

# SUSTAINABILITY REVIEW SECTION

JSW's Sustainability Vision aligns the activities and strategies in line with the global goals on mitigating climate change and aligning to a low-carbon economy. The business strategy is based on 3 major pillars - Environmental Stewardship, Social Development and Governance which define the path to further the progression for improvisation of the performance against major material issues.

JSW Energy has identified 17 key focus areas across the three pillars of ESG, which are aligned to the 17 UN Sustainable Development Goals. The organization ensures that the identified material issues are augmented by various internal policies and procedures to monitor and evaluate performance against the same. While JSW Energy not only ensures due diligence with respect to its material issues for internal performance mapping the organization has also initiated the assessment to extend it to the value chain partners to align them with JSW's sustainability agenda. This will help JSW Energy in identifying and mitigating the sustainability risks across its business units in an effective and timely manner.

As a part of the commitment with respect to climate change agenda, the organization is aligned with SBTi and also has in place, carbon neutrality targets by 2050. JSW Energy proactively tracks its performance by means of set KPIs to understand the progression with respect to climate change in a timely manner.

## Our Sustainability Strategy: Key Elements

The sustainability culture at JSW is based on certain key elements which work in synergy for achieving the Company's vision around the sustainability strategy

### LEADERSHIP

The leadership at JSW Energy is passionate towards the sustainability agenda and constantly upgrades knowledge and information on the ESG aspects relevant to the business and sector. This state-of-the-art approach in sustainability which trickles from top to bottom is instrumental in giving an edge to JSW Energy for effective implementation of sustainability strategy.

### STAKEHOLDER ENGAGEMENT

Meaningful interaction with the stakeholders help JSW Energy in understanding the stakeholder expectations which are then taken into consideration in setting the goals and targets around sustainability to create a long-term value for all the stakeholders.

### COMMUNICATION

Digitalisation in communication has enhanced JSW's internal channels of communication which ensures effective and timely communication with all the stakeholders resulting in better coordination and dissemination of information from plant level to the group level.

### PLANNING

The sustainability strategy of JSW Energy effectively maps the material issues which helps the organisation in timely mitigation of risks and harnessing the opportunities for a greater value creation.

### IMPROVEMENT




























JSW Energy continuously strives to identify potential opportunities for performance improvement across material topics especially with respect to Environment, Social and Governance in alignment with the three sustainability pillars.

### MONITORING

The organisation continuously engages with its plant level teams and corporate team to map progress against the key performance indicators on a monthly basis to ensure a timely feedback is provided on the matters requiring intervention.

### REPORTING

Disclosing performances, transparently to the stakeholders using Global Reporting Initiative (GRI).

Pillars of Sustainability	Key Focus Areas	Alignment to SDGs
Environmental Stewardship	Climate Change	13 CLIMATE ACTION 
	Energy	7 AFFORDABLE AND CLEAN ENERGY 
	Resources	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
	Water Resources	6 CLEAN WATER AND SANITATION 
	Waste	11 SUSTAINABLE CITIES AND COMMUNITIES  12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
	Wastewater	6 CLEAN WATER AND SANITATION  11 SUSTAINABLE CITIES AND COMMUNITIES  12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
	Air Emissions	13 CLIMATE ACTION 
	Bio-diversity	15 LIFE ON LAND 
	Local Considerations	11 SUSTAINABLE CITIES AND COMMUNITIES 
Social Development	Health & Safety	15 LIFE ON LAND  12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
	Indigenous People	11 SUSTAINABLE CITIES AND COMMUNITIES 
	Cultural Heritage	11 SUSTAINABLE CITIES AND COMMUNITIES 
	Social Sustainability	10 REDUCED INEQUALITIES  17 PARTNERSHIPS FOR THE GOALS 
	Supply Chain Sustainability	11 SUSTAINABLE CITIES AND COMMUNITIES  12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
	Employee Well-being	8 DECENT WORK AND ECONOMIC GROWTH  5 GENDER EQUALITY  10 REDUCED INEQUALITIES 
Governance	Human Rights	16 PEACE, JUSTICE AND STRONG INSTITUTIONS  5 GENDER EQUALITY  10 REDUCED INEQUALITIES 
	Business Ethics	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 

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## Sustainability Key Focus Initiatives

JSW Energy's Sustainability Strategy has been aligned with the long-term vision of value creation for all its stakeholders around Environment, Economy and Social parameters. The organisation has committed to climate change by aligning with TCFD and is also mapping the ESG performance of its supply chain partners to align them with the organisational commitments around ESG.

Key Focus Area	Initiatives
<p>Climate Resilience for Business – Global NetZero Agenda</p> 	<ul style="list-style-type: none"> <li>• Scenario Analysis with respect to transitional risks across its operations in alignment with RCP 8.5 and RCP 4.5</li> <li>• Identification and Prioritisation of Asset Level Risks</li> <li>• Analysis of financial impacts of climate change risks for both physical and transitional</li> <li>• Cost-Benefit Analysis of financial impacts</li> <li>• Phase 1 TCFD Risk Assessment to be completed in FY 2024</li> </ul>
<p>Supplier Sustainability Assessment – Extending ESG to supply chain</p> 	<ul style="list-style-type: none"> <li>• Sustainability Assessment is in progress for approximately 75 critical suppliers</li> <li>• The suppliers are assessed against the parameters of including Energy usage, Water consumption and Waste Management</li> <li>• A digital self-assessment questionnaire has been rolled out to the critical Tier 1 suppliers</li> <li>• The assessment shall enable JSW Energy to identify suppliers who have ESG agenda in place and futuristically can continuously monitor the improvement on energy, water and waste management aspects</li> </ul>
<p>Biodiversity – Protection of the Ecosystem</p> 	<ul style="list-style-type: none"> <li>• Implementation of a Policy to protect and enhance biodiversity in line with the target of <b>"No Net Loss to Biodiversity by 2030"</b></li> <li>• Initiation of Biodiversity Assessment, in line with the TNFD Framework, across all power plants</li> <li>• Completion of detailed eco-system seasonal study at Barmer plant to implement the biodiversity management plan</li> </ul>

## Sustainability Awards and Accolades

- JSW Energy has been honored for its exemplary performance in the CDP Climate Program 2022, by maintaining a Leadership (A-) level, at the CDP India Annual Event
- JSW Energy, Ratnagiri was awarded the 'Sword of Honor' for Excellence in Occupational Health, Safety & Wellbeing by British Safety Council in December 2022
- JSW Energy's Integrated Annual Report 2022 received a Gold Award in the Spotlight Competition 2022 by the League of American Communications Professionals or LACP in November 2022
- JSW Energy Limited was conferred the Best Air Pollution Management Award in the Environment category at the ESG India Leadership Awards 2022 presented by 'Acuite' & ESG 'ESG Risk'
- JSW Energy Ratnagiri was awarded for "Outstanding Achievements in Environment Protection" at the Green Tech Environment Awards 2022
- JSW Energy, Vijayanagar received the prestigious GMF Green Crest Diamond Award in the Energy Conservation Category in October 2022
- JSW Energy - Vijaynagar and Barmer received the prestigious Council of Enviro Efficiency (CEE) Award 2022 for the Best Energy Efficient Units
- JSW Energy – Barmer Limited received FICCI's 9<sup>th</sup> Quality System Excellence Award.
- JSW Energy (Barmer) Limited received the "Best Energy Efficient Plant – Lignite 2022" award for reduction of Net Heat rate by the Mission Energy Foundation.
- JSW Energy (Barmer) Limited was conferred the "Prashansa Patra-2022" award for Safety by National Safety Council of India.
- JSW Energy (Barmer) Limited was awarded the "Best Power Generator of the Year - 2023" Award by Council of Enviro Excellence (CEE).
- JSW Hydro (Baspas II & KW HEP) received 2 excellence Awards (1 Pre - Excellence 1 Excellence) in 6<sup>th</sup> National Convention on Quality Concepts (NCQC 2022) by Quality Circle Forum of India at Aurangabad.
- JSW Energy, Karcham Wangtoo Hydroelectric project has received the 'CBIP Award' 2022 for "Best Performing Hydro Power Project" by Central Board of Irrigation and Power at New Delhi on 3<sup>rd</sup> March, 2023. The award was presented by Hon'ble Union Minister of Power, New & R.E. Govt. of India.



# ENGAGING WITH STAKEHOLDERS – LONG-TERM VALUE CREATION

JSW Energy understands the linkage between material topics and stakeholder concerns. Effective engagement with the relevant and critical stakeholders helps in identifying and addressing the needs of the stakeholder groups going down to the level of marginalized community which is getting impacted by organisational activities. This process of engaging stakeholder groups benefits by reducing the overall risk to the business. More importantly, it also gives a chance to both the sides (business and stakeholders outside the business) to voice their concerns by aligning on a mutual platform.

## Stakeholder Group

### Customers



### Employees



### Shareholders



### Government & Regulators



### Suppliers & Vendors



### Society, Communities & NGOs



### Others (R&D Institutions and Industry Bodies)



Key Material Concerns	Mode of Engagement	Frequency of Engagement
<ul style="list-style-type: none"> <li>Customer Relationship Management</li> <li>Opportunities in Renewable Energy</li> </ul>	Customer meets, Advertisements, publications, website and social media, Conferences events, Phone calls, emails and meetings	Regular and Need-basis
<ul style="list-style-type: none"> <li>Occupational Health and Safety</li> <li>Human Rights</li> <li>Labour Management</li> </ul>	JSW World – Intranet portal, Newsletters, Employee satisfaction surveys – JSW Voice Pulse Survey, Emails and meetings, Trainings, Employee engagement initiatives like WeCare and Samvedna, Wellbeing Survey, Safety Perception Survey, Performance appraisal, Grievance redressal mechanisms, Notice boards	Regular and Need-basis
<ul style="list-style-type: none"> <li>Innovation and Digitalisation</li> <li>Corporate Governance and Ethics</li> <li>Economic Performance</li> <li>Cyber Security</li> <li>Business Model Resilience</li> <li>Risk Management</li> <li>Responsible Investment</li> <li>Opportunities in Renewable Energy</li> <li>Climate Strategy</li> </ul>	Analyst meets and conference calls, Annual General Meeting, Advertisements, publications, website and social media, Investor meetings and roadshows	Regular and Need-basis
<ul style="list-style-type: none"> <li>Socio-economic Compliance</li> <li>Environmental Compliance</li> <li>Water and Effluents</li> <li>Biodiversity</li> <li>Emissions</li> <li>Waste</li> </ul>	Advertisements, publications, website and social media, Phone calls, emails and meetings, Regulatory audits/ inspections	Regular and Need-basis
<ul style="list-style-type: none"> <li>Supply Chain Management</li> <li>Materials</li> </ul>	Vendor assessment and review, Training workshops and seminars, Supplier audits, Advertisements, publications, website and social media.	Regular and Need-basis
Local Communities	Need assessment, Meetings and briefings, Partnerships in community development projects, Training and workshops, Impact assessment surveys, Advertisements, publications, website and social media, Complaints and grievance mechanism	Regular and Need-basis
<ul style="list-style-type: none"> <li>Life Cycle Management</li> <li>Climate Strategy</li> </ul>	Collaboration with R&D Institutions and various industry bodies	Need-basis

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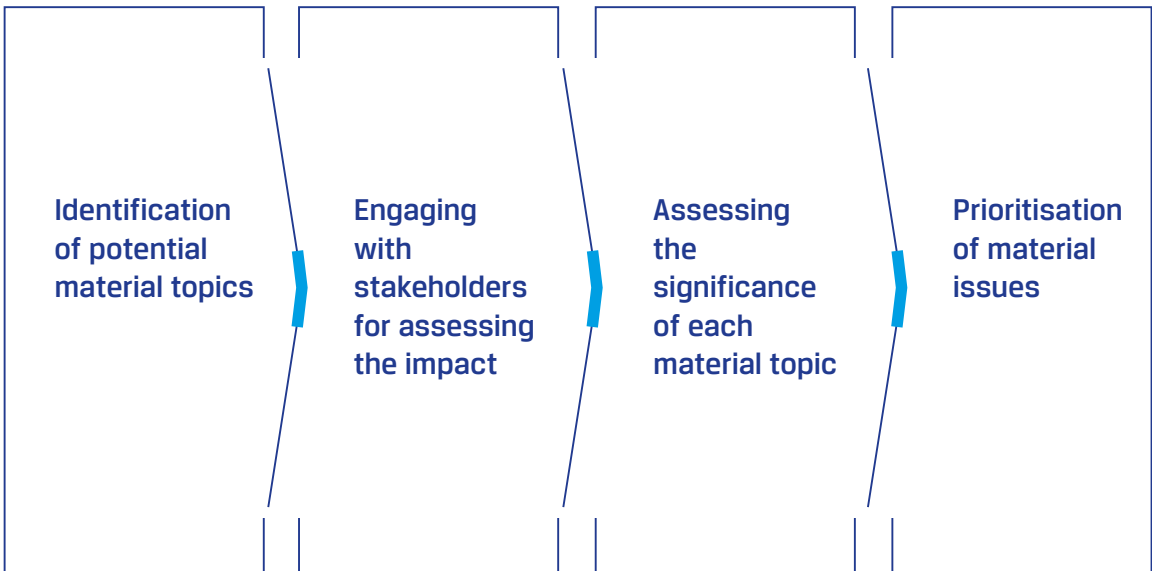
# MATERIALITY

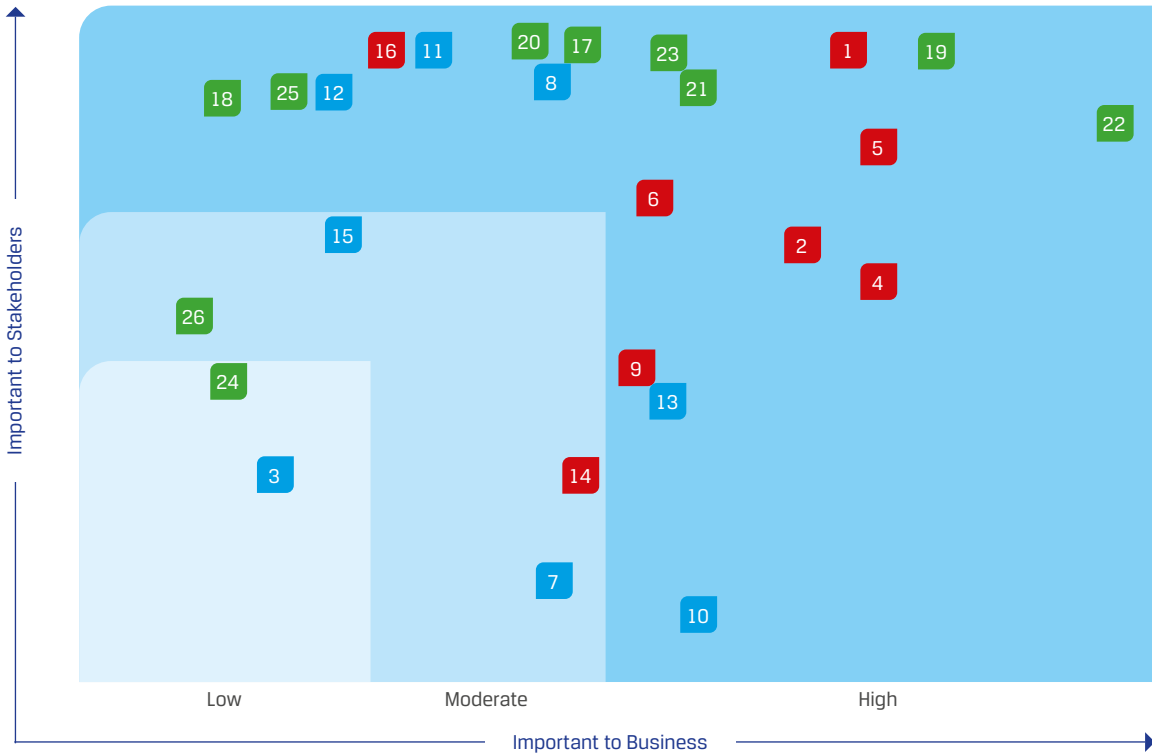
JSW Energy periodically conducts the materiality assessment which facilitates in identifying topics of significance to both its internal and external stakeholders. This exercise helps the organization to plan strategies for managing the risks and harnessing the opportunities. The company has always believed in open and transparent interactions with its stakeholders for enhancing

the trust factor leading to visible business growth. The company strives to engage in continuous interactions with its stakeholders to understand their perspective and be the first to respond to the evolving market scenarios as stakeholder engagement cannot be a one-time exercise. This gives JSW Energy a business edge while responding to the changing market dynamics.

