that arise due to the various business activities and they are able to identify and employ adequate safety measures for their workers</p> <p><b>Topic 3: Ethics and governance</b>  <b>Impact:</b> To understand the national and governance norms, ethical business practices, corporate.</p> <p><b>Topic 4: Critical People policies</b>  <b>Impact:</b> Builds a team that is effective, efficient and well motivating, thereby enhancing the confidence and self-esteem of employees</p>	All major suppliers & contractors at all 4 major plants - about 60-70% covered

### 2. Does the entity have processes in place to avoid/ manage conflict of interests involving members of the Board? (Yes/No) If yes, provide details of the same.

Yes. The Company undertakes assessment at sites in order to identify any and all potential areas for conflict of interest. It engages with internal and external stakeholders to ensure the comprehensiveness of this assessment process. Based on the outcomes of this assessment process, the Company:

- Enhances its business practices to eliminate any perceived threat of a conflict of interest occurring;
- Reviews and re-confirms the effectiveness of both its external grievance system and associated internal systems through which any potential and actual conflicts of interest can be highlighted, investigated and addressed;
- Provides appropriate training to the Board and employees with regard to how to recognise and avoid conflicts of interest.

**PRINCIPLE 2 Businesses should provide goods and services in a manner that is sustainable and safe**

**Essential Indicators**

1. **Percentage of R&D and capital expenditure (capex) investments in specific technologies to improve the environmental and social impacts of product and processes to total R&D and capex investments made by the entity, respectively.**

	<b>FY 2022-23</b> <b>Current Financial Year</b>	<b>FY 2021-22</b> <b>Previous Financial Year</b>	<b>Details of improvements in environmental and social impacts</b>
R&D	0%	0%	
Capex	26.55%	92%	Lower GHG, Lower PM, Health and Safety Creating more livelihood Opportunities

Majority of the Capex in FY23 has been used for the procurement and construction of the Renewable projects (wind, solar, hydro). The renewable projects shall result in clean power without any GHG and PM pollution. It also creates a lot of livelihood for locals.

2. **a. Does the entity have procedures in place for sustainable sourcing? (Yes/No)**

Yes.

- b. If yes, what percentage of inputs were sourced sustainably?**

JSW Energy Barmer - 30.71%

JSW Energy Ratnagiri - 45%

JSW Energy Vijayanagar - 24.58%

JSW Hydro Energy - 35%

3. **Describe the processes in place to safely reclaim your products for reusing, recycling and disposing at the end of life, for (a) Plastics (including packaging) (b) E-waste (c) Hazardous waste and (d) other waste.**

Not Applicable – Being an electricity generation company, there is limited scope for reclaiming of its products for further processing. Nonetheless, the company is constantly seeking out opportunities to recycle waste. Fresh water is used for generation of De-mineralized water, which is fed to boiler for generation of steam. The process of generating DM water causes wastewater generation. This is treated in neutralizing pits and the treated effluent is used for condenser makeup. The fresh water used for canteen and toilet purposes is treated through Sewage treatment plant and the treated effluent is used for development of green belt in and around the plant. Regular monitoring of the effluent parameter is being carried out by in-house laboratory. This ensures the efficacy of wastewater management and ensures that the systems are running properly.

The used oil waste, e-waste, plastic waste is recycled through authorized vendors at all locations.

All the Ash waste generated due to burning of coal is utilized inhouse or by cement manufacturers & other construction contractors for making of cement, bricks etc.

The hazardous waste sent to authorized recyclers in FY 2022-23 is 140.645 MT.

4. **Whether Extended Producer Responsibility (EPR) is applicable to the entity's activities (Yes / No). If yes, whether the waste collection plan is in line with the Extended Producer Responsibility (EPR) plan submitted to Pollution Control Boards? If not, provide steps taken to address the same.**

Not Applicable

## Leadership Indicators

1. Has the entity conducted Life Cycle Perspective / Assessments (LCA) for any of its products (for manufacturing industry) or for its services (for service industry)? If yes, provide details in the following format?

NIC Code	Name of Product/ Service	% of total Turnover contributed	Boundary for which the Life Cycle Perspective / Assessment was conducted	Whether conducted by independent external agency (Yes/No)	Results communicated in public domain (Yes/No) If yes, provide the web-link.
351	Electricity Generation*	-	-	-	-

\*No LCA was carried out in the FY22-23

2. If there are any significant social or environmental concerns and/or risks arising from production or disposal of your products / services, as identified in the Life Cycle Perspective / Assessments (LCA) or through any other means, briefly describe the same along-with action taken to mitigate the same.

Name of Product/Services	Description of the risk/concern	Action Taken
Not Applicable		

3. Percentage of recycled or reused input material to total material (by value) used in production (for manufacturing industry) or providing services (for service industry).

Indicate input material	Recycled or reused input material to total material	
	FY 2022-23 Current Financial Year	FY 2021-22 Previous Financial Year
Water	23.46%	22.37%
Fly Ash	100%	97%
Waste Gases	7.00%	6.9%

The raw material consumed that was re-cycled or re-used was waste gases being used as fuel at Vijayanagar plant, re-cycling of water for usage in cooling cycle, horticulture and supply re-cycled water for irrigation to nearby communities as & when possible. Fly ash generated is sold to fly ash brick manufacturing units. The Company is in constant endeavor for recycling, reusing of material leading to conservation of resources.

4. Of the products and packaging reclaimed at end of life of products, amount (in metric tonnes) reused, recycled, and safely disposed, as per the following format:

	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	Reused	Recycled	Safely Disposed	Reused	Recycled	Safely Disposed
Plastic (Including Packaging) MT	0	0	2.43	0	83.12	0
E-Waste MT	0	6.02	0	0	0.38	0
Hazardous waste MT	0	30.085 (waste oil) + 104.54 (battery waste)	0	0	50.65	0
Other Waste MT	1378753.48 (FlyAsh & Bottom Ash + Primary Sludge)	1.875 (Food Waste)	0.62 (Biomedical waste)+1508.31 (MS Scrap)	113620 (FlyAsh & Bottom Ash)	192.30 (battery waste+other)	0

5. Reclaimed products and their packaging materials (as percentage of products sold) for each product category.

Indicate product category	Reclaimed products and their packaging materials as % of total products sold in respective category
Not Applicable - Product is Electricity	

**PRINCIPLE 3 Businesses should respect and promote the well-being of all employees, including those in their value chains**

**Essential Indicators**

**1. a. Details of measures for the well-being of employees:**

Category	% of employees covered by										
	Total (A)	Health insurance		Accident insurance		Maternity benefits		Paternity benefits		Day care facilities	
	No (B)	% (B/A)	No. (C)	% (C/A)	No. (D)	% (D/A)	No. (E)	% (E/A)	No. (F)	% (F/A)	
<b>PERMANENT EMPLOYEES</b>											
Male	2,206	2,206	100%	2,206	100%	-	NA	2,206	100%	2,206	100%
Female	104	104	100%	104	100%	104	100%	-	NA	104	100%
<b>Total</b>	<b>2,310</b>	<b>2,310</b>	<b>100%</b>	<b>2,310</b>	<b>100%</b>	<b>104</b>	<b>100%</b>	<b>2,206</b>	<b>100%</b>	<b>2,310</b>	<b>100%</b>

**b. Details of measures for the well-being of workers:**

Category	% of employees covered by										
	Total (A)	Health insurance		Accident insurance		Maternity benefits		Paternity benefits		Day care facilities	
	No (B)	% (B/A)	No. (C)	% (C/A)	No. (D)	% (D/A)	No. (E)	% (E/A)	No. (F)	% (F/A)	
<b>OTHER THAN PERMANENT WORKER</b>											
Male	2,220	2,220	100%	2,220	100%	-	-	2,220	100%	2,220	100%
Female	120	120	100%	120	100%	120	100%	-	-	120	100%
<b>Total</b>	<b>2,340</b>	<b>2,340</b>	<b>100%</b>	<b>2,340</b>	<b>100%</b>	<b>120</b>	<b>100%</b>	<b>2,220</b>	<b>100%</b>	<b>120</b>	<b>100%</b>

**2. Details of retirement benefits, for Current Financial Year and Previous Financial Year.**

Benefits	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	No. of employees covered as a % of total employees	No. of workers covered as a % of total workers	Deducted and deposited with the authority (Y/N/N.A.)	No. of employees covered as a % of total employees	No. of workers covered as a % of total workers	Deducted and deposited with the authority (Y/N/N.A.)
PF	2,310	100%	Y	1,603	100%	Y
Gratuity	2,310	100%	Y	1,603	100%	Y
ESI	NA	NA	NA	NA	NA	NA
Others	- One time relocation allowance at the time of retirement					
- please Specify	- Post retirement Medical Insurance coverage for employee & spouse up to the age of 75 years at a concessional rate					

**3. Accessibility of workplaces:**

Are the premises / offices of the entity accessible to differently abled employees and workers, as per the requirements of the Rights of Persons with Disabilities Act, 2016? If not, whether any steps are being taken by the entity in this regard.

