

# Business Responsibility Report

## Section A: General Information about the Company

Disclosure item	Response
1 Corporate Identity Number (CIN) of the Company	L74999MH1994PLC077041
2 Name of the Company	JSW Energy Limited
3 Registered address	JSW Centre, Bandra-Kurla Complex Bandra (East), Mumbai – 400 051
4 Website	<a href="http://www.jsw.in">www.jsw.in</a>
6 Financial Year reported	2017-18
7 Sector(s) that the Company is engaged in (industrial activity code-wise)	1. Generation of Thermal Power 2. Generation of Hydro Power 3. Power Transmission 4. Power Trading NIC Code: 351 Electric Power Generation, Transmission and Distribution
8 List three key products/ services that the Company manufactures/ provides (as in balance sheet)	1. Power Generation (Thermal and Hydro) 2. Power Transmission 3. Power Trading
9 i. Number of International Locations (Provide details of major 5)	Major International Operations: 1. South Africa – South Africa Coal Mining Holdings Limited is engaged in Coal Mining & Ancillary activities (11 sites) 2. Swaziland – Minerals & Energy Swaziland Proprietary Ltd. is engaged in Mining activities (1 site)
ii. Number of National Locations	JSW Energy Limited 1. Vijayanagar (Karnataka) 2. Ratnagiri (Maharashtra)  Subsidiaries 3. Raj WestPower Limited – Barmer (Rajasthan) 4. Himachal Baspa Power Company Limited – Karcham-Wangtoo and Baspa (Himachal Pradesh) 5. JSW Energy (Kutehr) Limited – Kutehr (Himachal Pradesh) 6. JSW Energy (Raigarh) Limited – Raigarh (Chhattisgarh) 7. JSW Green Energy Limited – Delhi
10 Markets served by the Company - Local/ State/ National/ International	Maharashtra (MSEDCL), Karnataka (State DISCOMS), Himachal Pradesh (HPSEB), Haryana (HSEB), Rajasthan (State DISCOMS), UP (State DISCOMS), Andhra Pradesh (APSEB), Telangana (TPCC), Punjab (PSPCL)

## Section B: Financial Details of the Company (as on 31<sup>st</sup> March, 2018)

Disclosure item	Response
1 Paid-up Capital (₹ crore)	1,640.05
2 Total Turnover (₹ crore)	8,513.98
3 Total profit after taxes (₹ crore)	77.97
4 Total Spending on Corporate Social Responsibility (CSR) as percentage of profit after tax (%)	₹ 32.53 crore 42%
5 List of activities in which expenditure in 4 above has been incurred:	a) Improving Living Conditions b) Promoting Agriculture and Watershed c) Promoting Social Development and Employability d) Addressing Social Inequality e) Addressing Environment Concerns f) Preserving National Heritage g) Promoting Sports Development h) Promoting Swachh Bharat Abhiyan (Clean India Mission)

## Section C: Other Details

Disclosure item	Response
1 Does the Company have any Subsidiary Company/ Companies?	Yes List of Indian Subsidiaries: 1. Raj WestPower Limited. 2. Himachal Baspa Power Company Limited 3. Jaigad PowerTransco Limited 4. JSW Energy (Raigarh) Limited 5. JSW Energy (Kutehr) Limited 6. JSW Green Energy Limited 7. JSW Solar Limited 8. JSW Electric Vehicles Private Limited
2 Do the Subsidiary Company/Companies participate in the BR Initiatives of the parent Company? If yes, then indicate the number of such subsidiary Company(s)	Yes. Raj WestPower Ltd. and Himachal Baspa Power Company Ltd. participate in the BR initiatives of the parent Company.
3 Do any other entity/entities (e.g. suppliers, distributors etc.) that the Company does business with, participate in the BR initiatives of the Company? If yes, then indicate the percentage of such entity/entities? [Less than 30%, 30-60%, More than 60%]	JSW Energy's value chain partners (e.g. suppliers and contractors) are encouraged to contribute to its CSR initiatives. However, with the expansive nature of its value chain, currently less than 30% of the entities partner in its BR initiatives.

## Section D: BR Information

### 1. Details of Director/Directors responsible for BR

Name	DIN	Telephone	Email ID
Mr. Nirmal Kumar Jain	00019442	022-42861000	jainnirmal1946@yahoo.co.in

#### Details of the BR head

Name	Designation	Telephone	Email ID
Dr. Suman Majumdar	Group Chief Sustainability Officer	022-42861000	suman.majumdar@jsw.in