During the reporting year, JSW Energy relooked the topics internally in line with the changing business scenario. In order to align the organizational strategy with the emerging trends, JSW Energy is undertaking a Double Materiality Survey.

## Materiality Assessment Process





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**Environmental Stewardship**

- 17 Water and Effluent Management
- 18 Biodiversity Preservation
- 19 Emissions Management
- 20 Waste Management
- 21 Climate Strategy
- 22 Opportunities in Renewable Energy
- 23 Environmental Compliance
- 24 Materials Management
- 25 Energy Management in Operations
- 26 Life Cycle Management of Assets

**Social Well-being**

- 3 Data Privacy and Cyber Security
- 7 Public Policy
- 8 Occupational Health and Safety
- 10 Customer Relationship Management
- 11 Local Communities
- 12 Labour Management
- 13 Human Capital Development
- 15 Human Rights

**Governance**

- 1 Corporate Governance
- 2 Economic Performance
- 4 Business Model Resilience
- 5 ESG-based Enterprise Risk Management
- 6 Responsible Investment
- 9 Supply Chain Management
- 14 Innovation and Digitalisation
- 16 Socio-Economic Compliance

**Materiality Impact**

Over the last 2 to 3 years the organisation has been diligently working on the few top 4 -5 material risks identified above, through the materiality survey. The organisation has been constantly improving upon its 'Corporate Governance' setting out Board level committees to have a clear oversight on the important issues of the organisation. Focus on the

operational excellence, which has been the forte of JSW Energy, has helped the organisation to achieve good economic progress year on year. Strengthening of IT systems and Cyber security has prevented any kind hacking or similar incident leading to loss of information / data. The Business Model of the organisation has a resilient structure with clear & tangible

goals and provides great value to shareholders by virtue of a healthy mix of renewables & non-renewables. ESG (Environment, Social, Governance) is now at the core of the Business and governance of the organisation and the transition of JSW Energy into Renewable space makes it one of the ESG leaders combating Climate Change in the country.



# PLANET POSITIVE

Addressing climate change issues is essential for de-risking the business and building resilient communities. JSW Energy's climate philosophy is extended to all facets of business drawing utmost attention from all stakeholders for taking responsibility in acting towards the climate urgency. JSW Energy being an active contributor in strengthening the economy, society is also committed to continuously work individually and in partnership through concerted and accelerated efforts for preserving the natural balance of ecosystems.



The organization proactively addresses global environmental issues through robust systems for monitoring and managing the key material issues such as climate change, water, emissions, waste and biodiversity. The material issues are mapped to KPIs, which aid in evaluating the performance across each area of concern while elucidating planned strategies catalyzing the progress for meeting the long-term targets.

JSW Energy as a part of the global energy industry has set ambitious carbon reduction targets that span across our operations, value chain, and platform ecosystem. The prime focus will be on identifying the physical & transition climate risks and subsequently working towards mitigating the impacts of these risks on business assets and disseminating the expertise for resilient communities. To achieve this, JSW Energy has committed to becoming a Net-Zero Business by 2050 and endorsed various initiatives like SBTi, Global Framework for Decarbonising Heavy Industries, UN Energy Compact and Responsible Energy Initiative India. JSW Energy is also in the process of obtaining the membership of UN Global Compact, which would be completed within 2023 enabling access to global best practices, tools, trainings etc enhancing the company's commitment to Sustainability. Climate Risk Assessments based on the TCFD framework are in progress across all the major power plants (Barmer, Ratnagiri, Vijayanagar, Hydro-Sholtu, Solar-Vijayanagar, Nandyal & Salboni) as well as at the under construction Renewable projects at Tuticorin, Dharapuram, Sandur-Vijayanagar. Eco-Systems study



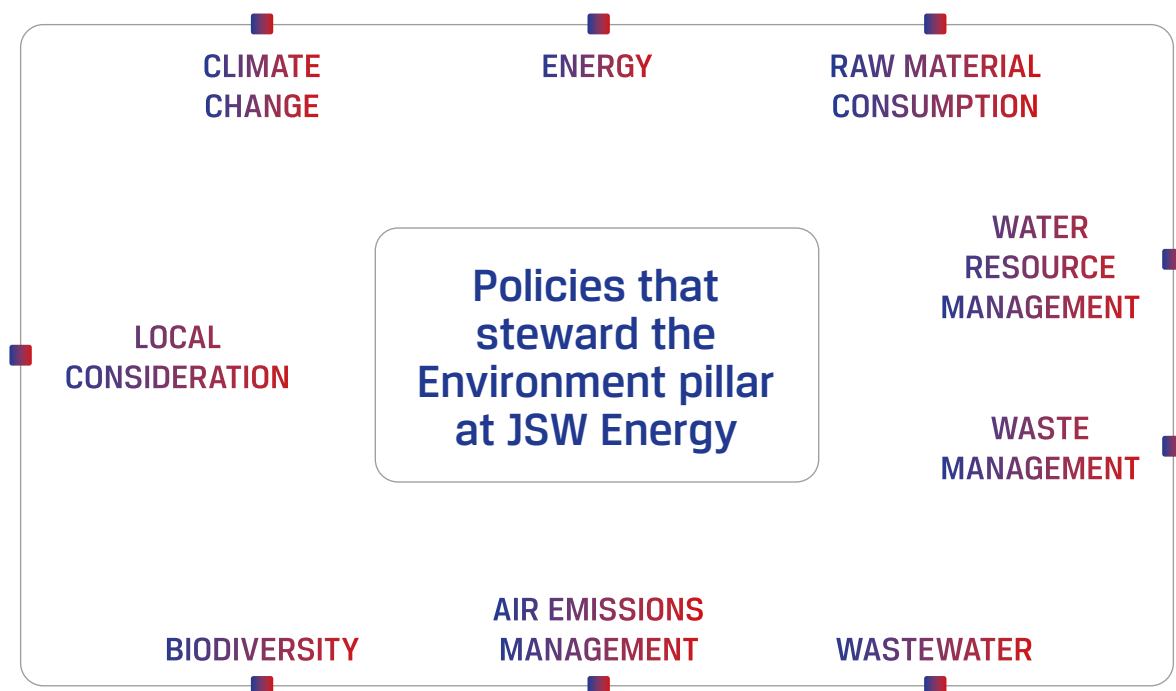
for Biodiversity Risk assessment under the TNFD framework is also in progress at operational plants as well as the ongoing projects. The organization's efforts towards combating climate change have been acknowledged by the United Nations Energy Compact.

### CDP Leadership

The company received a leadership band rating of 'A-' in the CDP Climate Change Disclosures which showcases its commitment towards environmental stewardship. As the only energy company in India to achieve such a distinction from CDP, this accomplishment propels the champions to make greater strides towards combating global climate crisis.

### Our key Business Prerogatives

- Rapid and enduring expansion towards sustainability
- Establish a forward-thinking company that leverages advanced technology and innovation
- Strengthening ESG practices and generating appealing returns.

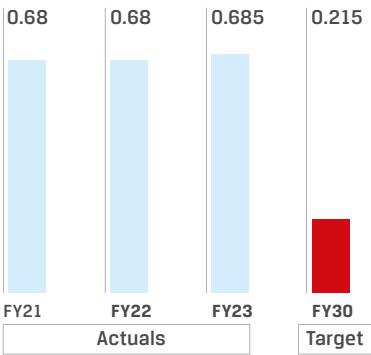


### Performance Against Targets

Environmental Parameter	KPI	Actuals			Target
		FY 2021	FY 2022	FY 2023	FY 2030
<b>Climate Change</b>	GHG Emissions (Scope 1+2) - tCO <sub>2</sub> e / MWh	0.68	0.68	0.685	0.215
<b>Water Security</b>	Sp. Freshwater intake (m <sup>3</sup> / MWh) (Power Production)	1.11	1.11	1.116	0.591
<b>Waste</b>	Waste - Ash Utilisation (%)	100%	96.9%	100%	100%
<b>Air Emissions</b>	Sp. PM (Kg / MWh)	0.14	0.14	0.12	0.05
	Sp. Sox (Kg / MWh)	1.65	1.52	1.24	0.68
	Sp. NOx (Kg / MWh)	0.95	0.81	0.70	0.37
<b>Biodiversity</b>	Biodiversity at our Operating sites	Great focus on plantations across all power plants	Biodiversity Eco-systems study initiated at Barmer plant	Biodiversity Eco-systems study in progress at 5 plant/project locations. Completed at Barmer.	Achieve No-Net loss of Bio-diversity

### GHG Emissions (Scope 1 + 2)

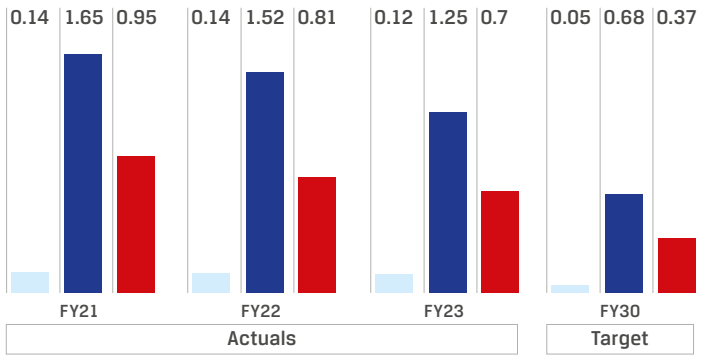
tCO<sub>2</sub>e/MWh



Climate Change GHG Emissions  
 Climate Change (Scope 1+2) – tCO<sub>2</sub>e/MWh  
 FY30 Target = 0.215 is aligned with SBTi

### Air Emissions

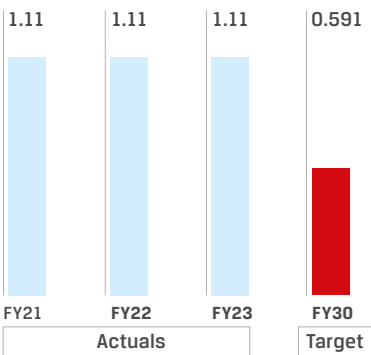
Kg/MWh



Air Emissions Sp. PM (Kg/MWh) Air Emissions Sp. SOx (Kg/MWh)  
 Air Emissions Sp. NOx (Kg/MWh)

### Sp. Freshwater (power production)

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



### Waste Ash Recycled

(%)



# CLIMATE CHANGE

## Climate Strategy – Advancing for Deeper Decarbonization

### Strategic Approach

JSW Energy is committed to burgeoning its efforts in propagating the sustainable development for all with innovative products and services. Being an energy provider, the company recognises the role it plays in low-carbon economy transition and contribution to Net-Zero goals of the country. Robust infrastructure developments and greater integration of mitigation and adaptation plans remains the central fulcrum in JSW Energy's climate action programmes. The plan to diversify the energy

resources will continue to drive business sustainably and increase the operational capacity to 20 GW by FY 2030, and help JSW Energy evolve as a leader in renewable energy technologies. The organization realizes the intensified momentum of climate change risks and is determined to progress further in its climate stewardship plans in alignment with SDG 13 "Climate Action". The company conducts detailed studies to systematically identify the threats of climate change on the business and adopts strategic plans to perform reliably under wide range of conditions with periodic oversight of board members. The governance for

climate change related issues vests with the Board while the Sustainability Committee coordinates actions at the plant level for the implementation of effective management plans. JSW Energy has made good progress in the direction of moving towards its 2030 KPI's with a 10.5% reduction in carbon emissions compared to the baseline year 2020 figure of 0.76 TCO<sub>2</sub>/MWh. The company remains committed to its path of combating climate change and working towards becoming a Net-Zero Company by 2050 in alignment with global sentiment of limiting the average temperature rise of 1.5 °C.

## Targets

# REDUCE OUR CARBON EMISSIONS BY MORE THAN 50% (BASELINE 2020) BY 2030.

### SDG's Impacted



### ESG Governance Structure at JSW Energy



## GHG Emissions (tCO<sub>2</sub>e)

Scope 1	Scope 2	Scope 3
<b>FY 2023</b>	<b>FY 2023</b>	<b>FY 2023</b>
<b>1,60,62,495.59</b>	<b>26,293.23</b>	<b>16,34,696.75</b>
<b>FY 2022</b>	<b>FY 2022</b>	<b>FY 2022</b>
<b>1,50,86,661.31</b>	<b>33,292.43</b>	<b>12,19,298.14</b>
<b>FY 2021</b>	<b>FY 2021</b>	<b>FY 2021</b>
<b>1,44,81,410.36</b>	<b>30,183.23</b>	<b>17,18,776.72</b>

### Categories Considered under Scope 3 Emissions

Scope 3* - Category Details	Total Emissions
<b>Categories</b>	
1. Purchased goods and services	15,521.47
2. Capital goods	5,731.34
3. Fuel and Energy	16,11,646.53
4. Upstream Transportation and distribution	210.60
5. Waste generated in operations	607.27
6. Business travel	228.66
7. Employee Commuting	750.88
<b>Total</b>	<b>16,34,696.75</b>

All other categories of scope 3 are not relevant to the operations of JSW Energy limited.

\* Sources used for calculation of Scope 3 emissions - i) US EPA-Category 1 and Category 2, ii) GaBi database Category 3 and Category 4, iii) DEFRA-Category 5, iv) India GHG Programme-Category 6 and Category 7.

Standard assumptions and calculation methodologies used for all categories; Scope 3 calculations included all major power plants together accounting for 95% installed capacity. 225 MW solar plant and 27 MW wind project commissioned recently excluded due to very few Scope 3 categories. 1753 MW renewable project acquired on 29<sup>th</sup> March, 2023 also excluded.