Yes – All premises/ offices are accessible to differently abled employees and workers.

**4. Does the entity have an equal opportunity policy as per the Rights of Persons with Disabilities Act, 2016? If so, provide a web-link to the policy.**

Yes. JSW Energy respects human rights and nurtures an inclusive culture that does not discriminate on the basis of religion, gender, caste or disabilities and has a policy for equal opportunity for all. The Company has a Human Rights Policy that aims to protect human rights and reinforce the culture of inclusivity and equality within our organisation. The policy can be viewed at:

[https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Sustainability\\_Policies/JSWEL\\_Policy\\_on\\_Human\\_Rights.pdf](https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Sustainability_Policies/JSWEL_Policy_on_Human_Rights.pdf)

The Company also has a Policy on Labour Practices and Employment Rights that affirms its stance on being an equal opportunity employer and treat all employees with respect and dignity and judged solely on their performance irrespective of their race, religion, caste, gender, age, disability and any other characteristic. The policy is available at:

[https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Sustainability\\_Policies/JSWEL\\_Policy\\_on\\_Labour\\_Practices\\_and\\_Employment\\_Rights.pdf](https://www.jsw.in/sites/default/files/assets/downloads/energy/Corporate%20Governance%20and%20Regulatory%20Information/Sustainability_Policies/JSWEL_Policy_on_Labour_Practices_and_Employment_Rights.pdf)

## 5. Return to work and Retention rates of permanent employees and workers that took parental leave.

Gender	Permanent Employees	
	Return to work rate	Retention Rate
Male	100%	100%
Female	100%	100%
<b>Total</b>	<b>100%</b>	<b>100%</b>

## 6. Is there a mechanism available to receive and redress grievances for the following categories of employees and worker? If yes, give details of the mechanism in brief.

	Yes/No (If Yes, then give details of the mechanism in brief)
Permanent Workers	Yes - All HR & Business Leads have set grievance handling mechanism
Other than Permanent Workers	NA
Permanent Employees	Yes -All HR & Business Leads have set grievance handling mechanism
Other than Permanent Employees	NA

## 7. Membership of employees and worker in association(s) or Unions recognised by the listed entity:

Category	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	Total employees/ workers in the respective category (A)	No of Employees / workers in the respective category who are part of association/union(B)	%B/A	Total employees/ workers in the respective category (A)	No of Employees / workers in the respective category who are part of association/union(B)	%B/A
<b>EMPLOYEES</b>						
Male	2,220	947	42.66%	1,533	530	34.57%
Female	120	36	30%	70	12	17.14%
<b>Total</b>	<b>2,340</b>	<b>983</b>	<b>42.01%</b>	<b>1,603</b>	<b>542</b>	<b>33.81%</b>
<b>WORKERS</b>						
Male	0	0	0%	443	443	100%
Female	0	0	0%	26	26	100%
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>492</b>	<b>492</b>	<b>100%</b>

## 8. Details of training given to employees and workers:

Category	FY 2022-23 Current Financial Year					FY 2021-22 Previous Financial Year				
	Total (A)	On health and safety measures		On skill up gradation		Total (A)	On health and safety measures		On skill up gradation	
		No. (B)	% (B/A)	No. (C)	% (C/A)		No. (B)	% (B/A)	No. (C)	% (C/A)
<b>EMPLOYEES</b>										
Male	2,206	2,206	100%	1,299	59%	1,533	1,533	100%	658	43%
Female	104	104	100%	74	71%	70	70	100%	46	66%
<b>Total</b>	<b>2,310</b>	<b>2,310</b>	<b>100%</b>	<b>1,373</b>	<b>59%</b>	<b>1,603</b>	<b>1,603</b>	<b>100%</b>	<b>704</b>	<b>44%</b>
<b>WORKERS</b>										
Male	2,220	2,220	100%	-	-	2,264	2,264	100%	1,155	51%
Female	120	120	100%	-	-	210	210	100%	21	10%
<b>Total</b>	<b>2,340</b>	<b>2,340</b>	<b>100%</b>	<b>-</b>	<b>-</b>	<b>2,474</b>	<b>2,474</b>	<b>100%</b>	<b>1,176</b>	<b>48%</b>



## 9. Details of performance and career development reviews of employees and worker:

Category	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	Total (A)	No. (B)	% (B/A)	Total (C)	No. (D)	% (D/C)
<b>EMPLOYEES</b>						
Male	2,206	2,206	100%	1,533	1,533	100%
Female	104	104	100%	70	70	100%
<b>Total</b>	<b>2,310</b>	<b>2,310</b>	<b>100%</b>	<b>1,603</b>	<b>1,603</b>	<b>100%</b>

All employees of the Company undergo an annual performance appraisal process as determined by the Company. The appraisal process is based on criteria such as grade of the employee, role / designation of the employee, her / his role in and contribution to the overall performance of the Company, the performance of profit centre / division to which she / he belongs, merits of the employee, past performance record, future potential of the employee and / or such other criteria as may be determined by the management.

## 10. Health and safety management system:

### a. Whether an occupational health and safety management system has been implemented by the entity? (Yes/ No). If yes, the coverage such system?

Yes, occupational health and safety management system coverage is as per ISO 45001:2018. The JSW Group endeavors to prevent all injuries and work-related illnesses. It recognises health and safety as an integral part of its operations by promoting "Zero Harm" in its operations. It aspires to set the highest standards required to comply and exceed applicable statutory health and safety requirements. It provides appropriate trainings to employees, associates, contractors and suppliers to help them work safely. The system helps in assessing risks and provide controls on health and safety hazards in operations and activities. Regular assurance programs are conducted and timely actions are taken. The systems ensure that incidents are reported timely, investigated for root causes and deployment of lessons learnt across the Group companies.

### b. What are the processes used to identify work-related hazards and assess risks on a routine and non-routine basis by the entity?

A well-defined safety observation system, hazard Identification and risk assessment procedures are in place. Some of them are enlisted below:

- 1) Hazard Identification & Risk Assessment. (HIRA)
- 2) Barrier Health Management (BHM)
- 3) Quantitative Risk Assessment (QRA)
- 4) Job Safety Analysis (JSA)
- 5) HAZOP
- 6) Safety Inspections
- 7) Safety Audits
- 8) Safety Observation System

Safety is reviewed by the Board as an important part of the Operations review every quarter. The safety performance with all locations is reviewed on a monthly basis by the steering committee.

**c. Whether you have processes for workers to report the work-related hazards and to remove themselves from such risks. (Y/N)**

Yes. As part of the group initiative, all JSW employees, business associates & contractors are required to comply with the newly launched "10 JSW CRITICAL SAFETY RULES". These rules cover the most critical safety practices to achieve a notable reduction in injuries & illness. This is a real opportunity for discussion, identifying points for improvement and communication about safety behaviors with the workforce.

JSW expects all levels of management and employees to not only anticipate hazards, but also to address them and stop employees if they deem a work environment or task to be unsafe. Safety Observation (SO) programme is a great way of engaging the workforce. It is mandatory for the leadership team to conduct shop floor walkthrough & identify unsafe acts & conditions.

Additionally, safety improvement of High-Risk operations is done through Risk Rating method and employing teams to brainstorm and find ways to improve safety of these systems using new technology, creating new safety barriers and using administrative controls. Every plant has completed & improved at least 10 High Risk systems.

**d. Do the employees/ worker of the entity have access to non-occupational medical and healthcare services? (Yes/ No)**

YES, Jindal Sanjivani hospital(JSH) is available at most of the locations where the worker has access to all available medical healthcare services. In locations where JSH is not there, the organization usually has tie-ups with local hospitals for healthcare.