ODS Emissions (KG of CFCe11) are 28.39. Emissions associated with reservoir are not covered

## Initiatives undertaken to reduce energy consumption and carbon emissions

S. No.	Description of energy reduction initiative	Nature of initiative	Month of incorporating initiative	Energy reductions in GJ	GHG emissions saved due to energy saving (MTCO <sub>2</sub> e)
				(Estimated annual average reductions in energy due to a particular initiative)	
				FY 2023	FY 2023
<b>Barmer Plant</b>					
1.	APH Tube Plugging done in Unit#3 (Energy savings - 573.21 KW) <b>Problem-</b> Primary Air (PA) fan, secondary Air (SA) fan and Induced draft (ID) fan Energy consumption was increasing progressively in Unit-3 Boiler due to APH leakage. <b>Solution-</b> Unit shutdown was taken and APH tube plugging was done. <b>Benefit-</b> Reduction in Total Fan Power consumption by 580.57 KW.	Energy Saving	May-22	10913.43	1102.26
2.	APH Tube Plugging/Replacement done in Unit#7 (Energy savings - 323.61 KW) <b>Problem-</b> Primary Air (PA) fan, secondary Air (SA) fan and Induced draft (ID) fan Energy consumption was increasing progressively in Unit-7 Boiler due to APH leakage. <b>Solution-</b> Unit tripped on high turbine vib. During this Shutdown Unit 7, RHS APH PA-4 & SA-4 tube replaced. <b>Benefit-</b> Reduction in Total Fan Power consumption by 323.61 KW.	Energy Saving	Jul-22	5218.74	527.09
3.	APH Tube Plugging done in Unit#5 (Energy savings - 1058.14 KW) <b>Problem-</b> Primary Air (PA) fan, secondary Air (SA) fan and Induced draft (ID) fan Energy consumption was increasing progressively in Unit-5 Boiler due to APH leakage. <b>Solution-</b> Unit shutdown was taken and APH tube plugging was done. <b>Benefit-</b> Reduction in Total Fan Power consumption by 1058.14 KW.	Energy Saving	Aug-22	18906.39	1909.54
4.	APH Tube replacement done in Unit#4 RHS SA1 & PA1 (Energy savings - 2276 KW) <b>Problem-</b> 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. <b>Solution-</b> Unit shutdown was taken and APH tube replacement was done. <b>Benefit-</b> Reduction in Total Fan Power consumption by 2276 KW.	Energy Saving	Oct-22	28850.12	2913.86

S. No.	Description of energy reduction initiative	Nature of initiative	Month of incorporating initiative	Energy reductions in GJ (Estimated annual average reductions in energy due to a particular initiative)	GHG emissions saved due to energy saving (MTCO <sub>2</sub> e)
				FY 2023	FY 2023
5.	APH Tube replacement done in Unit#3 SA1 &PA1 (Energy savings - 1798 KW) <b>Problem-</b> Primary Air (PA) fan, secondary Air (SA) fan and Induced draft (ID) fan Energy consumption was increasing progressively in Unit-3 Boiler due to APH leakage. <b>Solution-</b> Unit shutdown was taken and APH tube replacement was done. <b>Benefit-</b> Reduction in Total Fan Power consumption by 1798 KW.	Energy Saving	Jan-23	10,003.33	1,010.34
<b>Total</b>				<b>73,891.999</b>	<b>7,463.092</b>

S. No.	Description of energy reduction initiative	Nature of initiative	Month of incorporating initiative	Energy reductions in GJ (Estimated annual average reductions in energy due to a particular initiative)	GHG emissions saved due to energy saving (MTCO <sub>2</sub> e)
				FY 2023	FY 2023
<b>Ratnagiri Plant</b>					
1.	Augmentation of rain water harvesting system resulted in reduced pumping hours for drawing fresh water from MIDC line	Saving of electricity	Jun-22	103	27
2.	Replacement of HP exhaust dump valve to avoid the passing of high energy steam in Unit-4	Saving of Natural Resources	Aug-22	10,273	907
3.	Improvement in Aux. Power Consumption by de-staging of BFP in Unit-1	Saving of Natural Resources	Jan-23	837	205
4.	Sequential Valve Mode of Turbine Governing Valve Operation resulting in lower throttling losses thereby saving coal consumption	Saving of Natural Resources	Dec-22	36,901	5,651
<b>Total</b>				<b>48,114</b>	<b>4,307</b>

The GHG emissions intensity only for thermal power plants is 0.92 tco<sub>2</sub>e / MWh.

The air emissions intensity are as follows:

SOx - 1.68 kg / MWh

NOx - 0.95 kg / MWh

SPM - 0.16 kg / MWh

Energy consumed (JSW Energy Consolidated):

Renewable sources:	1,24,444 GJ
Non-Renewable sources:	
i) Total electricity consumption	56,70,779 GJ
ii) Total fuel consumption within organisation	8,86,29,496 GJ
Total energy consumed (Non-renewable)	9,43,00,275 GJ
Net electricity generation FY23	21,866 MU

IPCC factors used for energy conversion

S. No.	Description of energy reduction initiative	Nature of initiative	Month of incorporating initiative	Energy reductions in GJ (Estimated annual average reductions in energy due to a particular initiative)	GHG emissions saved due to energy saving (MTCO <sub>2</sub> e)
				FY 2023	FY 2023
<b>Vijayanagar Plant</b>					
1.	SBU1 BFP recirculation valve logic modification has given a saving of 311 kwh at 90 MW	Energy savings	June-22	12.96	1184.4
2.	SBU1 PA fan auto pressure set point based on coal flow has given a saving of 15 kwh	Energy savings	September-22	0.33	30.2
3.	SBU1 U2 BFP stopping at low load	Energy savings	August-22	21.97	2007.8
4.	SBU2 U1 To reduce slip losses in turn to reduce BFP Power Consumption	Energy savings	May-22	20.05	1832.5
5.	SBU2 U1 Low load CEP VFD locking speed reduced from 700 to 600 to avoid throttling losses	Energy savings	June-22	1.67	152.4
6.	SBU2 U1 Two mill Operation at low <120 MWh & coal flow < 58 TPH	Energy savings	July-22	6.00	548.4
7.	SBU2 U1 Two mil Operation at low <120 MWh & coal flow < 58 TPH & reduced header pressure Up to 5.5 Kpa & 3 mill operation reduced header pressure up to 7.0 Kpa	Energy savings	June-22	23.80	2175.6
8.	SBU2 U1 Rectification of blade pitch mechanism malfunction, Secondary Air Flow reduced to 480 to 440 tph	Energy savings	July-22	1.66	151.4
9.	SBU2 U1 Reducing secondary air Flow & reducing PA flow by two mill operation	Energy savings	June-22	8.26	755.0
10.	SBU2 U1 ESPT Power Consumption Optmization by stopping 4 th & 10 th filed in both passes during Low load operation hours	Energy savings	June-22	1.94	177.5
11.	SBU2 U1 Ash handling Compressor stopping upto max 12 hrs, according to load condition in turn to reduce Power Consumption	Energy savings	July-22	1.82	166.6
12.	SBU2 U1 Switching OFF 2 CT fan's Stopped for power optimization during 90 MWh operation at < 92 Kpa vacuum	Energy savings	July-22	10.02	915.9
13.	Cooling towers blade replacement in SBU1 (6 NOS.)	Energy savings	February-23	0.53	48.5
<b>Total</b>				<b>110.469</b>	<b>10146.120</b>



# TCFD ALIGNMENT

## Introduction

The TCFD framework consists of four key areas: governance, strategy, risk management, and metrics and targets. It provides guidelines for organizations to assess and disclose climate-related risks and opportunities in a consistent and comparable manner. By following these guidelines, companies can better understand and communicate their climate-related impacts, ensuring greater accountability and transparency for investors and stakeholders.

JSW Energy is committed to addressing the risks and opportunities associated with climate change. We recognize that climate-related issues have the potential to significantly impact our business and financial performance. Therefore, we are adopting the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to assess and disclose climate-related risks and opportunities. Further onto our journey to align with the TCFD recommendation, we are undertaking detailed studies to reexamine our risks and opportunities.

## Governance

### Board Oversight

In order to drive momentum and accountability, we have board level committees to assess and manage climate-related risks. All the sustainability achievements and initiatives are presented and discussed at the Board Level Sustainability Committee



during the bi-annual gatherings. This collaborative approach is holistically streamlining the effective institutionalization of climate strategies across the organization.

### Management Oversight

At the management level, the Executive Committee and corporate functions teams are responsible for closely reviewing and governing climate-related matters:

- Executive Committee: Climate change and sustainability KPIs and performance of the company are discussed with the Executive Committee during its monthly meetings.

- Corporate Functions Teams: Corporate risk, sustainability, and strategy are the three primary teams responsible for supporting the Executive Committee in climate-related matters. These teams interact with each site on a monthly basis and also interact with other cross-functional teams as and when needed.

### Strategy

Our strategy also includes evaluating the potential transition and physical risks associated with climate change, such as extreme weather events and changes in water availability, to ensure the resilience of our operations.

We are utilizing internationally accepted scenarios from two primary sources:

- Intergovernmental Panel on Climate Change (IPCC) which provides pathways for assessing physical impacts of climate change from varying degrees of GHG emission concentration in the atmosphere
- International Energy Agency (IEA) which models implications of climate-related policies and technologies on energy systems globally

We will use the IPCC Representative Concentration Pathways RCP8.5 and RCP4.5 for assessing location-specific physical risks and IEA World Energy Outlook (WEO) 2020 Stated Policies Scenarios (STEPS) and Sustainable Development Scenario (SDS) for assessing transition risks.

**Physical and transition climate change scenarios**

**1. Business-as-usual scenario**

- **IPCC scenarios (Physical Risks)**

**RCP 8.5 scenario**

Extremely high emissions scenario with global mean temperature expected to rise by 3.7 degC (2.6 - 4.9 degC) by end of the century. The scenario assumes high dependence on fossil fuels and no policy-driven mitigation.

- **WEO-2020 scenarios (Transition Risks)**

**Stated Policies scenario**

Incorporates existing and announced climate policies (till mid-2022) including Nationally

Determined Contributions from governments across the world. The scenario provides a baseline against which additional actions are required to meet SDS climate goals.

**2. Optimistic scenario**

- **IPCC scenarios (Physical Risks)**

**RCP 4.5 scenario**

Intermediate emissions scenario with global mean temperature expected to rise by 1.8 degC (1.1 - 2.6 degC) by end of the century. The scenario considers increased use of renewable energy and strong policy driven mitigation.

- **WEO-2020 scenarios (Transition Risks)**

**Sustainable Development scenario**

Provides an energy sector pathway which is consistent with meeting global net-zero CO2 emissions from the energy system as a whole by around 2070, universal access to energy and reduced air pollution.

These climate scenarios are viewed as tools that help us make informed business decisions while taking into consideration potential impact of climate risks. For identification and assessment of climate-related physical risks, location-specific climate profiles will be developed for each asset to determine climate change impacts in every region of our operations. These risks were assessed based on two parameters:

- 0 Probability of occurrence – likelihood of occurrence of a given risk due to projected changes in climatic parameters at regional level
- 0 Expected impact – extent of impact that JSW Energy is likely to witness from an identified risk (function of our climate resilience at plant/facility level)



Risks	Description
<p><b>Physical risks</b> Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns.</p>	<p><b>Chronic:</b></p> <ol style="list-style-type: none"> <li>1. Water unavailability leading to significant operational impacts to our plants located in regions with high water stress.</li> <li>2. Disruption of operations due to extreme heat waves caused by the temperature change.</li> </ol> <p><b>Acute:</b> Extreme climatic events like intense rainfalls, cyclones leading to flooding which may result in operational shutdowns and/or service disruptions, unstable raw material procurement.</p> <p><b>Mitigation Strategy:</b> We are diversifying our operations across India and are committed to expand widely in RE which does not require any raw materials during the operational phase. All our plants are zero liquid discharge plants and we aim to maintain this status while reducing the specific fresh water consumption in the years ahead. We are also evaluating the modalities to improve the water conservation and build an additional storage facility to avoid any effect on the operations due to water scarcity. While these measures help us in increasing the resilience of our operations, we will work towards setting up the systems to monitor the weather patterns (especially rainfall patterns) to understand the likelihood of these risks occurring in the near term.</p>
<p><b>Transition risks</b> Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change.</p>	<p><b>Policy:</b> Increasingly stricter environmental laws and regulations such as the Perform, Achieve, and Trade (PAT) mechanism, Carbon tax, Increased Coal Cess – altogether potentially increasing the cost of production and lower profit margins.</p> <p><b>Market:</b></p> <ol style="list-style-type: none"> <li>1. Change in consumer preferences with increasing demand for renewable energy to substitute thermal energy.</li> <li>2. Risks associated with the volatility of prices of coal as well as its quality.</li> </ol> <p><b>Technology:</b> Financial non-viability of capital intensive low-carbon technologies and the associated challenges in adopting to these breakthrough technologies.</p> <p><b>Reputation:</b> Adverse impacts of our business decisions on our social licence to operate which is intrinsically tied to our contributions towards the well-being of the wider community and environment affecting our standing with our investors as well as society at large.</p> <p><b>Mitigation Strategy:</b> We are in the process of substituting the coal-based boilers at one of our location with the waste gases from our Group company, JSW Steel. This avoids the need for fossil fuel thereby reducing the policy and market risks. Our ICP of 12 USD/tCO<sub>2</sub>e of carbon will allow us to adopt a balanced view of the feasibility of any proposed low carbon in the near and medium term, ensuring that we continue in our low carbon journey without losing our competitive edge.</p>
<p><b>Opportunities</b></p>	<p>We see the increasing demand for renewable energy as an opportunity for JSW Energy alongside India's commitment to have 500 GW of fossil free energy by 2030.</p> <p>We are committed to expand only in the renewable space and by 2030, 85% of our power mix is expected to be from RE which is a significant increase from the current levels of 30%.</p> <p>Furthermore, increasing policy and regulatory push towards low carbon growth creates advantage for our ongoing expansion plans to have 20 GW by 2030.</p> <p>Our commitment to be a Net-Zero company by 2050 is further supported by our Science Based Targets (SBTi) taken for 2030. We are also working towards ultra low carbon technologies like green hydrogen and CCUS (carbon capture and utilisation and storage) that can have a positive impact in promoting the decarbonisation of other industries.</p> <p>While we recognise that not all of these measures are viable today, we are continuously monitoring the landscape to ensure that we do not miss the bus on any of these opportunities as and when they do turn the corner.</p>



## Risk Management

We will use the climate change risk assessment framework which has been used for identification and assessment of risks at two levels:

- Asset/plant level: Climate-related physical risks to be identified and assessed at asset/plant level. These risks are categorized into high, medium and low risk levels using a 3X3 risk matrix based on two parameters – probability of occurrence and expected impact of risks.
- Corporate level: Climate-related transition risks and opportunities arising due to changes in climate policies, market landscape and operating environment to be identified and assessed at

the corporate level. Similar to physical risks, transition risks are also classified into high, medium and low risks based on the level of impact that these risks might have on our operations.

Key risks and opportunities identified at both asset/plant and corporate levels will be reviewed, monitored, and evaluated to develop risk mitigation strategies. Similar to risk identification, strategy formulation to address and manage identified climate-related risks and opportunities takes place at both corporate and asset/plant levels.

### Metrics and Targets

We have established key performance indicators (KPIs) and targets to monitor our progress

in managing climate-related risks and opportunities. These include metrics related to greenhouse gas emissions, energy consumption, and renewable energy capacity. We regularly track and report on these metrics, providing transparency to stakeholders on our performance.

### Way Forward

As we embark on our TCFD journey, we remain committed to strengthening our climate-related disclosures and actions. We will continue to assess and disclose climate-related risks and opportunities, improve our risk management practices, set ambitious targets, and invest in low-carbon technologies. By doing so, we strive to create long-term value for our shareholders while contributing to a sustainable future.

## Energy

### Targets

# ENHANCE THE RENEWABLE POWER SHARE IN OUR TOTAL INSTALLED CAPACITY BY 2030 REDUCE OUR ENERGY INTENSITY AND AUXILIARY POWER CONSUMPTION BY MORE THAN 50% BY 2030

#### Share of Renewable / Thermal

<b>Renewable Capacity</b>	<b>Thermal Capacity</b>
<b>FY 2023</b>	<b>FY 2023</b>
<b>52%</b>	<b>48%</b>
<b>3,406 MW</b>	<b>3,158 MW</b>

## Clean Energy

One of the biggest trials the world is facing today is climate change and as a responsible corporate, JSW Energy has taken early action to contribute to the global agenda of climate action. JSW Energy, in its commitment towards Net Zero, has undertaken the target on increasing the share of renewable energy in its overall portfolio by 2030. This transition shall augment JSW Energy's contribution to meeting the nation's target towards decarbonisation. JSW Energy strives to pursue its economic and sustainability goals by undertaking conscious steps towards decarbonised and digitalised energy models, adopting principles of circularity in water and waste management.

The organisation has aligned its business model with the global UNSDG agenda and has further taken steps to strengthen its renewable energy portfolio.

### Initiatives undertaken to increase the share of Renewable Energy

1993 MW Wind projects are under construction in Karnataka and Tamilnadu. 240 MW hydro project is under construction in Himachal Pradesh. JSW Energy has recently commissioned 225 MW Solar Plant near Vijayanagar, Karnataka. The company has completed the acquisition of Mytrah Energy which has renewable assets worth 1,753 MW in FY 2023. SECI-XII - 300 MW has been awarded recently. Thus, in FY 2023 we have

added 2,005 MW of Renewable Energy and by the end of CY 2024, the organisation is expected to add another 2,506 MW of Renewables to its present capacity of 6,564 MW.

The company has won bids for 3.4 GWh storage projects comprising of (i) Battery storage energy bid from Solar Energy Corporation of India (1 GWh / 500MW). (ii) Hydro Pumped Storage Project from Power Company of Karnataka limited for procurement of 2.4 GWh for a period of 40 years. Hence it is a pragmatic view that the organisation is strategizing to increase its renewable portfolio which is in line with its 2030 commitment of achieving 85% Renewable Energy portfolio amounting to 20 GW

## Sustainable Financing Through Green Bonds

JSW Hydro Energy raised USD 707 million (₹5,163 crore) amount through issuance of Green Bonds in FY 2022. These green bonds have proven to be an effective financial instrument for the company, enabling them to secure investments for their renewable energy projects. Furthermore, JSW Hydro Energy is anticipated to continue issuing green bonds in the future, emphasizing their commitment to sustainable financing and the development of clean energy initiatives.

To ensure a consistent and standardized approach in its green bond issuances, JSW Hydro Energy has established a comprehensive Green Bond Framework. This framework serves as a robust methodology that applies to all

future green bond instruments issued by the company. It provides clear guidelines and principles to ensure transparency, disclosure, and integrity in the development of a sustainable finance market.

The Green Bond Framework adopted by JSW Hydro Energy is aligned with the ICMA Green Bond Principles (GBP) of 2018. These principles are a set of voluntary guidelines that are widely recognized and respected in the sustainable finance industry. By adhering to the GBP, JSW Hydro Energy aims to promote responsible investment and support the growth of the clean energy sector.

The issuance of green bonds has proven to be an effective strategy for JSW Hydro Energy to attract investments for its clean energy

projects. These funds play a crucial role in supporting the development and expansion of hydro-based power plants, which contribute to reducing carbon emissions and mitigating the impacts of climate change.

By leveraging the potential of green bonds and aligning with international standards, JSW Hydro Energy demonstrates its commitment to sustainable finance and environmental stewardship. The company's efforts in raising funds through green bonds contribute to the transition towards a greener and more sustainable energy future.

The Framework encompasses five fundamental pillars, which include the Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds,



**The Green Bond Framework adopted by JSW Hydro Energy is aligned with the ICMA Green Bond Principles (GBP) of 2018. These principles are a set of voluntary guidelines that are widely recognized and respected in the sustainable finance industry. By adhering to the GBP, JSW Hydro Energy aims to promote responsible investment and support the growth of the clean energy sector.**

Reporting, and External Review. These pillars serve as the core elements that outline the principles and guidelines for JSW Hydro Energy's green bond initiatives. Each pillar plays a crucial role in ensuring transparency, accountability, and effective management of the funds raised through the issuance of green bonds.

The Framework is publicly available, and can be accessed [here](#) for further details.

### **Internal Carbon Pricing: Promoting Sustainability and Mitigating Climate Change Impacts**

JSW Energy recognizes the urgent need to address climate change and its far-reaching consequences. As part of the organization's commitment to sustainability, it has implemented an Internal Carbon Pricing mechanism, which plays a vital role in the operations and decision-making processes. This approach aligns with the broader strategy to reduce greenhouse gas emissions, promote energy efficiency, and transition towards a low-carbon economy.

The development of Internal Carbon Pricing (ICP) mechanism involved adopting a widely recognized approach known as shadow pricing. This approach has gained prominence globally for determining carbon pricing and serves as the foundation for JSW Energy's ICP methodology. Through careful analysis, by utilizing data for Asian as well as other global companies, the organization has derived an ICP range of 10-12 USD per ton of CO<sub>2</sub>e.

The adoption of a shadow pricing approach, combined with extensive evaluation of carbon prices worldwide, provides a robust foundation for the ICP framework. This range allows the company to incorporate the potential costs associated with carbon emissions into its decision-making processes, encouraging the adoption of cleaner technologies and practices across operations.

Using this approach, the company has initiated few small investment analysis of buying new technology equipment, Pumps & VFD's (variable feed drives) which helps to increase efficiency and results in lower emissions but is more costly than the traditional equipment. Based on the outcomes of the ROI analysis, using shadow pricing for ICP, JSW Energy has bought VFD's & other equipment at the thermal power plants.

By incorporating Internal Carbon Pricing, JSW Energy has achieved several key objectives. Firstly, it acts as an economic signal, incentivizing the teams to identify and implement emission reduction opportunities across operations. This helps optimize energy use, invest in cleaner technologies, and reduce the operational carbon footprint. Secondly, it facilitates informed decision-making by providing a comprehensive assessment of the financial implications associated with different emission scenarios and investment choices.

JSW Energy firmly believes that by embracing Internal Carbon Pricing, the organization is not only mitigating climate change risks but also fostering innovation, driving operational efficiencies, and contributing to the global transition to a sustainable, low-carbon future. Through this strategic approach, JSW Energy aims to demonstrate leadership in the energy sector and create long-term value for all the stakeholders while actively addressing the challenges posed by climate change.

# Water

To develop and sustain life, it is essential to protect and replenish the drainage systems. Sustained, reliable and judicious access to water is essential for JSW Energy's kind of business where water finds its usage in cooling, ash disposal, heat removal in plant auxiliaries, and several other consumptive purposes such as fire-fighting and gardening.

JSW Energy understands the crucial need of managing water resources effectively both within and outside of its operational sites and therefore has devised a variety of strategies to maximise water usage efficiency across the organisation. The organization has established structured processes for identifying, managing, and mitigating water-related risks on business along with robust long-term watershed management strategies for host communities.

## Few initiatives at JSW Energy as a water steward are listed below

- One of its plants, in Ratnagiri, has deployed rainwater harvesting systems to collect and store water in dams near Vinayakwadi township, which is almost of 35,000 cubic meters water storage capacity. This stored water is then used for plant operational processes and drinking purposes.
- At Vijayanagar, cooling water is recycled through the RO plant and re-used in the processes within the plant. Similarly, the clear water from the STP is re-used in the horticulture activities. Thus, overall around 11,37,923 litres of water has been treated and reused in the plant in FY 2023.
- At Barmer, the Indira Gandhi canal remains the potential water source and efforts were made to enhance the water monitoring system by installing a water meter close to the PT plant from where the water offtake for utilisation in the power production process is

initiated. This installation eliminates all the approximate deductions for water loss (through evaporation, leakage etc.) thereby providing an improved and close to real water consumption values.

## Water Stress

- Two thermal power plants of JSW Energy, namely at Vijayanagar (860 MW) and Barmer (1,080 MW) along with the Hydropower plant (1,391 MW) fall in high water stress area while the power plant at Ratnagiri (1,200 MW) falls in low water stress region. The solar power plant at Vijayanagar (225 MW) is also in the high water stress region.

Total water withdrawal at Barmer plant was 1,88,99,181 KL while water consumption was 1,80,21,676 KL. At Vijayanagar water withdrawal was 85,75,246 KL and consumption 81,30,738 KL. A total of 5,95,09,970 KL of water was discharge across all plants of JSW Energy, out of this 5,84,11,696 KL is sea water discharge at Ratnagiri plant.





**Target**

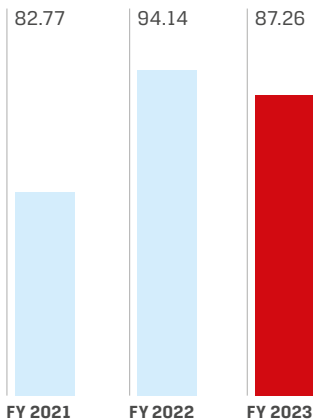
# REDUCE OUR WATER CONSUMPTION PER UNIT OF ENERGY PRODUCED BY 50% BY 2030

Initiatives Undertaken for the progress

## Water Withdrawal

FY 2021	FY 2022	FY 2023
<b>Groundwater</b> 0 KL	<b>Groundwater</b> 0 KL	<b>Groundwater</b> 28,017 KL
<b>Surface water</b> 2,36,88,280 KL	<b>Surface water</b> 2,48,24,795 KL	<b>Surface water</b> 2,88,27,036 KL
<b>Third-party water</b> 0 KL	<b>Third-party water</b> 0 KL	<b>Third-party water</b> 0 KL
<b>Seawater</b> 5,70,89,846 KL	<b>Seawater</b> 6,53,25,454 KL	<b>Seawater</b> 5,84,11,696 KL
<b>Total</b> 8,27,78,126 KL	<b>Total</b> 9,41,88,905 KL	<b>Total</b> 8,72,66,749* KL

**Total Water Withdrawal**  
(in million KL)



### Value Creation Story

**Strategic Objective**  
Ensure optimum utilization of water received from MIDC and avoiding wastage.

**Material Topic Addressed**  
Water and Effluent Management

**Target Area**  
JSW Energy  
Ratnagiri Plant

**Alignment with SDG**



\* Does not include water withdrawal in Solar Vijayanagar Plant as it was not metered.



**Key Risks:** Leakages across the pipeline which pumps the water to the plant

**Challenges:** Effective use of raw water at JSWEL Ratnagiri Complex

**Summary:** Quarterly walk throughs are arranged along this pipe line to inspect and arrest leakages. Flow meters are installed at various distribution point and consumption is monitored and recorded on daily basis. Sewage water is treated in STP and treated water is utilized for gardening. Effluent of Demineralize water treatment and Boiler water blowdown water is used as make up to cooling water system. From clarified water storage tank water is supplied to

labour colony situated adjacent to plant. By arresting leakages and operating tank inlet valves at predetermined time, water consumption is reduced to 500 m<sup>3</sup> per day from 700 m<sup>3</sup> per day.

Rain water harvesting is done by construction of dam near vinayakwadi township. Water storage capacity of this dam is 35,000 m<sup>3</sup>. Manual interventions are constructed at upstream side of dam to increase water hold up. Water is pumped to clarified water storage tank near plant from July to December from this facility. In FY 2023 about 3,50,000 m<sup>3</sup> water was pumped from rain water harvesting facility to plant for process and drinking water use.

### Effluent Management

JSW Energy maintains a 'Zero Liquid Discharge Status' at all the plants. Through this, the systems are designed to internally manage the process wastewater by recycling and reusing, thereby eliminating the need to discharge the effluents outside the plant. The company's sustainability strategy aligns with this approach, ensuring wastewater is treated and recycled in the water use cycle or diverted for horticulture use. In FY 2023 JSW Energy recycled and reused 4,252.308 million liters of water, demonstrating its commitment to sustainability.

**Targets**

# MAINTAINING A 'ZERO LIQUID DISCHARGE' FOR ALL OUR POWER PLANTS

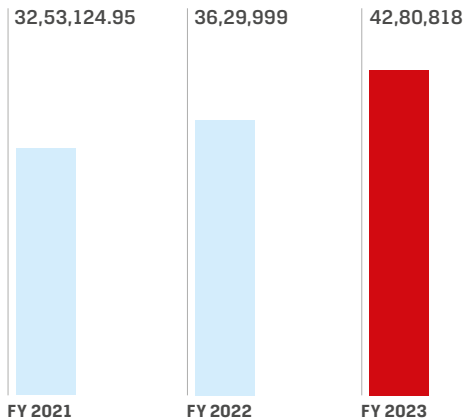
Initiatives undertaken to maintain ZLD Status

## Waste Water Recycled

FY 2021	FY 2022	FY 2023
32,53,124.95 KL	36,29,999 KL	42,80,818 KL

### Waste Water Recycled

(kL)



## Waste Management

Minimised environmental footprint remains overarching objective for all business decisions at JSW Energy. Being an energy provider with complex systems generating different waste streams both with hazardous and non-hazardous content, we take up sustainable waste management practices for safe disposal. JSW Energy recognizes this responsibility and adopts circularity principles to manage waste sustainably, including recycling rejected coal and hazardous waste, and using ash in cement manufacturing. Our total ash generation in FY 2023 was 13,89,038.26 MT and 100% was disposed with no environmental impact.

**Targets**

# MAINTAIN 100% RECYCLING OF FLY ASH AND WASTES GENERATED FROM OUR OPERATIONS

Progress against the target

## Waste Ash Recycled (%)

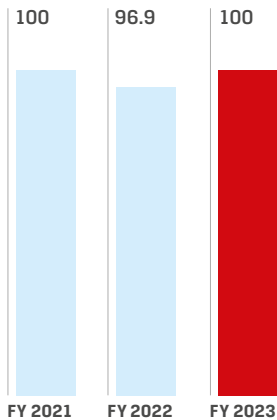
FY 2021	FY 2022	FY 2023
100	96.9	100

## Waste Utilization (MT)

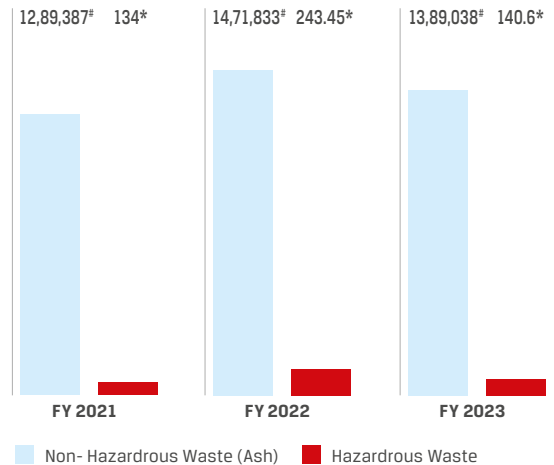
Non- Hazardous Waste (Ash)

FY 2021	FY 2022	FY 2023
12,89,387 (134)*	14,71,833 (243.45)*	13,89,038# (140.6)*

### Waste Ash Recycled (%)



### Waste Utilization (MT)



# Ash Utilization was more than ash generation as previous years ash, stored in the ash pond, was also used up as per requirement.

\* Hazardous Waste

Waste management at JSW Energy is an important activity and all concerned teams ensure that all compliances related to the handling of waste material whether hazardous or non-hazardous are followed in a responsible manner. All power plant locations have tie-ups with authorized agencies for re-cycling / reuse / disposal of waste in a safe and sustainable manner.

- **Hazardous waste:** The power plants mainly have waste oil generated during the maintenance activities, which needs a safe disposal through authorized agencies and authorized recyclers. The plants have safe storage locations for used oil with all safety systems within the set-up. Small quantities of e-waste, battery waste, MS scrap waste, plastic waste is generated at most of the locations where these wastes are also handled & disposed in a responsible manner.
- **Non-hazardous waste:** Ash is produced by the thermal power plants. All thermal power plant locations have a structured set-up of ash collection, storage and disposal system. Traditionally, Ash silos of desired capacity are available in all the plants with provision of ash evacuation into an Ash Bulker at the bottom. All plants have tie-ups with Cement making & brick making companies who take away all the ash from the plants which is used as an input material for their product.