Safety Incident/Number	Category	FY2022-23	FY2021-22
		Current Financial Year	Previous Financial Year
Lost Time Injury Frequency Rate (LTIFR) (per one million-person hours worked)	Employees	0	0
	Workers	0	0.1
Total recordable work-related injuries	Employees	0	0
	Workers	0	0
No. of fatalities (safety incident)	Employees	0	0
	Workers	0	1
High consequence work-related injury or ill-health (excluding fatalities)	Employees	0	0
	Workers	0	0

In FY23 the overall LTIFR has improved to 0.0 from 0.1 in the previous FY22. There was no recordable or high consequence injury or fatality in any of the operational plants of JSW Energy in the year FY23.

**12. Describe the measures taken by the entity to ensure a safe and healthy work place.**

The organisation emphasises on the importance of maintaining a safe and healthy workplace for all employees, workers and third-party stakeholders who work on its premises.

In the current financial year, all the four major power plants of JSW Energy identified high risk scenarios numbered 16 to 20 (16 to 18 for Barmer). These high risk scenarios were then mitigated through our BHM tool (Barrier Health Management) where new safety systems/processes and controls were added so as to bring down its Risk Rating to below 5 (minimal risk). A Total of 18 such high Risk scenarios were covered across all plants.

As a proactive measure to increase the safety competency of our staff, all employees above L8 grade, across all the four major power plants, completed their BSC (British safety Council) Safety Champion online training consisting of 10 high Risk safety modules. Thus a total of 500+ employees completed their safety champion training and certification.

The Company has developed high risk procedures in line with corporate safety standards. Line managers involvement in Safety Observation systems (SOS) using the software tool, Incident reporting & Investigation using software-based tools. Regular trainings are provided to employees & associates.

Some of the other measures taken at plants are as below:

- OHS Policy OHS Induction & OHS Trainings
- Motivational Programs
- Standard Operating Procedure
- OHS Committees
- Mass Safety Tool Box Talks
- Permit to Work
- LOTO
- Confined Space Entry
- QRA
- Manual Material Handling Assessment
- Industrial Hygiene Survey
- OHS Inspections
- Barrier Health Management
- Safety Kaizen
- Hazardous Area Classification
- Gas Monitoring
- Near Miss Reporting System
- Incident Investigation System
- Contract Safety Management
- Road Safety
- Visual Display Management
- Electrical Safety
- Tools, tackles & equipment's inspection
- Portable tools inspection

**13. Number of Complaints on the following made by employees and workers:**

	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	Filed during the year	Pending resolution at the end of year	Remarks	Filed during the year	Pending resolution at the end of year	Remarks
Working Conditions	Nil	Nil	Nil	Nil	Nil	Nil
Health & Safety	Nil	Nil	Nil	Nil	Nil	Nil

**14. Assessments for the year:**

% Of your plants and offices that were assessed (by entity or statutory authorities or third parties)	
Health and safety practices	100% of plants and offices were assessed by entity through third parties.
Working Conditions	

**15. Provide details of any corrective action taken or underway to address safety-related incidents (if any) and on significant risks / concerns arising from assessments of health & safety practices and working conditions.**

All operational plants were assessed by third party for Occupational Health & safety practices by reputed & authorised third party agencies.

No significant concerns were raised during the audit and nor was there any lapse on the statutory compliance part. However, minor gaps and few opportunities for improvement beyond the compliance were pointed out by the auditors. Majority of the OFI's (Opportunity for Improvement) have been implemented at site locations while few OFI's are under progress (plan for implementation is finalized and work is in progress) at our plant locations. Some of the OFI's, duly implemented, are provided below –

1. Records of periodic maintenance of Flame proof lighting in HFO/LDO area not maintained properly – Rectification done in the record upkeep.
2. Maintenance of electrical equipment in boiler area – Proper preventive maintenance schedule updated for all electrical equipment in boiler area.
3. Ergonomical assessment for employees not done – Ergonomical assessment for employees to be conducted in 1<sup>st</sup> quarter of FY23.
4. Fire Hydrant Testing procedure revised and updated.
5. Training provided on SCBA (Self Contain Breathing Apparatus) usage to concerned team. Included in annual training calendar.
6. Washing room signage displayed at location
7. Loose ladder in MCC room rectified
8. Safety Policy Displayed in both Hindi & English at the main Gate.
9. Painting of corroded steel structure completed
10. Sign Boards in LHS area provided in Hindi language also in addition to English.

**Leadership Indicators**

**1. Does the entity extend any life insurance or any compensatory package in the event of death of (A) Employees (Y/N) (B) Workers (Y/N)?**

- A) Yes  
B) Yes

**2. Provide the measures undertaken by the entity to ensure that statutory dues have been deducted and deposited by the value chain partners.**

The Company is compliant to statutory dues of employees towards income tax, provident fund, professional tax, ESIC etc. as applicable from time to time.

The other value chain partners (vendors) are equally responsible to comply as per the contract.

**3. Provide the number of employees / workers having suffered high consequence work- related injury / ill-health / fatalities (as reported in Q11 of Essential Indicators above), who have been rehabilitated and placed in suitable employment or whose family members have been placed in suitable employment:**

	Total no. of affected employees		No. of employees that are rehabilitated and placed in suitable employment or whose family members have been placed in suitable employment	
	FY 2022-23	FY 2021-22	FY 2022-23	FY 2021-22
	Current Financial Year	Previous Financial Year	Current Financial Year	Previous Financial Year
Employees	0	0	0	0
Workers	0	0	0	0

**4. Does the entity provide transition assistance programs to facilitate continued employability and the management of career endings resulting from retirement or termination of employment? (Yes/ No)**

Yes. The philosophy behind Company's people management is to empower its employees through a broad range of initiatives directed towards their holistic growth. It believes in continuous learning and keeping abreast of the latest technologies and processes. Continuous work is done on designing and offering new and exciting learning opportunities for all employees.

The JSW Learning Academy acts as a learning platform which operates as an online training and education support on multiple subject areas which the stakeholders can choose from. These courses/trainings aids the employees to develop their soft skills and also acquire special skills needed to take up different jobs in a job rotation scenario aiding in continued employability and a healthy cross-functional work scenario. JSW Energy also ensures that the employees are aware of all the latest technologies and tools which further improves their productivity.

The separated employees are assisted with employment counselling to make their further journey easier. The retired employee can also seek guidance in relation to new roles that can be taken on the basis of their experience apart from monetary benefits.

**5. Details on assessment of value chain partners:**

	<b>% of value chain partners (by value of business done with such partners) that were assessed</b>
<b>Health and safety practices</b>	The Company expects its value chain partners to follow extant regulations, including health and safety practices and working conditions, these parameters are explicitly captured in the procurement contracts. Performance is monitored on various parameters including but not restricted to explicit parameters relating to adherence to health and safety practices and working conditions regulations.  In July 2022 Safety Inspection was done for one of our value chain partner at Trichy carrying out High Risk works at his manufacturing plant. Safety Improvements opportunities were listed and given to vendor for compliance
<b>Working Conditions</b>	

**6. Provide details of any corrective actions taken or underway to address significant risks / concerns arising from assessments of health and safety practices and working conditions of value chain partners.**

Safety Improvements opportunities were listed and given to value chain partner for implementation at their manufacturing unit.

All contractors & value chain partners, working in the premises of JSW Energy are sufficiently trained on safety practices and systems, inline with JSW Energy safety systems, so that there are no safety violations from their end. This practices enables the value-chain partner to enhance his safety systems, practices and training parameters.

## PRINCIPLE 4: Businesses should respect the interests of and be responsive to all its stakeholders

### Essential Indicators

#### 1. Describe the processes for identifying key stakeholder groups of the entity.

Key stakeholders forms an important group and plays an important role to maintain sustainable operations of the organization. JSW Energy maintains a dynamic and strategic stakeholder engagement process where it identifies key stakeholder groups from the larger universe of all possible stakeholders. This is done after considering the material influence each group has on the Company's ability to create value (and vice-versa). Through this mechanism, the Company has currently identified seven internal and external stakeholder groups: Employees, Government and Regulatory Authorities, Customers, Communities and Civil Society / NGOs, Suppliers, Institutions, Investors.