In FY 2023, 100% Ash utilization has been done at all plants of JSW Energy. It will not be out of place to mention that a 45,000 MT Ash Silo has been constructed at the JSW port adjacent to JSW Energy

Power plant at Ratnagiri in FY 2023. The Silo and all its associated infrastructure has been completed and Ash is now being filled up in the Silo. The sea route shall be utilised to transport the Ash to all prospective buyers, both in the national markets as well as for international requirements to other countries.

### **Management through Principles of Circularity**

JSW Energy has implemented several initiatives to reduce waste generation, such as optimizing processes, use of smart and latest technologies, innovative business plans for increasing the material efficiency, and streamlining lifecycle of materials across the organisation. This has proven effective in planning the management strategies right from collection, transport, treatment and disposal of wastes. The company ensures to adhere by circularity philosophy for minimizing the adverse effects on stakeholders, community and environment.

## **Air Emissions**

### **Strategic Approach**

Power generation from conventional energy sources remains the major emitter of greenhouse gases and other pollutants leading to global warming. Recognizing the need for energy producers to act with agility, JSW Energy has deployed state of art technologies for managing and maintaining the air quality which also forms a key focus area in sustainability plans of the company. To control the release of gaseous emissions resulting from the operations, the company has devised a range of mitigation strategies at the plant level. At our Barmer facility, the organization has recently replaced the old ESPs with new technology, state-of-the-Art, Electrostatic Precipitators (ESPs) to boost the plant efficiency in eliminating particulate matter from the flue gas stream. Similarly, at the Ratnagiri plant, Flue-gas desulfurization (FGD) has been installed to reduce Sulphur emissions from exhaust flue gases, which significantly curbs air pollution.



**Targets**

**(BASE YEAR 2020 AND TARGET YEAR IS 2030)**

**REDUCE THE DUST EMISSIONS, PER UNIT OF ENERGY PRODUCED, BY 2/3<sup>RD</sup>**

**REDUCE THE EMISSIONS OF OXIDES OF SULPHUR AND NITROGEN, PER UNIT OF ENERGY PRODUCED, BY 60%**

**Progress against the target**

**FY 2021**

**Sp. PM**

**0.14 KG/MWH / 3,054.82 TONNES**

**FY 2022**

**Sp. PM**

**0.14 KG/MWH / 3,124.68 TONNES**

**FY 2023**

**Sp. PM**

**0.12 KG/MWH / 2,863.24 TONNES**

**Sp. Sox**

**1.65 KG/MWH / 35,203.20 TONNES**

**Sp. Sox**

**1.52 KG/MWH / 33,810.60 TONNES**

**Sp. Sox**

**1.25 KG/MWH / 29,233.46 TONNES**

**Sp. NOx**

**0.95 KG/MWH / 20,273.52 TONNES**

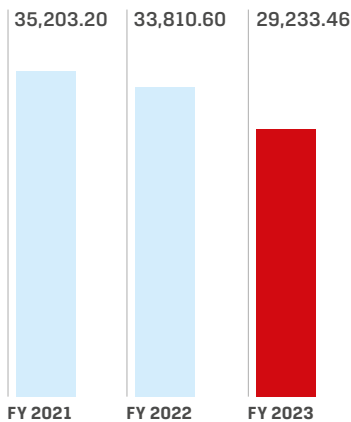
**Sp. NOx**

**0.81 KG/MWH / 18,137.79 TONNES**

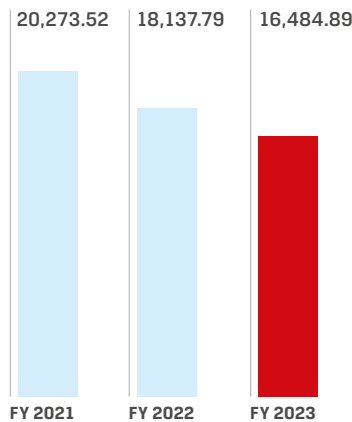
**Sp. NOx**

**0.70 KG/MWH / 16,484.89 TONNES**

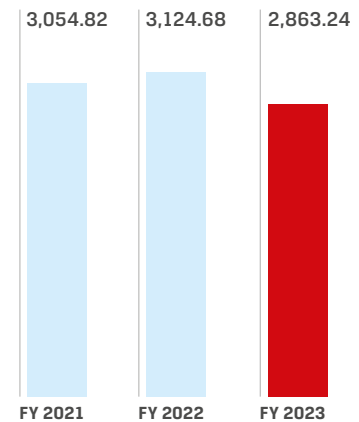
**SOx (in Tonnes)**  
(MT)



**NOx (in Tonnes)**  
(MT)



**PM (in Tonnes)**  
(MT)



## Biodiversity

JSW Energy prioritizes biodiversity preservation programmes for proactively identifying and addressing potential risks to prevent any net loss of biodiversity across all its operational sites. A significant amount of sustainability efforts are aimed at reducing the environmental impact of JSW Energy's business operations. The company has been actively involved in several ecological conservation programs at our Ratnagiri and Barmer plants, which include a range of plantation activities. The biodiversity

protection initiatives are designed to maintain the ecological balance of host communities.

The organization has been undertaking many bio-diversity activities like plantations all-round the year, preservation / restoration of ponds & greenery, drinking water spots for wildlife in areas surrounding our operational plant. Thus, in order to assess the result / impact of these activities as well as further plan for biodiversity management in the area, JSW Energy has also undertaken a detailed seasonal ecosystem study at its Barmer plant during

the reporting period to understand the patterns across all 4 seasons. JSW Energy understands the impacts its operations may create on the external environment and the surrounding biodiversity. In order to minimize the negative impacts, the organisation has initiated Biodiversity Assessments across 5 of its operating/project sites. These assessments shall augment the establishment and implementation of a biodiversity management plan which shall lead the organisation towards achieving its target of "No Net Loss to Biodiversity" by 2030.



### Target

# ACHIEVE A 'NO NET LOSSES OF BIODIVERSITY AT ALL OUR OPERATING SITES

#### Initiatives undertaken to conserve and protect biodiversity around operating sites

**FY 2021**  
**Number of saplings planted**  
**10,123**

**FY 2022**  
**Number of saplings planted**  
**37,196**

**FY 2023**  
**Number of saplings planted**  
**33,719**

**Value Creation Story**

**Strategic Objective**

Biodiversity conservation is the protection and management of biodiversity to obtain resources for sustainable development. JSW Energy had 3 key strategic objectives:

- To preserve the diversity of species.
- Sustainable utilization of species and ecosystem.
- To maintain life-supporting systems and essential ecological processes.

**Target Area**

Environment and Areas surrounding JSW Energy Barmer Plant

**Material Topic Addressed**

Biodiversity Preservation

**Alignment with SDG**



**Key Risks:** Decline of forest cover, loss of species, temperature & moisture regulation, decline in animal habitat

**Challenges Overcome:** Desert area around the plant with water scarcity

**Summary:** JSW Energy (Barmer) Ltd has tied up with CII for securing and monitoring eco system developed in the plant and nearby area in line with the

TNFD framework. In addition, the company has executed extensive plantation drive in and around the plant. In this financial year, 5,250 saplings have been planted in the plant premises.

JSW Energy (Barmer) Ltd had developed the green belt in the desert area, which boosts to sustainable improvements in bio diversity objectives. The organization has 2 reservoirs which help any birds and species to migrate here.

In addition, the company also fixed water points at many places across its plant, which also play major role in protecting ecosystem. Though the water is pumped from the IGNP canal 184 KMs away from the plant, JSW Energy has meticulously developed green belt around 132 acres which includes the following varieties of plants and trees.

**TREES**  
Neem, Sesame

**LEAF PLANTS**  
Olive

**FLOWERS**  
Kaner and Tikoma and ornamental types

**OTHERS**  
Amla, Ber, Dates, Sugarcane

**FRUITS**  
Mango, Banana, Orange, sweet lemon, Guava & Pomegranate



# SOCIAL SUSTAINABILITY – PROGRESS STARTS WITH PEOPLE

## Strategic Approach

JSW Energy believes that employees are the key force driving sustainable growth of companies. The company select talents from diverse fields to lead the paradigm shift and strive to create an environment in which employees can sufficiently demonstrate their own qualities. JSW considers people essential to the growth and success of its operations.

JSW Energy is dedicated to its employees ongoing professional and personal development, and provides trainings in various areas of health and safety, skill upgradation, soft skills, to name a few. JSW Energy believes that it is the agile workforce, vibrant work environment, the expansive skill set and technical know-how of its employees enable innovative and sustainable solutions and long-term value creation for its stakeholders.

At JSW Energy, human capital is not just a strategic differentiator but is at the core of the Company's existence. The organisation consistently strives to create an environment which supports its employees' growth and aspirations. JSW Energy leverages its robust pool of knowledge, skills, competencies, technical expertise and experience to drive shared organisational objectives and maximise value.

JSW Energy has adopted various policies to ensure the development of its human capital and the

community. Key policies for social development are as follows:

- Policy on Human Rights
- Policy on Labour Practices and Employment Rights
- Health and Safety Policy
- Policy on Local Considerations
- Policy on Social Development and Community Involvement
- Policy on Indigenous People and Resettlement
- Policy on Cultural Heritage
- Policy on Making Our World a Better Place



For details on each policy, visit the company website: <https://www.jsw.in/investors/energy/jsw-energy-sustainability-policies>



## Permanent Employees

Age Group	FY 2023		FY 2022		FY 2021	
	Male	Female	Male	Female	Male	Female
<30	183	19	49	11	116	10
30-50	1,736	74	1,186	48	1,099	45
>50	287	11	298	11	297	11
<b>Total</b>	<b>2,206</b>	<b>104</b>	<b>1,533</b>	<b>70</b>	<b>1,512</b>	<b>66</b>

## Other than Permanent Employees

Age Group	FY 2023	FY 2022	FY 2021
Male	2,310	2,268	2,264
Female	120	189	210
<b>Total</b>	<b>2,430</b>	<b>2,457</b>	<b>2,474</b>

## New Hires - Permanent Employees

Age Group	FY 2023		FY 2022		FY 2021	
	Male	Female	Male	Female	Male	Female
<30	136	11	38	07	07	02
30-50	606	29	80	02	30	01
>50	35	2	10	00	1	00
<b>Total</b>	<b>777*</b>	<b>42*</b>	<b>128</b>	<b>09</b>	<b>38</b>	<b>03</b>

\*468 contractual employees (442 male and 26 female) brought under payroll at hydro-sholtu in FY 2023.

## Employee Turnover

Age Group	FY 2023		FY 2022		FY 2021	
	Male	Female	Male	Female	Male	Female
<30	8	4	13	03	7	01
30-50	58	4	56	01	24	02
>50	32	2	2	00	1	00
<b>Total</b>	<b>98</b>	<b>10</b>	<b>71</b>	<b>04</b>	<b>32</b>	<b>03</b>

## Performance and Career Development Reviews

Employees	FY 2023	FY 2022	FY 2021
Male	2,206	1,533	1,512
Female	104	70	66
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## Learning and Development

Training Data		FY 2023	FY 2022	FY 2021
Total Number of Permanent Staff Attended	Male	1,645	1202	1184
	Female	79		
Total Number of Training Hours	Male	37,108	23,198	33,715
	Female	2,331		
Average Training Hours	Male	17.5	-	-
	Female	23.31		
Overall Average Training Hours		17.07	14.47	21.36

# CARE Model

JSW Energy believes an agile and a motivated workforce helps the organisation achieve its objectives and move ahead in its sustainability agenda. With organisations returning to the business as usual scenario, the HR function has played an integral role in ensuring a smooth transition placing utmost importance on the physical and mental well-being of the employees.

An example of this is the CARE initiative, which promotes a world-class employee experience across all functional areas, leveraging cross-functional collaboration to achieve desired business outcomes demonstrating the HR team's commitment to fostering a supportive and productive work environment.

The company prioritizes aligning its vision, mission, objectives, and strategies with the active participation and engagement of its employees. As a result, the workforce is highly motivated to

meet the set Key Performance Indicators (KPIs) within defined timelines, enabling JSW Energy to achieve its business goals in a sustainable manner. The CARE Model is based on 4 key elements: Communication, Agility, Responsibility, and Elevation. The CARE model drives our employees towards becoming more adaptable, resilient, and accountable, driving meaningful results that align with our company goals. The model is centred on the belief that effective communication and agility, combined with a sense of responsibility and elevation, can help all the employees achieve greater success and contribute positively to the growth of the company.

CARE model's **COMMUNICATION** pillar establishes a comprehensive structure to engage employees across functions. A grievance redressal mechanism has been implemented to capture valuable insights through a knowledge

management system to address complex business issues and promote continuous learning. This approach fosters a collaborative culture that supports overall business objectives by leveraging multi-level communication and knowledge-sharing.

The **AGILE** pillar augments extensive stakeholder engagement through innovative and advanced mechanism.

CARE model's **RESPONSIBILITY** element aims to imbibe a problem-solving approach by the way of fostering a Kaizen culture of continuous improvement. JSW Energy institutionalizes QC activities on the shop floor to create an engaged workforce that supports its business objectives.

The **ELEVATED** pillar aims at augmenting a culture of multi-functional rewards and recognition throughout the organization.

In FY 2023, JSW Energy has undertaken new initiatives to raise the effectiveness of the CARE Model which are as below:

Communication	Agility	Responsibility	Elevation
<ul style="list-style-type: none"> <li>Corporate Induction</li> <li>Quarterly Company Initiative / Industry Update through Inhouse Bolt Magazine</li> </ul>	<ul style="list-style-type: none"> <li>Cross Functional collaboration testimonials - 'Energy Movers and Shakers'</li> <li>Launch of Energy Learning Hub - online platform for Employees to share their knowledge on sector-specific topics</li> </ul>	<ul style="list-style-type: none"> <li>Launch of Focused Group Discussions to motivate employees to come-up with fresh ideas and action plans through brainstorming sessions</li> </ul>	<ul style="list-style-type: none"> <li>Launch of 'My Development Plan' to cater to employees learning needs with customized online learning journeys</li> <li>Launch of 'Women at Energy' highlighting achievements of female employees and the value created by them</li> <li>Launch of 'Parivar ka Samachar' to provide recognition to family members of employees</li> </ul>



### Employee Well-being

A workplace can be happy and productive only when its employees get a sense of belonging towards the organisation. JSW Energy places extreme importance on employee wellbeing both physical and mental by running several initiatives including annual health checkup, medical insurance, accident and life covers, accessibility to medical treatment by means of onsite health centers. The Company also ensures that the employees focus on their mental well-being to be agile and productive.

JSW Energy also seeks constructive feedback from its employees on a regular basis to understand the gaps with respect to various initiatives for health and mental wellbeing. This feedback is used to bridge the gaps and devise new programmes as and when necessary.

### People Management Through Digitalisation

With most of the organisations adapting to the business as usual scenario, digitalisation is becoming a huge driving force in changing the very fundamental way that the organisations operate. Digital transformation

is not limited to the C-suite anymore across geographies but is becoming an important stepping stone for enabling fast paced progress in the workplaces. JSW Energy has also embraced digital transformation across its business processes for managing people and processes as HR plays an important role for accelerating the excellence across operations.

### Future of Work

JSW Energy understands the value created by its employees across the operations. Today, as the organisation looks to expand its presence, the HR team shall look to create

more upskilling opportunities for its employees across the various domains of engineering, operations, maintenance and project management to empower them to undertake challenging opportunities and develop the required skills and knowledge to work with the emerging technologies. The expansion into renewable and battery storage systems will provide employees with the opportunities to develop new skills and knowledge in emerging technologies. Diversification of JSW Energy's portfolio shall also provide employees with opportunities to work across different sectors, projects and locations offering them learning opportunities which will help them broaden their horizons and gain diverse perspectives.

Overall, the future of work at JSW Energy seeks to provide employees with various benefits, including career growth, skill development which shall ultimately lead to increased job satisfaction and employee retention.

### Succession Planning

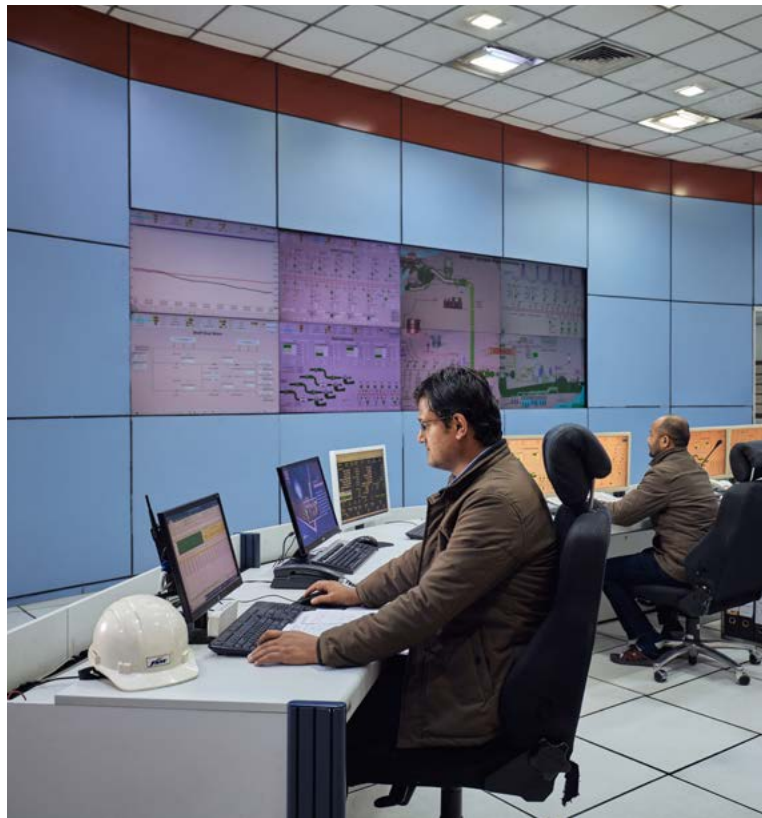
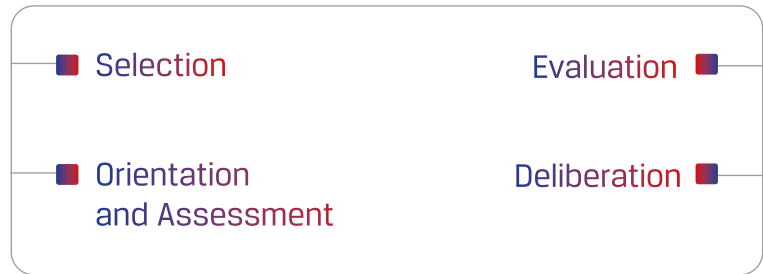
As organisations are scaling up their operations on a global scale, succession planning is seen as one of the most important planning aspects to ensure business continuity, keeping up with the changing business dynamics and better role models for boosting overall employee productivity.

JSW Energy being an aspirational organisation, believes in mobilizing its internal resources by way of skill enhancement trainings. These trainings help in fast-tracking the vertical growth of employees and have in place a rich talent pool which can work

in a multi-functional environment in challenging times to maintain a balanced business scenario. Additionally, as succession planning initiative, JSW Energy has launched 'Talent Board' for the senior leadership team which will help the organisation identify a successor for grooming and developing them into better leaders and ensuring their success in the long run.

The Company is also open-minded about hiring the right kind of people for top positions to bring out a balance between internal experienced manpower and the new leaders who bring with them freshness and innovation.

### Talent Assessment Process will have 4 broad Steps:



# Health and Safety



At JSW Energy, there is a proper safety governance structure in all the plant locations which includes safety committees, safety systems and safety related policies which the stakeholders must abide by. The company being ISO 45001 certified takes great measures with respect to occupational health and safety to ensure a zero-incident scenario. Some of the important safety measures in place include:

- An EHS Policy (Environment, Health & Safety)
- Robust Safety Management Systems
- Continuous monitoring and improvisation of safety systems to ensure an accident-free workplace
- Strict adherence to safety and all relevant environmental compliances
- Inculcating a safety culture by means of an 'Safety Observation System' for all the stakeholders on an online platform
- Effective implementation of all the safety norms and programs under the guidance and supervision of safety committees established across all the operational plants (10 safety committee's)
- Continuous training on safety aspects by means of modules (both on-line and off-line)
- Anticipating high risk scenarios via Barrier Health Management initiative and taking structured measures to mitigate these high Risks as a proactive risk management approach

- Clear safety instructions for the supply chain partners
- Implementation of JSW CARES program for Contractor Safety Management.
- Use of Digital transformation for the benefit of enhanced safety management across operations
- Continual Improvement programs to make safety a daily agenda.

JSW Energy's management aims to achieve a scenario where accidents are completely eliminated, resulting in a decrease in both the frequency and severity of incidents. To achieve this goal, the company is implementing top-notch safety practices and increasing training hours for all employees at different levels of operations, with the ultimate aim of preventing fatalities.

### Safety Initiatives

JSW Energy Ltd., as an organization, is very much focused on the safety of its employees and the work force associated with our organization. The organization is striving to achieve the highest and world class standard of safety across all the power plants. There are many safety systems and tools being utilized to achieve 'Zero Harm' and building a Safe Work Environment at all the plants. The Major Safety Systems being used at JSW Energy are as follows:

#### Safety Governance Structure

- Each Plant locations has 7 safety committees, 3 DIC's, 1 Apex Committee. Focus of Senior leadership of plant on safety is ensured as each of these teams is led by one of the HOD's. Since each of these committees has 5-7 members, the direct participation of around 50-60 employees in matters of safety is evident. All these Safety committees meet in the first

week of the month to review the previous month performance and plan for the activities of the current month.

- Regular monitoring of safety activities through **Steering Committee Meeting** Chaired by JMD & CEO, Safety Excellence Journey Review by Corporate Safety Team. In the Safety Steering committee meeting the JMD&CEO reviews the safety performance with all the Head of Plants along with Group Safety Head & Corporate Safety Head. This meeting is held in every 30 to 45 days. This meeting allows the Top management oversight on the safety activities of every plant.

#### Lone Worker Safety

Lone worker safety takes into consideration such critical areas where people usually work alone and hence need enhanced vigil with respect to a systematic process for absolute safety of such individuals. At all locations the lone workers are identified and specific safety process is in place duly backed up by safety devices which ensure that an alarm is raised to multiple relevant people in case of any safety concern to the Lone worker. This will enable the co-workers to provide help to the affected lone worker in the shortest possible span of time.

#### Safety Perception Survey

A survey was carried out at the Ratnagiri and Vijayanagar plant location, which included over 90% of the employees and contract workers. The main objective being identification of such safety issues which are critical but difficult to notice. The analysis of the Safety perception survey data is done with support of a knowledge partner. The gaps or requirements identified through

the analysis are then worked upon by the Management and the plant teams to modify systems & processes, provide adequate facilities & support to workers and plan for more welfare and wellbeing activities for employees, workers and relevant stakeholders. Such Safety Perception surveys have been carried out at Barmer and Vijayanagar sites as well and similar programs/initiatives based on the Survey analysis results are run in those locations as well.

#### Scaffolding Inspector Certificate Training

JSW Energy engages with its employees on safety aspects, one such initiative is awareness sessions for employees on construction safety of a scaffold before they start working over such structures. The organization makes sure that employees are aware of construction safety of a scaffold prior to allowing people to work over it.

#### Safety Observation System

The software system is a system in which all the employees (Grade L08 & above) of all locations are mapped and all these employees have to mandatorily log in 16 safety observations (unsafe acts & unsafe conditions) per month or 4 observations per week as per the schedule / date raised by the system. The closure of all these Safety Observation (SO) raised are completed by concerned teams after which they close the SO in the system with explanation of the work done. The data on SO helps in timely identification of the scenarios and locations where a breach leading to an incident might take place, and the same can be mitigated before the actual mishap occurs.

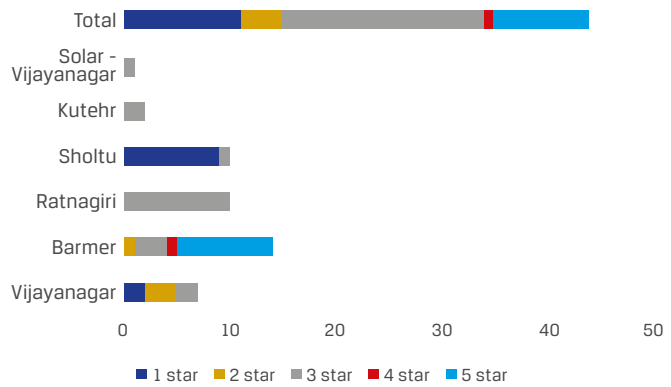
### Safety Observations (Nos.)

Plant	FY 2023	FY 2022
Barmer	26,045	26,601
Ratnagiri	12,258	13,129
Vijayanagar	24,145	20,621
Sholtu	17,251	16,258
Kutehr	3,625	3,570
Solar Vijayanagar	455	408
<b>Total</b>	<b>83,779</b>	<b>80,587</b>

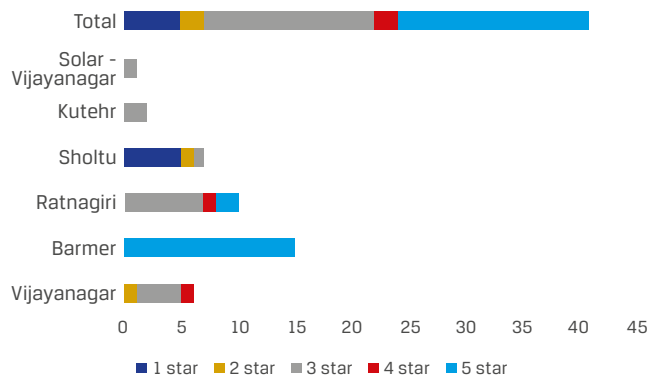
### Contractor Safety Management

JSW CARES (Contractor Assessment & Rating for Excellence in Safety) program is being actively implemented at all major locations of JSW Energy. The program assesses not only the safety systems & documentation but also tracks the safety performance of the contractor. The CARES assessment is done twice a year for every contractor and the ones who reach the 5 STAR rating become preferred contractors for JSW Energy. The present status of JSW CARES program is provided below.

#### JSW CARES - FY 2022



#### JSW CARES - FY 2023





### Barrier Health Management (BHM)

All the high risk processes are handled through the BHM program which has been successfully running in JSW Energy for the last 4 years. Collectively **18 New BHM programs** were started in FY 2023 in all the four major Thermal and Hydro power plants. This is a systematic tool to identify various risks in a process through collective brainstorming and further through focused discussions the risk mitigation

strategies are finalised. These strategies include improvements in process, equipment and engineering / administration control methods. The Bow-Tie methodology is used as a technical tool to **identify the improvements** in various 'causes' that might otherwise lead to an accident.

A total of 18 new BHM scenarios were taken in FY 2023 collectively by all the major power plants. 16 BHM Risks have been

completed and the balance two risks are on the verge of completion as new equipment / processes are being installed / integrated. All the new equipment / processes are generally taken through the Management of Change(MoC) process as well which allows the flow of information on the new changes to all relevant stakeholders / operational teams. The current status of the BHM Risks is provided below.

### BHM Status - March 2023 - Risks 16 to 20 - Total 18 High Risks

Plant	06/22	05/22	07/22	06/22
BHM Evaluation Sheet				
Bow-Tie Diagram				
New Barrier Identified				
Bow-Tie Diagram				
BHM Evaluation Sheet				
New Barrier Installation			Target- 04/23	Target- 04/23
Date of Evaluation	03/23	03/23	03/23	03/23
Plant	Barmer	Ratnagiri	Vijayanagar	Hydro

Completed  In progress 

### PTW, JSA, HIRA and LOTO system implementation

PTW (permit to work) is now a regular feature across all the plants and no work can be authorized without an approved PTW. JSA (Job safety Analysis) format forms a part of the PTW and no PTW is approved without a completed JSA. HIRA (Hazard Identification & Risk Analysis) – For all annual repetitive maintenance activities HIRA is completed by the concerned teams and while doing the JSA the HIRA Risks are already included for review and consideration. Other Hazards as identified are added to the HIRA

list along with the mitigation actions required to be done. LOTO (Lock out & Tag Out) – All plants have the required LOTO equipment to be used for isolation of the electrical & mechanical energy equipment & systems during the maintenance work in the plant. The LOTO is applied as the finalized SOP. Extensive training has been provided to the concerned maintenance teams. No PTW is approved without the application of LOTO where energy isolations are required.

### E-Learning

JSW Energy has launched 10 High Risk modules for all employees and contract workforce. All the plant locations have access to 10 High Risk e-learning modules through our internal digital 'Learning management System' (LMS). As part of the safety KRA of each employee they have to complete these modules. The 10 High Risk modules are – PTW, Work at Height, Confined Space, LOTO, Electrical safety, Machine Guard & rotating equipment, Conveyor Belt Safety, Personal Protective Equipment (PPE), Scaffolding safety and Lifting & handling equipment safety.

### OHC for regular medical check-up and other medical support activities for workforce

Each plant location has an Occupational Health Centre (OHC) with qualified Doctor and support staff. At these OHC, the first aid cases and minor injuries/ ailments are handled & recorded. The Basic medical tests & annual medical check-up of the workforce is also done at this OHC. In the plant location at Vijayanagar the OHC is complemented by Sanjeevani Hospital run by the JSW Group for any emergency case which cannot be handled by the OHC.

## Health and Safety Performance

### Safety Performance Indicators

FY 2023*	FY 2022	FY 2021
<b>Fatal</b> 0	<b>Fatal</b> 1	<b>Fatal</b> 0
<b>Loss-Time Injury</b> 0	<b>Loss-Time Injury</b> 0	<b>Loss-Time Injury</b> 1
<b>LTIFR</b> 0	<b>LTIFR</b> 0.10	<b>LTIFR</b> 0.11

\* The values for FY 2023 are applicable for JSW employees and contractors

### System Improvements

- Regular safety toolbox talks(TBT) are conducted for all workers, with a particular focus on those workers who work on a certain height or confined space or some other hazardous work for ensuring complete safety scenario.
- TBT is now a standard procedure before starting all jobs so that the workers can be reminded of any critical issues for the job which is about to be done.
- Job Safety Analyses (JSA) is conducted for all jobs done by the contractor and it forms a part of the Permit to Work(PTW) of the contractor. The Shift Incharge does not approve any PTW which does not have a JSA attached to it.
- Workers involved in work at height receive mandatory training on crucial aspects such as proper access and exit from high platforms, dos and don'ts, and compliance with PPE requirements.

### Job- Specific Trainings

All plants of JSW Energy, have a structured process for mapping of the safety skills of both employees & contractor's employees. For the JSW Energy employees, based on the skill, a competency development program is undertaken which is also reviewed quarterly for its effectiveness. Under the competency development for safety, a Training Need Identification (TNI) matrix is made for each employee. In the TNI matrix, the safety trainings required by the employee is mapped as all the employees do not require all the specialized safety trainings. So based on the work area and work function of the employee the training need is finalized.