#### 2. List stakeholder groups identified as key for your entity and the frequency of engagement with each stakeholder group

Key Stakeholders	Whether identified as Vulnerable & Marginalised Group (Yes/ No)	Channels of communication (Email, SMS, Newspaper, Pamphlets, Advertisement, Community Meetings, Notice Board, Website), Others	Frequency of engagement (Annually/Half Yearly/ Quarterly/ Others - please specify)	Purpose and scope of engagement including key topics and concerns raised during such engagement
Customer	No	Customer meets, Official communication channels: Advertisements, publications, website and social media, Conferences events, Phone calls, emails and meetings.	Frequent and as and when required	To acquire new customers and service the existing ones
Employees	No	JSW World - Intranet portal, Newsletters, Employee satisfaction surveys - JSW Voice Pulse Survey, Emails and meetings, Training programs like Springboard, Employee engagement initiatives like WeCare and Samvedna, Performance appraisal, Grievance redressal mechanisms, Notice boards	Intranet - Daily Newsletter - Quarterly Emails - As and when required	To keep employees abreast of key developments happening in the company and also addressing their grievances
Suppliers	No	Vendor assessment and review, Training workshops and seminars, Supplier audits, Official communication channels: Advertisements, publications, website and social media	As and when required	Service existing business
Investors/ Shareholders	No	Analyst meets and conference calls, Annual General Meeting, Official communication channels: Advertisements, publications, website and social media, Investor meetings and roadshows	Quarterly	To inform on how the company is currently doing and what it plans to do in near term future
Institutions & Industry Bodies	No	Networking through meetings, brainstorming sessions, discussions, etc.	As and when required	Networking so as to be abreast of new opportunities in sector and drive change
Governments & Regulatory Authorities	No	Advertisements, publications, website and social media, Phone calls, emails and meetings, Regulatory audits/ inspections	As and when required	Discussions with regard to various regulations, amendments, inspections, approvals and assessments.
Communities & Civil Society/ NGOs	No	Need assessment, Meetings and briefings, Partnerships in community development projects, Training and workshops, Impact assessment surveys, Official communication channels: Advertisements, publications, website and social media, Complaints and grievance mechanism	Frequent and as when required	Support CSR projects

## Leadership Indicators

- 1. Provide the processes for consultation between stakeholders and the Board on economic, environmental, and social topics or if consultation is delegated, how is feedback from such consultations provided to the Board.**

JSW Energy's stakeholder engagement strategy seeks feedback on a regular basis, which is then integrated into the organization's medium- and long-term strategy and planning exercises. This also enables the Company to promote the idea of shared growth and a common prosperous future for the society at large. The Company has formal mechanisms in place to engage key stakeholder groups in a constructive manner and collect valuable feedback, including on areas that are under the purview of the NGRBC Principles, eg in FY23 our Vijayanagar plant conducted a comprehensive 'safety perception survey' for all employees and contract workers covering about 98% employees and around 90% of the workers to understand their safety & welfare requirements. A 'Wellbeing Survey' was also conducted at Vijayanagar taking valuable feedback from the Employees & workers. The analyses on the above responses created a very useful database and opportunities of improvement, further Risk assessment and strategy formulation for implementation of new welfare, safety and wellbeing initiatives. These Surveys are already completed at our Barmer Plant in Rajasthan and are now being planned for our Hydro-power plants in Himachal Pradesh as part of continual Improvement. All the above mentioned initiatives are presented in the Board Sustainability committee meeting.

- 2. Whether stakeholder consultation is used to support the identification and management of environmental, and social topics (Yes / No). If so, provide details of instances as to how the inputs received from stakeholders on these topics were incorporated into policies and activities of the entity.**

Yes. The Company engages with various stakeholders in helping to ensure that every group's expectations are heard. Social development activities are carried out through the JSW Group's JSW Foundation which provides opportunities to communities for their holistic and inclusive development. In addition, the Company has been engaging with a number of ESG consultants and experts in this field, along with rating agencies which helps to better understand expectations of stakeholders and benchmark against best practices. The Foundation also actively works towards eradicating poverty and hunger, tackling malnutrition, promoting social development, addressing social inequalities by empowering vulnerable sections of the society, addressing environmental issues, preserving national heritage and promoting sports training. Through continuous and purposeful engagement with the local communities, we work towards creating a value-based and empowered society. The foundation also collaborated with communities, individuals and the government to facilitate them overcome various livelihood challenges, skilling opportunities and educational support. The various evolving aspects of ESG makes it a 'learning phase' and hence stakeholder interactions remain vital for the Company.

- 3. Provide details of instances of engagement with, and actions taken to, address the concerns of vulnerable/marginalized stakeholder groups.**

The Company is committed to building constructive relationships with all its stakeholders. Engagements with stakeholders are done on diverse issues. Proactive engagement with stakeholders provides the Company us with insights that help to gain information on material issues, shape business strategy and operations, and minimise the risk of reputation. For details, please refer to pages 48 and 51 of the Sustainability Report within the Integrated Annual Report.

## PRINCIPLE 5 Businesses should respect and promote human rights

### Essential Indicators

1. Employees and workers who have been provided training on human rights issues and policy(ies) of the entity, in the following format:

Category	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	Total (A)	No. of employees/ workers covered (B)	% (B / A)	Total (A)	No. of employees/ workers covered (B)	% (B / A)
<b>EMPLOYEES</b>						
Permanent	2,310	2,310	100%	1,603	1,603	100%
Other than Permanent	NIL	NIL	NIL	NIL	NIL	NIL
<b>Total Employees</b>	<b>2,310</b>	<b>2,310</b>	<b>100%</b>	<b>1,603</b>	<b>1,603</b>	<b>100%</b>
<b>WORKERS</b>						
Permanent	NIL	NIL	NIL	NIL	NIL	NIL
Other than Permanent	2,430	2,430	100%	2,474	2,474	100%
<b>Total Workers</b>	<b>2,430</b>	<b>2,430</b>	<b>100%</b>	<b>2,474</b>	<b>2,474</b>	<b>100%</b>

2. Details of minimum wages paid to employees and workers, in the following format:

Category	FY 2022-23 Current Financial Year					FY 2021-22 Previous Financial Year				
	Equal to Minimum Wage			More than Minimum Wage		Equal to Minimum Wage			More than Minimum Wage	
	Total (A)	No. (B)	% (B/A)	No. (C)	% (C/A)	Total (D)	No. (E)	% (E/D)	No. (F)	% (F/D)
<b>EMPLOYEES</b>										
<b>Permanent</b>	2,310	0	0	2,310	100%	1,603	0	0	1,603	100%
Male	2,206	0	0	2,206	100%	1,533	0	0	1,533	100%
Female	104	0	0	104	100%	70	0	0	70	100%
<b>Other Than Permanent</b>	-	-	-	-	-	-	-	-	-	-
Male	-	-	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-
<b>Workers</b>										
<b>Permanent</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Male	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Female	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>Other Than Permanent</b>	2340	0	0	2340	100%	2457	0	0	2457	100%
Male	2220	0	0	2220	100%	2268	0	0	2268	100%
Female	120	0	0	120	100%	189	0	0	189	100%

3. Details of remuneration/salary/wages, in the following format:\*\*

	Male		Female	
	Number	Median remuneration/ salary/wages of respective category in ₹	Number	Median remuneration/ salary/wages of respective category in ₹
Board of Directors (BoD) (Whole-time directors)				
Key Managerial Personnel (other than BoD)				
Employees other than BoD and KMP*				
Workers				

\*\* Please refer Annexure D of the Directors Report details on remuneration



**4. Do you have a focal point (Individual/ Committee) responsible for addressing human rights impacts or issues caused or contributed to by the business? (Yes/No)**

Yes, Human rights is a sensitive issue and JSW Energy has zero tolerance to Human Rights violation. Human Rights is one of the 17 Key Focus areas for the Organisation. For any Human Rights violation, whenever reported, shall be investigated by a special committee nominated for the purpose by the Senior leadership / CEO.

**5. Describe the internal mechanisms in place to redress grievances related to human rights issues.**

The Company has put in place a robust Grievance Redressal process for investigation of employee concerns and has instituted a Code of Conduct & Employee Service Rules that clearly delineates employee responsibilities and acceptable employee conduct. All employees can register their grievances online, where a dedicated link is available in the company portal. They may also put in a written grievance letter through respective HR departments. The issue once registered is duly addressed through a High Level Committee constituted for the purpose.

Together, these constitute the foundation for promoting a diverse and inclusive culture at the workplace.