Subsequently, the organization has developed a safety training calendar based on training need identification done in step one. The Monthly Training Modules (Training Calendar) will be used as topics at for that specific month and can be reviewed at any given time a particular hazard risk increases on site, which prompts JSW Energy to add some additional safety trainings for the month and the calendar is updated accordingly.

### Types of safety training



### Process of identifying applicable training type





The company ensures to compulsorily train its employees who work at a specific height, especially those workers who work on the dam and power house projects. The working at a specific height scenario involves training around few critical elements such as:

- The SOP entails granting the authority to halt work to individuals such as the Supervisor, Engineer, Line Manager, and Head of Department in instances where hazardous conditions are observed on site.
- Workers must receive approval from a doctor to confirm their medical fitness for working at heights after they successfully clear the VERTIGO test. The test module has been constructed at the plant locations and the test is done for specific workers only who are already trained for work at height.
- Similarly employees/associates who are working in confined space are trained specifically for the same.

- A physical confined space module is available in plants on which the training is provided to the workers to familiarise them to conditions of the confined spaces.
- They are also trained on the SOP requirements for Entry & Exit from the confined spaces which also includes rescue drills.

The top leaders at all plants of JSW Energy Ltd. ensure that the competency of the employee as well as the contractors' employees are kept updated & skilled in their functional expertise. Hence a lot

of focus is laid on the competency mapping against the actual competence requirement of the employee. A gap analysis is done of each employee and the functional, behavioural and safety training requirement is mapped. Based on this gap analysis a TNI (Training Need Identification) is done and subsequently a training calendar is made to cater to these trainings for each employee. Thereafter, job-specific functional, behavioural and safety trainings are provided to all the employees as per the training calendar which is based on this requirement.

**In FY 2023, the following number of employees underwent the below given trainings –**

**Training Type**

**Functional**

1,018 Employees (M – 965, F- 53)

**Behavioural**

1,058 Employees (M- 1,005, F-53)

**Technical**

472 Employees (M – 443, F- 29)

**Safety**

1,343 Employees (M – 1,284, F- 59)

M - Male, F - Female

### Physical Improvements

- The company has procured its own scaffolding materials for maintenance work, reducing dependence on contractors' materials ensuring enhanced safety and quality
- Convex mirrors are installed at all specific corners / T-junctions of the roads where it is identified as blind turn
- Reflectors are embedded in the roads at the road centre and edges where lighting is less or poor so that the drivers are aware of the road dimensions when the reflectors glow due to the vehicle lights falling on them.

### Digitalisation in Safety Management

In this era of technological upscaling, digitalisation in safety management is well established in JSW Energy. All the safety observations, incidents, observation closures, safety compliances, incident investigations etc are logged in a software based system, and are managed by utilizing this digital system. This software ('mysetu') is prevalent in all operational plants of JSW Energy.

Additionally, the Contractor Safety Management is also managed through an in-house created software by the plant teams. Employee competency mapping and training needs are also tracked and monitored through

a comprehensive software created by the in-house teams at site locations. The above software comes in very handy for analysis and reporting of various parameters of safety which allows a better quality decision making and also saves precious time for decision making which leads to a better and efficient management of safety matters.

70-80 CCTV cameras have been installed across all the plants at various strategic locations which are connected to the security team at a manned Command Centre where the display of the CCTV's is monitored 24x7. Critical functions like security gate complex, Fire Station, Main Control Rooms are also provided access to the display of cameras relevant to their work areas.



# RESPONSIBLE SUPPLY CHAIN MANAGEMENT

Suppliers play a substantial role for every business. JSW Energy is committed to building long-term strategic partnerships with all its value chain partners ensuring smooth operations. The organization continuously strives to align all the suppliers and other value chain partners with its Code of Conduct and ESG targets to align them in the sustainability journey. JSW Energy believes in creating an environment of trust for all its suppliers to maintain a strong bond and forge a common ground for progressing towards a low

carbon economy. The organization believes in working closely with its supply chain to reduce the impacts along the value chain for which the company ensures that all the vendors fill the supplier registration survey which includes questions pertinent to ESG. JSW Energy also expect its suppliers to abide by all the applicable statutory and international environmental and social protocols and strictly adhere to the Supplier Code of Conduct as also UNGC Principles on Human Rights. The company has laid down a comprehensive

screening mechanism for its suppliers. They have a robust prequalification criterion for all its value chain partners through the code of conduct. This helps JSW Energy achieve its business goals sustainably by adopting the principle of responsible procurement. Few members of the procurement teams across plant locations also received ESG awareness training. JSW Energy plans to provide ESG trainings to all procurement teams at each plant in FY 2024, as part of the employee development program.

**The Supplier CoC is based on the following elements:**

### Compliance Management

Statutory compliance, notices, taxes, assurance mechanism for quality check

### Environment & Climate Change

Emissions, Effluents, Energy and Biodiversity

### Human Rights

Protection and Promotion of Human Rights and rights of indigenous people

### Business Ethics

Ethical behaviour, Anti-corruption, Conflict of interest, information security

### Labour

Freedom of Association, Collective Bargaining, Forced Labour, Child Labour, OHS and Wages

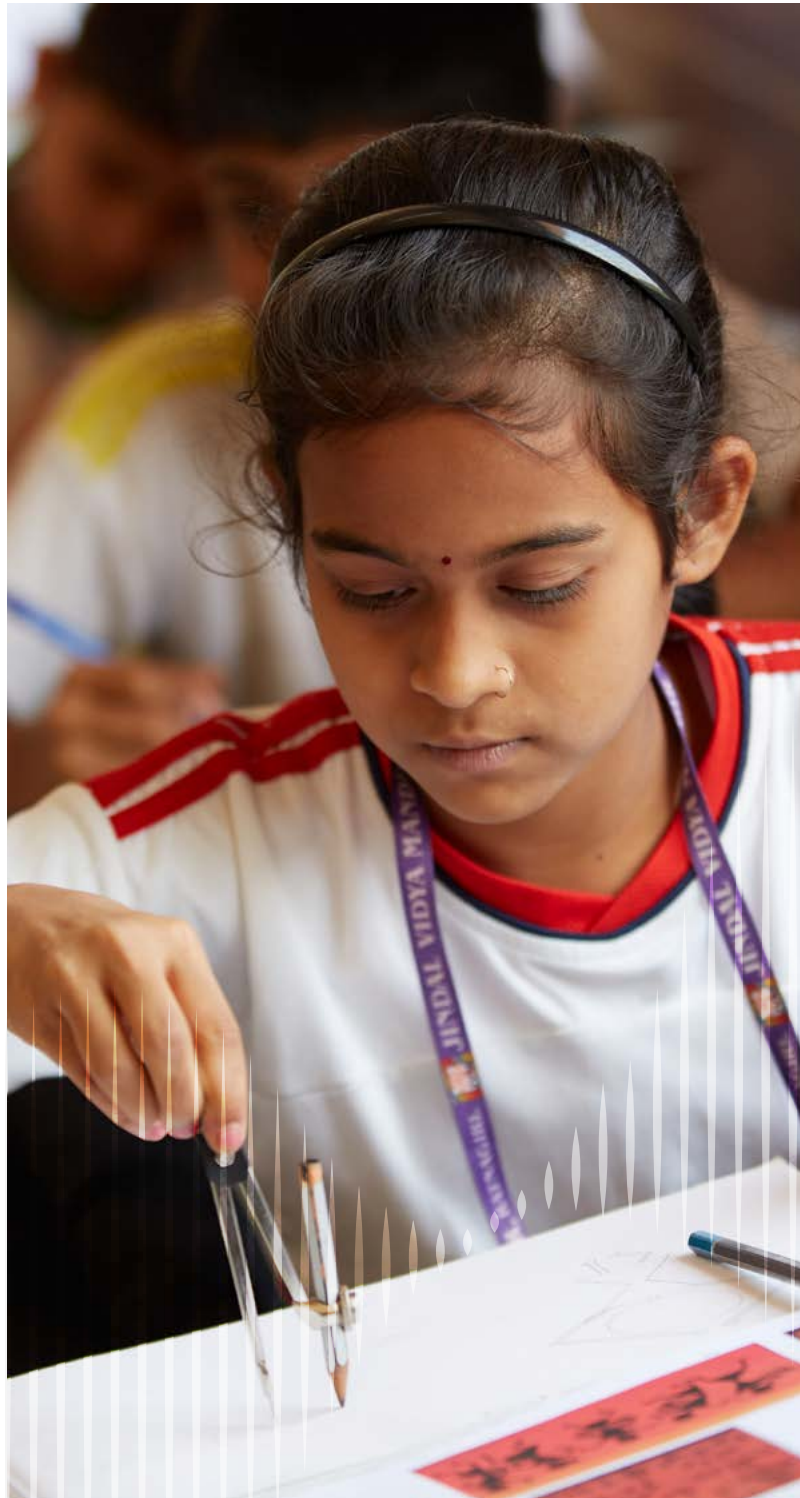
In the current year, JSW Energy has designed an ESG questionnaire for the supply chain vendors which shall enable the company to capture its ESG related data & initiatives allowing it to carry out an analysis to identify the vendors who are actively involved in sustainability initiatives and the ones who are lagging. JSW Energy aims to raise the level of ESG commitment of such vendors / contractors by conducting ESG workshops and awareness

sessions subsequently in the next financial year. The suppliers have been shortlisted based on the spend criteria as well as the High Risk suppliers & partners.

Going forward, in the short and medium time horizon and based on the climate risks assessments in the value chain, JSW Energy intends to identify preferred partners who have good ESG practices to combat climate change, for conducting business activities. However,

re-assessment and evaluation of suppliers and contractors shall remain an important activity to influence value chain partners to have an ESG based governance framework for enhancing the Sustainability Responsibility, ESG Risk assessments and subsequent mitigation plans and actions.

# EMPOWERING COMMUNITIES – CREATING A SOCIAL IMPACT



## Our CSR Vision

Empower communities with sustainable livelihood

## Mission

Empower citizens with better health, education and employment opportunities, and encourage sustainable development in key areas












## Policies for Community Development

JSW Energy has chosen a course of action for cooperating with the JSW Foundation both individually and collectively. The policy is available at <https://www.jsw.in/investors/energy/jsw-energy-sustainability-policies>

- Villages close to the plant will be prioritised and designated as the ones getting directly impacted (Direct Impact Zones DIZ); while some policies may be expanded to include areas outside the designated range to include Indirect Influence Zones' (IIZ)
- A thorough documentation of the process will be taken up to finalise the interventions based on the qualitative and quantitative data observations.
- The interventions in each area would include social mobilisation, advocacy at various levels, and/or relevant policy reforms.

## Focus Areas for CSR Activities

The following is a list of the various emphasis areas of our CSR operations, which are in accordance with Schedule VII of the Companies Act of 2013:

CSR Focus Area	Activity Undertaken	Alignment with SDG
Fostering Social Development	Supporting education, skill development, and livelihood enhancement	 
Enhancing living circumstances	Reducing hunger, poverty and malnutrition	
Tackling Social Inequalities	Promoting gender equality, women empowerment	
Rural Development	Installation of solar lights, renovation of schools, construction of new community buildings and enhancing medical care through distribution of medicines	  
Protecting national heritage	Women Empowerment, Empowering local community of weavers	 
Promoting Sports Training	SHIKHAR fellowship	
Enhancing technological support	Assisting technology incubators in central government-approved university institutions	

## Focus Areas for CSR Activities

### Number of Beneficiaries Directly Impacted through CSR Initiatives

FY 2023	FY 2022	FY 2021
2,33,021	1,60,973	73,111

## CSR Governance / Board involvement in CSR

The CSR Committee oversees the CSR interventions, their execution and the financials to run the CSR programmes. The Board closely monitors the activities of the CSR Committee and tracks progress towards achieving the CSR goals as outlined below:

### Strategic alignment

The board ensures that CSR initiatives are aligned with the company's overall strategic goals and objectives. By actively participating in the decision-making process, the board can guide the company's CSR efforts towards areas that align with its core values and business interests.

### Policy development

The board contributes to the development and implementation of CSR policies and guidelines. These policies establish the framework for JSW Energy's

CSR activities, including areas of focus, budget allocation, and performance measurement. Board-level involvement ensures that these policies are comprehensive, effective, and in line with industry best practices.

### Resource allocation

The board oversees the allocation of resources, including financial, human, and technological resources, to support CSR initiatives. By evaluating the feasibility and impact of various projects, the board ensures that resources are optimally utilized to maximize the positive social and environmental outcomes.

### Risk management

The board evaluates and manages CSR-related risks and challenges. By identifying potential risks and implementing appropriate risk mitigation strategies, the board safeguards the company's reputation and ensures compliance with relevant

regulations and standards. This proactive approach helps JSW Energy navigate potential pitfalls and maintain its commitment to responsible and sustainable practices.

### Monitoring and reporting

The board monitors the progress of CSR initiatives and receives regular reports on their outcomes. By reviewing performance metrics and assessing the effectiveness of CSR programs, the board can provide guidance and make informed decisions to enhance the impact and transparency of JSW Energy's CSR activities.

### Overall, board-level oversight

brings expertise, accountability, and strategic guidance to JSW Energy's CSR journey, enabling the company to integrate social and environmental considerations into its core business operations and contribute to sustainable development.

## Consolidated CSR Spend (₹ in crore)

**5.05**

Water, Environment, Sanitation and Waste Management

**1.10**

Sports Promotion

**2.40**

Skills and Livelihood

**0.98**

Project Management

**4.33**

Health and Nutrition

**8.40**

Education

**5.37**

Community Development and Infrastructure

**0.27**

Agricultural Livelihood

**27.91**

Total



## CSR Initiatives

### Health and Nutrition

The pandemic has highlighted the value of robust healthcare systems, particularly in the country's rural areas. This segment needs special attention with respect to healthcare and nutrition, due to the limited access about the resources and information as also the rural areas account for a major chunk of under-nourished population in India. JSW Energy continuously strives to work towards the malnutrition of such underserved communities and to bring them to the mainstream and lead healthy lives.

The JSW Foundation plans its initiatives to strengthen the health and nutrition services provided by the healthcare systems by raising awareness, assisting in the development of infrastructure, and promoting community involvement for success of such CSR interventions.



### Sports Promotion and Development

The Company is highly engaged in promoting sports, especially for the rural population, as they lack the required infrastructures, tools, training and nutrition. The Company via JSW Foundation supports various rural talents especially in the boxing category, apart from supporting other initiatives. JSW Foundation is continuously striving to expand its network via government agencies and other sports associations to formulate a robust support network for mentoring the desirable candidates and represent India in global sports forums.

### SHIKHAR - India's Fearless Fighters

JSW Hydro Energy provides the SHIKHAR fellowship to encourage boxers to enhance their skills. As a part of this initiative, JSW acknowledged the achievements of 12 boxers and their coaches in the National Boxing Championship held in Sonipat, Haryana, to demonstrate its dedication to promoting boxing.



Value Creation Story

# SHIKHAR – High Altitude Boxing Academy

CORPORATE OVERVIEW

SERVING STAKEHOLDERS

CAPITALS AND MD&A

STRATEGIES FOR GROWTH

BUILT ON GOVERNANCE

FINANCIAL STATEMENTS

SUPPORTING INFORMATION

## Strategic Objective

Supporting Sports person to become National & International level Boxing Champions.