**6. Number of Complaints on the following made by employees and workers:**

	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	Filed during the year	Pending resolution at the end of the year	Remarks	Filed during the year	Pending resolution at the end of the year	Remarks
Sexual Harassment	Nil	Nil		Nil	Nil	
Discrimination at workplace	Nil	Nil		Nil	Nil	
Child labour	Nil	Nil		Nil	Nil	
Forced labour / Involuntary labour	Nil	Nil		Nil	Nil	
Wages	Nil	Nil		Nil	Nil	
Other human right related issues	Nil	Nil		Nil	Nil	

**7. Mechanisms to prevent adverse consequences to the complainant in discrimination and harassment cases.**

The Company believes in promoting diversity & inclusion as a culture which allows all employees to bring their authentic selves to work and contribute wholly with their skills, experience and perspective for creating unmatched value for all stakeholders. It provides a rules-based policy framework that is non-discriminatory and provides equal opportunity for all individuals irrespective of their gender, religion, caste, race, age, community, physical ability or gender orientation. The Company to ensure a safe, secure and congenial work environment, so that employees can deliver their best without inhibition. The Company has put in place a robust Grievance Redressal process for investigation of employee concerns and has instituted a Code of Conduct & Employee Service Rules that clearly delineates employee responsibilities and acceptable employee conduct. Together, these constitute the foundation for promoting a diverse and inclusive culture at the workplace.

**8. Do human rights requirements form part of your business agreements and contracts? (Yes/No)**

Yes. The business agreements and contracts do include Company's expectations to promote sustainability, fair competition and respect for human rights.

**9. Assessments for the Year:**

% of your plants & offices that were assessed (by entity or statutory authorities or third parties)	
Child labour	Nil
Forced/involuntary labour	Nil
Sexual harassment	Nil
Discrimination at workplace	Nil
Wages	Nil
Others – please specify	Nil

**10. Provide details of any corrective actions taken or underway to address significant risks / concerns arising from the assessments at Question 9 above.**

There were no significant risks or concerns (considering Q9)

**Leadership Indicators**
**1. Details of a business process being modified / introduced as a result of addressing human rights grievances/complaints.**

As there were no Human Rights issues in the FY23 no business process was modified / introduced due to this.

**2. Details of the scope and coverage of any Human rights due-diligence conducted.**

NIL

**3. Is the premise/office of the entity accessible to differently abled visitors, as per the requirements of the Rights of Persons with Disabilities Act, 2016?**

Yes, all premises & offices are accessible to differently abled visitors.

**4. Details on assessment of value chain partners:\*\***

% of value chain partners (by value of business done with such partners) that were assessed	
Sexual harassment	
Discrimination at workplace	
Child labour	
Forced labour/Involuntary labour	100%
Wages	
Others – please specify	

\*\*The Purchase order / Contract document of the value chain partners includes clauses on the above mentioned matters for adherence.

However, JSW Energy has already initiated an ESG Assessment for 75+ value chain partners (Spend Analysis basis) covering the above points, in March 2023. The Assessment shall be completed by Q1FY24.

**5. Provide details of any corrective actions taken or underway to address significant risks / concerns arising from the assessments at Question 4 above.**

The Corrective Action management plan & its implementation shall follow once the above mentioned value chain assessment is completed.

## PRINCIPLE 6: Businesses should respect and make efforts to protect and restore the environment

### Essential Indicators

1. Details of total energy consumption (in Joules or multiples) and energy intensity, in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total electricity consumption (A)	57,95,223.12	53,63,811.86
Total fuel consumption (B) - GJ	8,86,29,496.61	8,66,73,658.45
Energy consumption through other sources (C)	0	0
<b>Total energy consumption (A+B+C) - GJ</b>	<b>9,44,24,719.73</b>	<b>9,20,37,470.31</b>
Energy intensity per rupee of turnover (Total energy consumption/ turnover in rupees)	0.000869	0.001053
Energy intensity (optional) - the relevant metric may be selected by the entity		

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes - Assurance done by KPMG Assurance and Consulting Services LLP

\* Reference:

2. Does the entity have any sites / facilities identified as designated consumers (DCs) under the Performance, Achieve and Trade (PAT) Scheme of the Government of India? (Y/N) If yes, disclose whether targets set under the PAT scheme have been achieved. In case targets have not been achieved, provide the remedial action taken, if any.

Yes. JSW Energy (Barmer) Ltd (JSWBL) is a designated consumer (DC) under the PAT scheme of the Government of India. The Company has been successful in achieving PAT cycle 1 & 2 targets. Below are the details of PAT Cycle Net Heat Rate (Kcal/Kwh) target & actuals:

#### Barmer Plant

PAT Cycle	Target	Actual
PAT Cycle 1	3,559.00	2,926.25
PAT Cycle 2	2,917.40	2,883.69
PAT Cycle 7	2,877.11	-

#### Vijayanagar Plant

##### SBU1

PAT Cycle	Target	Actual
PAT Cycle 1	2503	2,422.74
PAT Cycle 2	2,423.77	2,413.07

##### SBU2

PAT Cycle	Target	Actual
PAT Cycle 1	2,420	2,416.53
PAT Cycle 2	2,414.6	2,411.11

#### Ratnagiri Plant

PAT Cycle	Target	Actual
PAT Cycle 2	2,555	2,539

### 3. Provide details of the following disclosures related to water, in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>Water withdrawal by source (in kilolitres)</b>		
(i) Surface water	2,88,27,036	2,48,24,795
(ii) Groundwater	28,017	0
(iii) Third party water	0	0
(iv) Seawater / desalinated water	5,84,11,696	6,53,25,454
(v) Others		
<b>Total volume of water withdrawal (in kilolitres) (i + ii + iii + iv + v)</b>	8,72,66,749	9,41,88,905
<b>Total volume of water consumption (in kilolitres)</b>	2,62,09,609	*2,48,24,795
<b>Water intensity per rupee of turnover</b> (Water consumed / turnover)	0.00024	0.00028
<b>Water intensity</b> (optional) – the relevant metric may be selected by the entity	1.11 m <sup>3</sup> /MWh	1.11 m <sup>3</sup> /Mwh

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes – Assurance done by KPMG Assurance and Consulting Services LLP

\*Note – Water Stored values are not included in consumption

### 4. Has the entity implemented a mechanism for Zero Liquid Discharge? If yes, provide details of its coverage and implementation.

Yes. JSW Energy, recognises the need for the efficient management of water resources within and outside its operating sites. Efforts are made to increase water use efficiency, while also ensuring its availability for all stakeholders. All plants are based on the principle of 'ZERO LIQUID DISCHARGE'. Waste water is treated and recycled in the water use cycle or diverted for horticulture use. Domestic waste water is also treated in the STP (Sewage Treatment Plant) and recycled / utilized in the horticulture development.

### 5. Please provide details of air emissions (other than GHG emissions) by the entity, in the following format:

Parameter	Please specify unit	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
NOx	Metric Tonnes	16,484.89	18,137.79
SOx	Metric Tonnes	29,233.46	33,810.60
Particulate matter (PM)	Metric Tonnes	2,863.24	3,124.68
Persistent organic pollutants (POP)	NA (Not applicable)	NA	NA
Volatile organic compounds (VOC)	NA	NA	NA
Hazardous air pollutants (HAP)	NA	NA	NA
Others-please Specify- ODS (KG of CFC e11)	NA	28.39	11.45

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes – KPMG Assurance & Consulting Services LLP

### 6. Provide details of greenhouse gas emissions (Scope 1 and Scope 2 emissions) & its intensity, in the following format:

Parameter	Unit	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>Total Scope 1 emissions</b> (Break-up of the GHG into CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> , NF <sub>3</sub> , if available)	tCO <sub>2</sub> e	1,60,62,495.59	150,86,661.31
<b>Total Scope 2 emissions</b> (Break-up of the GHG into CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> , NF <sub>3</sub> , if available)	tCO <sub>2</sub> e	26,401.42	33,292.43
<b>Total Scope 1 and Scope 2 emissions per rupee of turnover</b>		0.00015	0.00017
<b>Total Scope 1 and Scope 2 emission intensity</b> (optional) – the relevant metric may be selected by the entity	tCO <sub>2</sub> e/MWh	0.68	0.68

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes - KPMG Assurance & Consulting Services LLP

**7. Does the entity have any project related to reducing Green House Gas emission? If yes, then provide details.**

Considering all the major plants at Hydro, Barmer, Vijayanagar and Ratnagiri, the organization has collectively planted around 33,719 saplings / plants in this FY22-23.

Apart from the plantations each location has specific energy reducing modification projects which in turn contribute to reduce the GHG emissions all throughout their effective life-time operation. These energy use reduction initiatives have resulted in the saving of 41.32 MU of electricity in FY22-23.

The Company has been gradually marching towards green and renewable energy by planting around 33719 plants till date. Plantation of local species is carried out every year to restore and rehabilitate the dumping sites with a survival rate more than 70 %. Green Cover has been increased near the colonies. The area in the plant premises has been converted into the green cover. A community playground has been developed near the colony. Sewage Treatment Plants are installed. Sholtu (600 KLD), Wangtoo PH (15 KLD), Baspa PH (15 KLD), Kuppa Camp (36 KLD). Effluent discharged is checked on regular basis by the Himachal Pradesh State Pollution Control Board and third party and are in permissible limits. Solid waste from the colonies and mess are segregated in non-biodegradable and biodegradable waste at the source itself. Fuel and manure is prepared by Biodegradable Domestic waste. Each location is provided with Composter of different capacity. The non-biodegradable waste is stored and sent to the vendors for further disposal and recycling.

At Barmer Plant - APH Tube replacement done in Unit#4 RHS SA1 &PA1 (Energy savings - 2276 KW) Problem- Primary Air (PA) fan, secondary Air (SA) fan and Induced draft (ID) fan Energy consumption was increasing progressively in Unit-4 Boiler due to APH leakage. Solution- Unit shutdown was taken and APH tube replacement was done. Benefit- Reduction in Total Fan Power consumption by 2276 KW.

At Ratnagiri Plant, by implementing Sequential Valve Mode of Turbine Governing Valve Operation, Energy saving of 63532.38 GJ (17647 MWh) was accrued during the operations and it also resulted in saving of 5651 GHG emission.

**8. Provide details related to waste management by the entity, in the following format:**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total Waste generated (in metric tonnes)		
Plastic waste (A)	2.43	0
E-waste (B)	6.02	0.38
Bio-medical waste (C)	0.62	0.012
Construction and demolition waste (D)	0	0
Battery waste (E)	104.54	192.3
Radioactive waste (F)	0	0
Other Hazardous waste. Please specify, if any. (G)	30.95	50.65
Other Non-hazardous wastegenerated (H). Please specify, if any. (Break-up by composition i.e., by materials relevant to the sector)	(Fly ash + bottom Ash: 13,41,737; Primary sludge: 1,156,224; MS Scrap & Other Scrap: 1,528,70; Food waste: 1.515)	14,93,373.43
<b>Total (A + B + C + D + E + F + G + H)</b>	<b>13,44,567.10</b>	<b>14,93,616.77</b>
<b>For each category of waste generated, total waste recovered through recycling, re-using or other recovery operations (in metric tonnes)</b>		
<b>Category of waste</b>		
(i) Recycled	142.52	11,16,561.26
(ii) Re-used	13,78,753.48	
(iii) Other recovery operations	1,511.39	3,77,055.51
<b>Total</b>	<b>13,80,407</b>	<b>14,93,616.77</b>
<b>For each category of waste generated, total waste disposed by nature of disposal method (in metric tonnes)</b>		
<b>Category of waste</b>		
(i) Incineration	0.612	0
(ii) Landfilling	0	0
(iii) Other disposal operations	0.00434	3,61,428.18
<b>Total</b>	<b>0.62</b>	<b>3,61,428.18</b>

**Note:** Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes - KPMG Assurance & Consulting Services LLP

**9. Briefly describe the waste management practices adopted in your establishments. Describe the strategy adopted by your company to reduce usage of hazardous and toxic chemicals in your products and processes and the practices adopted to manage such wastes.**

As JSW Energy is in the business of generating electricity through thermal, hydropower and renewable projects and the product as such is electricity. The hazardous waste generated during the O&M activity is the waste oil which is recycled through authorized recycling agencies at all locations. The quantity of this waste oil is low. Other than this, there is no involvement of any Toxic chemicals in the process of generating electricity.

**10. If the entity has operations/offices in/around ecologically sensitive areas (such as national parks, wildlife sanctuaries, biosphere reserves, wetlands, biodiversity hotspots, forests, coastal regulation zones etc.) where environmental approvals / clearances are required, please specify details in the following format:**

Not Applicable. The Company does not have any facilities in and around ecologically sensitive areas and as such n environmental/ clearances are required.

**11. Details of environmental impact assessments of projects undertaken by the entity based on applicable laws, in the current financial year:**

Although, required Environmental Impact Assessments (EIAs) were performed during the project initiation stages, there have been no EIAs performed during the reporting period in absence of any new projects undertaken.

**12. Is the entity compliant with the applicable environmental law/ regulations/ guidelines in India; such as the Water (Prevention and Control of Pollution) Act, Air (Prevention and Control of Pollution) Act, Environment protection act and rules thereunder (Y/N). If not, provide details of all such non-compliances, in the following format:**

Yes, all plants of JSW Energy are, as on date, compliant with applicable environmental laws/ regulations and guidelines. Proper clearances from the MOEF are in place for all the plants.

**Leadership Indicators**

**1. Provide break-up of the total energy consumed (in Joules or multiples) from renewable and non-renewable sources, in the following format:**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>From renewable sources</b>		
Total electricity consumption (A)	1,24,444 GJ	1,26,000 GJ
Total fuel consumption (B)	0	0
Energy consumption through other sources (C)	0	0
<b>Total energy consumed from renewable sources (A+B+C)</b>	1,24,444 GJ	1,26,000 GJ
<b>From non-renewable sources</b>		
Total electricity consumption (D)	56,70,779.08 GJ	52,37,811.86 GJ
Total fuel consumption (E)	8,86,29,496.61 GJ	8,66,73,658.45 GJ
Energy consumption through other sources (F)		0
<b>Total energy consumed from non-renewable sources (D+E+F)</b>	9,43,00,275.69 GJ	9,19,11,470.31 GJ

**Note:** Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.\

YES - KPMG Assurance and Consulting Services LLP

**Provide the following details related to water discharged:**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>Water discharge by destination and level of treatment (in kilolitres)</b>		
(i) To Surface water	653137	585,044
- No treatment		
- With treatment – please specify level of treatment	Domestic waste water treated in STP and discharged back into the river complying with stipulated environmental standard.	Nil
(ii) To Groundwater	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(iii) To Seawater	5,84,11,696	6,53,25,454
- No treatment		
- With treatment – please specify level of treatment	Seawater is used for cooling purpose and it is brought back to ambient level before it is discharged back.	
(iv) Sent to third-parties	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(v) Others (under ZLD initiative RO reject water is forwarded to JSW Steel for utilization in the coal beneficiation Plant)	445137	Nil
- No treatment		
- With treatment – please specify level of treatment		
<b>Total water discharged (in kilolitres)</b>	<b>5,95,09,970</b>	<b>6,59,10,499</b>

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes – KPMG Assurance & Consulting Services LLP

**2. Water withdrawal, consumption and discharge in areas of water stress (in kilolitres):**

**For each facility / plant located in areas of water stress, provide the following information:**

**Barmer: 8X135 MW**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>Water withdrawal by source (in kilolitres)</b>		
(i) Surface water	18899181	1,96,71,803
(ii) Groundwater		
(iii) Third party water		
(iv) Seawater / desalinated water	NIL	NIL
(v) Others		
<b>Total volume of water withdrawal (in kilolitres)</b>	<b>18899181</b>	<b>1,96,71,803</b>
<b>Total volume of water consumption (in kilolitres)</b>	<b>18021676</b>	<b>16263378</b>
<b>Water intensity per rupee of turnover</b> (Water consumed / turnover)	0.00059	0.00028
<b>Water intensity</b> (optional) – the relevant metric may be selected by the entity		
<b>Water discharge by destination and level of treatment (in kilolitres)</b>		
(i) Into Surface water	Nil	Nil
- No treatment		

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
- With treatment – please specify level of treatment		
(ii) Into Groundwater	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(iii) Into Seawater	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(iv) Sent to third-parties	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(v) Others – Water losses	NIL	Nil
- No treatment		
- With treatment – please specify level of treatment		
<b>Total water discharged (in kilolitres)</b>		

#### RATNAGIRI: (4X300 MW)

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kilolitres)		
(i) Surface water	6,99,472	9,42,299
(ii) Groundwater	Nil	Nil
(iii) Third party water	Nil	Nil
(iv) Seawater / desalinated water	5,84,11,696.18	6,53,25,454.92
(v) Others		
<b>Total volume of water withdrawal (in kilolitres)</b>	<b>5,91,11,168.18</b>	<b>6,53,25,454.92</b>
<b>Total volume of water consumption (in kilolitres)</b>	<b>6,99,472</b>	<b>9,42,299</b>
Water intensity per rupee of turnover (Water consumed / turnover)	0.00004	0.00007
Water intensity (optional) – the relevant metric may be selected by the entity	-	-
Water discharge by destination and level of treatment (in kilolitres)		
(i) Into Surface water	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(ii) Into Groundwater	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(iii) Into Seawater		
- No treatment		
- With treatment	5,84,11,696.18*	6,53,25,454.92
(iv) Sent to third-parties	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(v) Others		
- No treatment		
- With treatment – please specify level of treatment		
<b>Total water discharged (in kilolitres)</b>	<b>5,84,11,696.18</b>	<b>6,53,25,454.92</b>

\* In Ratnagiri the sea water is used in a closed loop for cooling purposes and is not used in process.