## Target Area

JSW Hydro Energy Limited, Sholtu, Himachal Pradesh

## Material Topic Addressed

Local Communities

## Alignment with SDG



**Key Risks:** The challenge

**Challenges:** Lack of awareness, infrastructure and sporting avenues

**Summary:** Name: Kashish Negi  
**Sport:** Boxing, Age: 17 Years,  
**State:** Himachal Pradesh

Kashish Negi's journey is nothing short of remarkable. Coming from a small yet breathtaking village in Kinnaur, Himachal Pradesh, she faced an early tragedy. Despite the hardships, Kashish's passion for running led her to the world of athletics. One day, she caught

sight of senior boxers from Sangla engaged in their intense boxing matches. Inspired by their skill and determination, Kashish made the bold decision to pursue boxing. Determined to follow her newfound passion, she enrolled at the Government Middle School in Sangla, which offered boxing training at SHIKHAR centre through JSW Foundation.

Kashish encountered numerous challenges during her schooling and early boxing training days. Her relentless efforts have paid off as she consistently achieves victory after victory.

Finally, Kashish's ultimate dream of representing her country on an international stage became a reality when she was selected to participate in the prestigious 40<sup>th</sup> Golden Glove of Vojvodina Men's and Women's Youth Boxing Tournament. With sheer determination and skill, she secured the Bronze medal, marking a significant milestone in her career.

### Followings are her major achievements:

- Under -17 School level State Championship-2018: Gold
- Open Sub Junior Girls National Championship-2018: Silver
- Under-17 School National Championship-2018: Gold
- Under-19 Girls School State Championship: 2019: Gold
- Girls Sub Junior Open State Championship- 2019: Gold
- Junior men's and women's National Championship-2021: Silver
- Youth Boys and Girls National Championship- 2022: Silver
- 40<sup>th</sup> Golden Glove of Vojvodina Youth Boxing Tournament- 2022 at Serbia: Bronze
- Khelo India North Zone Youth – 2022: Silver
- Khelo India Youth Games 2022 {Women}- 2022-23: Silver
- State level Youth men and Women Boxing Championship - 2023: Gold

## Medal Tally for FY 2023

### Medal Tally since our intervention

Medals	International	National	North Zone	State	District	Total
Gold	2	9	2	119	33	165
Silver	1	11	2	48	20	82
Bronze	2	19	1	54	18	94
<b>Total</b>	<b>5</b>	<b>39</b>	<b>5</b>	<b>221</b>	<b>71</b>	<b>341</b>

## Education and Learning

In the field of education and learning, the company is taking huge steps by focusing on a variety of topics such as improvising school infrastructure, early childhood interventions, remedial classes for select students, e-learning modules, scholarship programs for bright students, training material for teachers, career counselling for the students and mid-day meals as a nutritional support to the students. The students are also encouraged to take up science and math activities, visit science labs and libraries to understand the latest scientific developments. 757 students were also awarded with JSW Udaan scholarships during the reporting period.



## Skill Development

According to the Human Development Report by the United Nations Development Program, every fifth Indian is a skilled person. JSW Energy ensures focus on the development of rural graduates and empowerment of rural women so that development happens at the grassroot level covering almost 60% of the population.

## Charkha

JSW Energy believes in promoting the national heritage of India. Through its flagship program Charkha, JSW has brought into limelight the challenges faced by weavers and strives to promote the Indian handloom sector. As a part of Charkha, JSW has established 17 training facilities with the aim of empowering the rural women and enhancing their financial independence through sustainable livelihoods. During the financial year, 430+ women craftsmen underwent training as a part of this initiative at Sholtu & Kutehr, Himachal Pradesh.



Value Creation Story

# CHARKHA

## Strategic Objective

Empowering Women through Livelihood support

## Material Topic Addressed

Skills & Livelihood

## Target Area

JSW Hydro Energy Limited, Sholtu, Himachal Pradesh

## Alignment with SDG



**Key Risks:** Social pressures on working women

**Challenges:** Honing the weaving skill while managing Families, household responsibilities

**Summary:**

### Our Wonder Women Weave

Anjana is 45 years old and lives in the village of Shong in the Kinnaur district of Himachal Pradesh. She was married at 17 and started learning weaving from her mother-in-law. While she started weaving out of curiosity, she eventually became very interested in it and observed closely the weaving technique used by her mother-in-law. Initially, she started weaving for herself and her family. After enrolling in Project Charkha, she received the training to hone her skills further and now has gained the required expertise. In time and with experience, she started getting orders from villagers. Project Charkha has enabled Anjana to earn 20,000-25,000 per month compared to 5,000-6,000 per month she was earning earlier.



Today, Anjana motivates other women to learn weaving and has herself trained 30 women to date

## Community Development

JSW Energy strongly believes in the upliftment of the communities especially the remotely-located areas with sparse population. As part of comprehensive community development initiatives, JSW Energy has undertaken several significant actions to improve the quality of life while taking steps towards decarbonization. One key focus area is the installation of solar lights, which enables access to clean and reliable energy for households, schools, and communities at large. While this not only addresses the energy needs of the communities in the rural areas, it also significantly contributes to reducing carbon emissions and promoting sustainable development.

Other Initiatives includes planting saplings for a greener environment and distributing medicines to ensure good health and wellbeing. JSW Energy recognizes the importance of infrastructure development in rural areas and has actively converged with the local government bodies to enhance road work projects in order to improve transportation networks helping connect the communities to essential services, markets and educational institutions thereby stimulating the economic growth, facilitating trade and commerce and enhancing the overall standard of living of the rural communities.

### Key Outcomes of CSR Initiatives

- All the communities near the JSW Energy Plants now have better access to healthcare facilities
- Supporting sportsmanship and encouraging individuals with skills and training them to become National & International level Boxing Champions
- Augmenting quality education for children through various interventions
- Financial assistance to deserving candidates to ensure that they receive higher education
- Implementation of necessary infrastructure to reduce fetch time for safe drinking water leading to reduced fatigue and better quality of life for the communities
- Empowering women by augmenting sustainable financial support
- Supporting community to receive benefits of social security schemes of government



# GOVERNANCE – FUNDAMENTALS FOR DELIVERING VALUE

JSW Energy's governance model is based on the realms of a strong leadership that believes in delivering long term value to all the stakeholders. The strong corporate policy framework and a robust Code of Conduct aids the smooth sailing on a daily basis across the business operations.

## Board of JSW Energy

The Board at JSW Energy works on the core elements of Accountability, Transparency,

Integrity, Social responsibility, Environment and Regulatory Compliance. The board represents a diverse group of individuals with all the required skills and expertise to drive the Company's business as per the ESG agenda.

The Board is composed of 3 executive directors, 1 non-executive director and 5 independent directors including 1 woman director. The Board closely monitors the business

progress in alignment with the company's vision while doing a strategic planning to meet the set objectives. The Board also ensures to take into consideration stakeholder concerns in a transparent manner for a highly effective decision-making with respect to the management of material issues and their due diligence.

The various committees of the Board are as under

## Audit

## Corporate Social Responsibility

## Sustainability

## Risk Management

## Stakeholder Relationship

## Compensation and Nomination & Remuneration

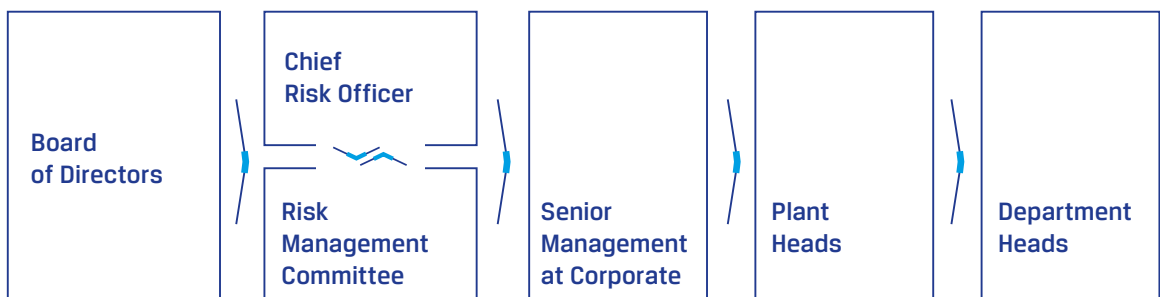
The Sustainability Committee overlooks the climate change agenda by evaluating the climate related risks in addition to managing other relevant material topics such as water management and biodiversity. The committee chairman evaluates the progress against the targets undertaken and ensures that the Group is aligned with the

overall sustainability vision and accordingly complies with the management of high priority material topics.

## Risk Management

JSW Energy has a board-approved risk management framework which aligns with the principles laid down by the COSO Framework. The organisation understands that

enterprise risk management is a continuously evolving process which needs close monitoring by the Board. The Risk Management Committee regularly interacts with the Board of Directors and Plant Heads to ensure effective implementation of the policy, identify any new potential risks and lay down processes for timely mitigation of such risks.



## Business Continuity Management

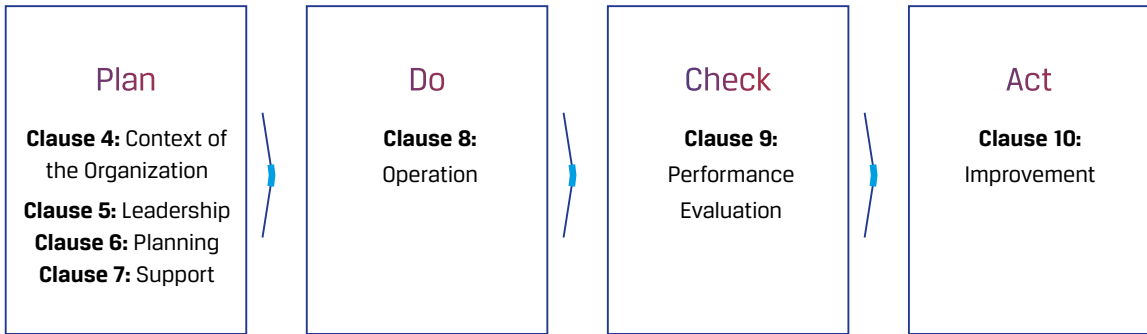
Business Continuity Management (BCM) is a holistic management process that identifies potential threats to an organization and the impacts to business operations those threats, if realized, might cause, and which

provides a framework for building organizational resilience with the capability of an effective response that safeguards the interests of its key stakeholders, reputation, brand and value-creating activities. Three of the major plants, viz., Barmer, Ratnagiri and Vijayanagar have

been certified under ISO 22301 for Business Continuity Management Systems. The fourth hydropower plant at Sholtu, Himachal Pradesh, is presently undergoing the BCMS certification process which is expected to be completed by end of Q1 FY 2024.

### Structure and Content of ISO 22301

#### Structure of ISO 22301:2019 Standard

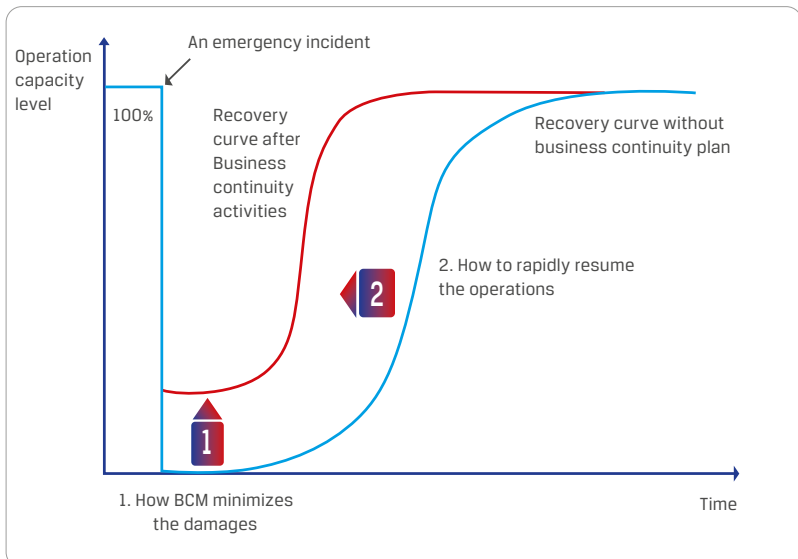


### Continuous Improvement

## Components of Business Continuity Management System (BCMS)

- A Policy
- Competent people with defined responsibilities
- Management processes relating to
  - o Policy
  - o Planning
  - o Implementation and Operation
  - o Performance Assessment
  - o Management Review
  - o Continual Improvement
- Documented information supporting operational control and enabling performance evaluation
- Any BCM processes relevant to the organization

### Benefits of a BCMS



The purpose of BCMS is to prepare for, provide and maintain controls and capabilities for managing organization's overall ability to continue to operate during disruptions. To achieve this the organisation should be able to:

- **Business perspective:** support its strategic objectives; create a competitive advantage; protecting and enhancing its reputation and credibility; contribute to organization's resiliency
- **Financial perspective:** reduce legal and financial exposure and reduce direct and indirect costs of disruptions
- **Stakeholders Perspective:** protect life, property and the environment; consider the expectations of interested parties and provide confidence in the organization's ability to succeed
- **Internal perspective:** improve its capability to remain effective during disruptions; demonstrate proactive control of risks effectively and efficiently; address operational vulnerabilities.

### Business Ethics

JSW Energy recognises the importance of organizational accountability, transparency, and integrity for the continued success of its operations. The corporate governance framework is ingrained with the core business principles of value and trust, while enhancing the overall growth opportunities for all stakeholders. The organisation has a strong Code of Conduct in place for meeting the expectations of all stakeholders including the Board of Directors, Senior Management, and employees. JSW has zero tolerance towards unethical behaviour such as corruption and bribery. Through raising awareness and promoting

these ethical codes, and integrity throughout its value chain, JSW Energy is dedicated to following the best practices to become more sustainable in its journey as a responsible brand.

### Vigil Mechanism

The company believes in fair and transparent mechanisms for conducting daily operations by adhering to the highest standards of professionalism, honesty and integrity. High ethical conduct is at the core of decision-making process at JSW Energy. The company's vigil mechanism encourages all employees and workers to report any irregularity or serious misconduct that can impact the business or its reputation. The company has a set process for reporting incidents of improper or unethical behaviour. During the reporting period, zero confirmed instances of corruption were recorded.

### Prevention of Sexual Harassment (POSH)

JSW Energy has always believed in providing a safe and harassment-free workplace for every individual working in the Company. JSW Energy in line with the provisions of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, has adopted a policy on Prevention of Sexual Harassment and has constituted an Internal Complaints Committee to look into the grievances related to POSH. During the reporting year, zero complaints of sexual harassment were recorded.

### Respecting Human Rights

Human Rights is a core value at JSW Energy. The organisation upholds the highest standards of human rights across its operations and value-chain and

undertakes continuous awareness sessions on Human Rights for all the employees, associates and workers from time to time and in different forums across all plants. Due care is taken to provide a humane care for all the workers / contractors who are working in the plant. Shaded areas for rest, drinking water & sanitation facilities for all contractors, associates and employees, adequate medical facilities and OHC (occupational Health Centre) for medical requirements of all those who are working inside the plant premises are provided. Policies are in place for Human Rights, Labour Practices and Employment Rights, Making our world a better place which are also available on the company's website. In order to have a structured system in place for management of Human Rights, JSW Energy is in the process for hiring an external knowledge partner who shall do a complete Risk Assessment for the organization on the Human Rights implementation, prepare a Human Rights Management Plan in consultation with various teams at the plant level and also conduct several formal Human Rights Trainings at all locations. JSW Energy being a Responsible Business Organization respects the rights of all humans and is now moving from the compliance mode to the Care mode for all ESG requirements especially Human Rights. The company has a zero tolerance approach towards any breach of code of conduct regarding human rights and/ or discrimination. As an outcome, JSW Energy has strict measures in place to ensure zero child/bonded labour within its organisation and also across its value-chain partners. There were no recorded instances of prejudice during the reporting period. Moreover, no operations were identified which may pose a high danger of using forced or underage labour.