### VIJAYANAGAR (860 MW)

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>Water withdrawal by source (in kilolitres)</b>		
(i) Surface water	85,75,246.55	74,14,527.13
(ii) Groundwater	Nil	Nil
(iii) Third party water	Nil	Nil
(iv) Seawater / desalinated water	Nil	Nil
(v) Others	Nil	Nil
<b>Total volume of water withdrawal (in kilolitres)</b>	<b>85,75,246.55</b>	<b>74,14,527.13</b>
<b>Total volume of water consumption (in kilolitres)</b>	<b>81,30,738.55</b>	<b>74,14,527.13</b>
Water intensity per rupee of turnover (Water consumed / turnover)	0.00021	0.00033
Water intensity (optional) – the relevant metric may be selected by the entity		
<b>Water discharge by destination and level of treatment (in kilolitres)</b>		
(i) Into Surface water	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(ii) Into Groundwater	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(iii) Into Seawater	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(iv) Sent to third-parties	NIL	NIL
- No treatment		
- With treatment – please specify level of treatment		
(v) Others (under ZLD initiative RO reject water is forwarded to JSW Steel for utilization in the coal beneficiation Plant)	4,45,137	Nil
- No treatment		
- With treatment – please specify level of treatment		Nil
<b>Total water discharged (in kilolitres)</b>	<b>4,45,137</b>	<b>Nil</b>

### HYDRO POWER PLANT (1391MW)

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kilolitres)		
(i) Surface water	6,53,137	7,89,634.30
(ii) Groundwater	Nil	Nil
(iii) Third party water	Nil	Nil
(iv) Seawater / desalinated water	Nil	Nil
(v) Others	Nil	Nil
<b>Total volume of water withdrawal (in kilolitres)</b>	<b>6,53,137</b>	<b>7,89,634.30</b>
<b>Total volume of water consumption (in kilolitres)</b>	<b>0</b>	<b>2,04,590</b>
Water intensity per rupee of turnover (Water consumed / turnover)	0.0	0.00001
Water intensity (optional) – the relevant metric may be selected by the entity		
Water discharge by destination and level of treatment (in kilolitres)		
(i) Into Surface water		
- No treatment		
- With treatment – water is routed through STP plant before discharge	6,53,137	5,85,044.3
(ii) Into Groundwater	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
(iii) Into Seawater	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(iv) Sent to third-parties	Nil	Nil
- No treatment		
- With treatment – please specify level of treatment		
(V) Others	0	Nil
- No treatment		
- With treatment – please specify level of treatment		
<b>Total water discharged (in kilolitres)</b>	<b>6,53,137</b>	<b>5,85,044.3</b>

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

YES - KPMG Assurance and Consulting Services LLP

### 3. Please provide details of total Scope 3 emissions & its intensity, in the following format:

Parameter	Unit	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
<b>Total Scope 3 emissions</b> (Break-up of the GHG into CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> , NF <sub>3</sub> , if available)	Tonnes of CO <sub>2</sub> equivalent	16,34,696.75	12,19,298.14
<b>Total Scope 3 emissions per rupee of turnover</b>		0.000015	0.00001
<b>Total Scope 3 emission intensity</b> (optional) – the relevant metric may be selected by the entity	tCO <sub>2</sub> e/Mwh	0.069	0.055

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes - KPMG Assurance & Consulting Services LLP

### 4. With respect to the ecologically sensitive areas reported at Question 10 of Essential Indicators above, provide details of significant direct & indirect impact of the entity on biodiversity in such areas along-with prevention and remediation activities.

Not Applicable.

### 5. If the entity has undertaken any specific initiatives or used innovative technology or solutions to improve resource efficiency, or reduce impact due to emissions / effluent discharge / waste generated, please provide details of the same as well as outcome of such initiatives, as per the following format:

Sr. No	Initiative undertaken	Details of the initiative (Web-link, if any, may be provided along-with summary)	Outcome of the initiative
1.	Solar & Wind Plants	The organization has commissioned 225 MW Solar Plant and 27 MW Wind Power plant in FY 22-23	GHG Emission reduction
2.	APH tube replacement	<b>At Barmer Plant</b> - Energy consumption was increasing progressively due to APH leakage. Solution- Unit shutdown was taken and APH tube replacement was done. Benefit- Reduction in Total Fan Power consumption by 2276 KW.	GHG Emission reduction
3	Power Plant Operation	<b>At Ratnagiri Plant</b> , by implementing Sequential Valve Mode of Turbine Governing Valve Operation, Energy saving of 63532.38 GJ (17647 MWh) was accrued during the operations and it also resulted in saving of 5651 GHG emission.	GHG Emission reduction
4.	Tree Plantations	Tree Plantation is a regular activity in all plants of JSW Energy every year. The number of trees planted location wise were: Vijayanagar - 3811, Barmer - 5720,, Ratnagiri - 5865, Hydro - 3223 and Dharapuram and Tuticorin: 15100	Reduce impact of emission

Sr. No	Initiative undertaken	Details of the initiative (Web-link, if any, may be provided along-with summary)	Outcome of the initiative
5.	Utilization of PTP Sludge	The sludge generated from PTP plant was not fully utilized and unused sludge had to be dumped which consumed additional cost for chemicals, electricity, transportation and land. The sludge is now used in Horticulture as manure saving all cost related to dumping alongwith 20% reduction in fertilizer cost for horticulture activity	Reduce impact due to effluent discharge / waste generated.

**6. Does the entity have a business continuity and disaster management plan? Give details in 100 words/ web link.**

The Company has a Business Continuity Policy duly approved by the Board and major generation plants have formulated Business Continuity Plans (BCP). These plants (at Barmer, Ratnagiri, Vijayanagar & Hydro-Sholtu) have gone through a rigorous BCMS(Business Continuity Management System) Audit and have successfully completed the BCMS certification under ISO 22301.

The main objective of BCP is to maintain business continuity under disruptive incidents with an aim to minimize impact on -

- Human life and other living beings
- Environment and related eco systems
- Economic losses
- All stakeholders (such as investors, employees)

To make this BCP more robust, Company plans training and awareness sessions across the Plant locations. Apart from training, BCP testing is done periodically to check its efficacy and improving it further based on the gaps observed during testing.

**7. Disclose any significant adverse impact to the environment, arising from the value chain of the entity. What mitigation or adaptation measures have been taken by the entity in this regard?**

None of the value chain entity have reported & neither it has come to our notice about any environmental impact caused by any value chain partner.

**8. Percentage of value chain partners (by value of business done with such partners) that were assessed for environmental impacts.**

JSW Energy has initiated an ESG assessment survey of our value chain partners for which a specially design ESG questionnaire has been rolled out in FY22-23. The study is under progress and shall be completed in Q1 of FY24.

**PRINCIPLE 7 Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent**

**Essential Indicators**

1. **a. Number of affiliations with trade and industry chambers/ associations.**
- b. List the top 10 trade and industry chambers/ associations (determined based on the total members of such body) the entity is a member of/ affiliated to.**

S. No.	Name of the trade and industry chambers/ associations	Reach of trade and industry chambers/ associations (State/National)
1	Confederation of Indian Industry (CII)	National
2	Federation of Indian Chambers of Commerce & Industry (FICCI)	National
3	The Associated Chambers of Commerce & Industry of India (ASSOCHAM)	National
4	Global Reporting Initiative (GRI)	International
5	Carbon Discloser Project (CDP) India	International
6	Indian Chamber of Commerce	National
7	National Safety Council of India	National
8	Quality Circle Forum of India (QCFI)	National
9	Southern Regional Power Committee (SRPC)	National
10	Bangalore Chamber of Industry and Commerce	National
11	Grow Care India	National

2. **Provide details of corrective action taken or underway on any issues related to anticompetitive conduct by the entity, based on adverse orders from regulatory authorities.**

No adverse orders received from regulatory authorities for anti-competitive conduct.

**Leadership Indicators**

1. **Details of public policy positions advocated by the entity:**

JSW Energy works closely with trade / industry associations in evolving policies that govern the functioning and regulations of Power Sector. The company participates in stakeholder consultation with Industry players and support the Government in framing policies in the following areas:

- Governance and administration
- Economic reforms
- Sustainable business principles
- Energy, water, and other natural resources
- Social and community development
- Transparency in public disclosure
- Non-conventional energy

JSW Energy, directly as well as through JSW Group teams, engages with the following associations and organizations: CII, FICCI, ASSOCHAM, GRI, CDP, Indian Chamber of Commerce

## PRINCIPLE 8 Businesses should promote inclusive growth and equitable development

### Essential Indicators

1. **Details of Social Impact Assessments (SIA) of projects undertaken by the entity based on applicable laws, in the current financial year.**

Name and brief details of project	SIA Notification No	Date of notification	Whether conducted by independent external agency (Yes / No)	Results communicated in public domain (Yes / No)	Relevant Web link
NIL					

\* No SIA was done in the current financial year. However specific social development programme impact assessments were done at Barmer, Ratnagiri, Hydro Sholtu and Hydro-Kutehr project. The assessments were carried out by an external agency.

Barmer: Traditional handicraft promotion initiative

Sholtu: Shikhar-Boxing development; Charkha-promoting handloom skills

Kutehr: Mobile health services - affordable healthcare services

Ratnagiri: Agriculture development initiatives

2. **Provide information on project(s) for which ongoing Rehabilitation and Resettlement (R&R) is being undertaken by your entity, in the following format:**

Not Applicable

3. **Describe the mechanisms to receive and redress grievances of the community.**

The grievance could be written at [jswel.investor@jsw.in](mailto:jswel.investor@jsw.in). This is provided in the Integrated Report which is made available on the Company's website. The grievance could also be sent to any of the plant locations who will handle the same.

4. **Percentage of input material (inputs to total inputs by value) sourced from suppliers**

	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Directly sourced from MSMEs/ small producers	21.71%	27%
Sourced directly from within the district and neighbouring districts	32.98%	44%

### Leadership Indicators

1. **Provide details of actions taken to mitigate any negative social impacts identified in the Social Impact Assessments (Reference: Question 1 of Essential Indicators above):**

Details of negative social impact identified	Corrective action taken
NIL*	

\* No SIA was done in the current financial year

2. **Provide the following information on CSR projects undertaken by your entity in designated aspirational districts as identified by government bodies**

S. No	State	Aspirational District	Amount spent (In INR)
1	Tamilnadu - Social Development - community development, integrated water resource management, google transformation program,	Tuticorin & Dharapuram	49,45,57,943

3. (a) **Do you have a preferential procurement policy where you give preference to purchase from suppliers comprising marginalized /vulnerable groups? (Yes/No)**

No, we do not have a policy on this as yet.

- (b) **From which marginalized /vulnerable groups do you procure?**

NA

- (c) **What percentage of total procurement (by value) does it constitute?**

NA

4. **Details of the benefits derived and shared from the intellectual properties owned or acquired by your entity (in the current financial year), based on traditional knowledge:**

S. No	Intellectual Property based on traditional knowledge	Owned/ Acquired (Yes/No)	Benefit shared (Yes / No)	Basis of calculating benefit share
1	NIL			

5. **Details of corrective actions taken or underway, based on any adverse order in intellectual property related disputes wherein usage of traditional knowledge is involved**

Name of authority	Brief of the Case	Corrective action taken
	Not Applicable	

6. **Details of CSR amount spent against ongoing projects for the financial year:**

**CSR Amount allocated - 2% of average net profit as per Section 135(5) = 27.91 crore**

Sl.	Key CSR Initiatives in FY2023	Thrust Areas and Spends (₹ crore)
1	Water, Environment, Sanitation and Waste Management	5.05
2	Sports Promotion	1.10
3	Skills and Livelihood	2.40
4	Project Management	0.98
5	Health and Nutrition	4.33
6	Education	8.40
7	Community Development and Infrastructure	5.37
8	Agricultural Livelihood	0.27
	<b>Total</b>	<b>27.91</b>

#### **Beneficiaries from vulnerable and marginalized groups**

The Company's objective is to pro-actively support meaningful socio-economic development in India and enable a larger number of people to participate in and benefit from India's economic progress. This is based on the belief that growth and development are effective only when they result in wider access to opportunities and benefit a broader section of society. All CSR initiatives are for the support of the communities near the Plant Location, underprivileged / those who belong to the vulnerable / marginalized sectors of the society.

**Number of direct beneficiaries impacted: 2,33,021**

**PRINCIPLE 9 Businesses should engage with and provide value to their consumers in a responsible manner**

**Essential Indicators**

**1. Describe the mechanisms in place to receive and respond to consumer complaints and feedback.**

All grievances could be submitted at [jswel.investor@jsw.in](mailto:jswel.investor@jsw.in). This is provided in the Integrated Report which is made available on the Company's website. The grievances of the community could also be sent to any of the plant locations HR / Admin teams who will handle the same.

**2. Turnover of products and/services as a percentage of turnover from all products/service that carry information about:**

As a percentage to total turnover	
<b>Environmental and social parameters relevant to the product</b>	Not applicable as JSW Energy is in the business of producing electricity, there
<b>Safe and responsible usage</b>	are no shelf goods or services that may carry information.
<b>Recycling and/ or safe disposal</b>	

**3. Number of consumer complaints in respect of the following: NIL**

	FY 2022-23			FY 2021-22		
	Current Financial Year			Previous Financial Year		
	Received during the year	Pending resolution at end of year	Remark	Received during the year	Pending resolution at end of year	Remarks
Data privacy	There have been no consumer complaints received in respect of these practices.			There have been no consumer complaints received in respect of these practices.		
Advertising						
Cyber-security						
Restrictive Trade Practices						
Unfair Trade Practices						
Others						

**4. Details of instances of product recalls on account of safety issues:**

	Number	Reason for Recall
Voluntary Recall		
forced Recall		Not Applicable due to the peculiar nature of product.

**5. Does the entity have a framework/ policy on cyber security and risks related to data privacy? (Yes/No) If available, provide a web-link of the policy.**

Yes. JSW Energy has under the Ethics or Code of Conduct, included the Cyber security, including data and information security. The Company also has a Board Level Committee on 'Risk management' which includes the Cyber Security Risk.

<https://jswworld.jsw.in/sites/default/files/JSW%20Code%20of%20Conduct%20Policy.pdf>

**6. Provide details of any corrective actions taken or underway on issues relating to advertising, and delivery of essential services; cyber security and data privacy of customers; re-occurrence of instances of product recalls; penalty / action taken by regulatory authorities on safety of products / services.**

Not Applicable.

## Leadership Indicators

**1. Channels / platforms where information on products and services of the entity can be accessed (provide web link, if available).**

All information regarding business of JSW Energy can be accessed through the Company's website [www.jsw.in/energy](http://www.jsw.in/energy) and in its periodic disclosures such as the annual report and the integrated report.

Link - <https://www.jsw.in/energy>

**2. Steps taken to inform and educate consumers about safe and responsible usage of products and/or services.**

Not Applicable – JSW Energy has 'Electricity' as its product and it is not directly involved in the distribution services to the consumer.

**3. Mechanisms in place to inform consumers of any risk of disruption/discontinuation of essential services.**

Not Applicable – JSW Energy has 'Electricity' as its product and it is not directly involved in the distribution services to the consumer.

**4. Does the entity display product information on the product over and above what is mandated as per local laws? (Yes/No/Not Applicable) If yes, provide details in brief. Did your entity carry out any survey with regard to consumer satisfaction relating to the major products / services of the entity, significant locations of operation of the entity or the entity as a whole? (Yes/No)**

Not Applicable – JSW Energy has 'Electricity' as its product and it is not directly involved in the distribution services to the consumer.

**5. Provide the following information relating to data breaches:**

- a. Number of instances of data breaches along-with impact - None
- b. Percentage of data breaches involving personally identifiable information of customers – Not Applicable