### 2. Principle-wise (as per National Voluntary Guidelines) BR policy/policies (Reply in Y / N)

Disclosure item	Response									
Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9	
1 Do you have a policy/policies for:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2 Has the policy been formulated in consultation with relevant stakeholders?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3 Does the policy conform to any national/ international standards? If yes, specify? (50 words)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
A: National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business B: ILO Convention on Human Rights C: Report on Affirmative Action by CII D: National Action Plan on Climate Change, National Environmental Policy E: UN Sustainable Development Goals										
4 Has the policy been approved by the Board?	Yes, at the Board Meeting held on 23 <sup>rd</sup> March, 2017									
If yes, has it been signed by MD/ owner/ CEO/ appropriate Board Director?	Yes, it has been signed by the Joint Managing Director & CEO									
5 Does the Company have a specified committee of the Board/ Director/ Official to oversee the implementation of the policy?	Yes, Risk Committee of the Board is responsible to oversee the implementation									
6 Indicate the link for the policy to be viewed online?	<a href="http://www.jsw.in/investors/energy/jsw-energy-financial-information-business-responsibility-reports">http://www.jsw.in/investors/energy/jsw-energy-financial-information-business-responsibility-reports</a>									
7 Has the policy been formally communicated to all relevant internal and external stakeholders?	Currently, the policy has been uploaded on the Company's website and is communicated through the Business Responsibility Report as well as Annual Report. However, it is proposed to formally communicate the policy to all relevant internal and external stakeholders.									

Disclosure item		Response								
Questions		P1	P2	P3	P4	P5	P6	P7	P8	P9
8	Does the Company have in-house structure to implement the policy/policies?	The Company has engaged the services of Dr. S. Majumdar, Group Chief Sustainability Officer, who along with his team, leads all the initiatives by the Company under the policy								
9	Does the Company have a grievance redressal mechanism related to the policy/policies to address stakeholders' grievances related to the policy/policies?	Yes, for example institutional shareholders can write to <a href="mailto:nitin.narayanan@jsw.in">nitin.narayanan@jsw.in</a> , non-institutional shareholders can write to <a href="mailto:jswel.investor@jsw.in">jswel.investor@jsw.in</a> about their queries and concerns								
10	Has the Company carried out independent audit/ evaluation of the working of this policy by an internal or external agency?	Not in 2017-18.								
2a	If answer to S. No. 1 against any principle, is 'No', please explain why: (Tick up to 2 options)									
Questions		P1	P2	P3	P4	P5	P6	P7	P8	P9
1	The Company has not understood the Principles									
2	The Company is not at a stage where it finds itself in a position to formulate and implement the policies on specified principles									
3	The Company does not have financial or manpower resources available for the task					Not Applicable				
4	It is planned to be done within next 6 months									
5	It is planned to be done within the next 1 year									
6	Any other reason (please specify)									

### 3. Governance Related to BR

Indicate the frequency with which the Board of Directors, Committee of the Board or CEO to assess the BR performance of the Company. Within 3 months, 3-6 months, Annually, More than 1 year	The Risk Committee of the Board meets within 3-6 months every year.
Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?	The Business Responsibility Report is available on the Company website at the link <a href="http://www.jsw.in/investors/energy/jsw-energy-financial-information-business-responsibility-reports">http://www.jsw.in/investors/energy/jsw-energy-financial-information-business-responsibility-reports</a> This will be a regular annual publication.

### Principle 1: ETHICS, TRANSPARENCY AND ACCOUNTABILITY

- Does the policy relating to ethics, bribery and corruption cover only the Company? (Yes/No). Does it extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs/ Others?

The Company's Policy on ethics, bribery and corruption includes within its ambit all the employees, including those with the Subsidiary Companies at all levels and grades, as also the Directors on the Board. The efficacy and performance of the Company's Whistleblower Policy and Code of Ethics are reviewed by the Audit Committee of the Board. In some of the Subsidiaries, the Policy has been extended to cover vendors and contractors. It is intended to extend the Policy to cover other external key stakeholders over a period of the next 3 years. The existing Code of Conduct for Board Members and senior management executives covers only the Company.

- How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.

80 complaints were received from shareholders in 2017-18, and all were resolved. These primarily related to non-receipt of annual report and dividend warrants.

## Principle 2: PRODUCTS AND SERVICES DESIGNED WITH ENVIRONMENTAL AND SOCIAL OPPORTUNITIES

### 1. List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities.

- Electricity generation through fossil fuel
- Electricity generation through hydro power
- Power trading

JSW Energy Ltd. believes in the efficient utilisation of all available resources. Today it is a leading, full-spectrum, integrated power Company, with presence across the power sector value chain. The Ministry of Power, had recognised JSW Energy, Vijayanagar as the Best Operating Power Plant for eight consecutive years (FY 2006-07 to FY 2013-14), while the power plants at Vijayanagar (Karnataka) and Ratnagiri (Maharashtra) were rated in the country's top five in environmental assessment as per the survey conducted in 2015 by Centre for Science and Environment (CSE), New Delhi.

Living up to this strong legacy by managing efficient operations, enhancing social and economic benefits, minimising environmental impacts, and employing cutting-edge innovation, JSW Energy has consolidated its place at the top of the ranks in India. The Vijayanagar plant won the **Innovation in Energy Conservation Award** by IPPAI for the FY 2017, (for the installation of VFD and elimination of hydro-coupling in ID Fan). It also was recognised by CII's Energy Efficient Unit (**'Excellence in Energy Management'**) for FY 2018, and was the winner of the RoSPA (UK) Silver Award (**Prevention of Accidents**) for FY 2018.

Further, the Ratnagiri Plant won the **Innovation in Energy Conservation Award** by IPPAI for FY 2017-18 (for the installation of VFD and elimination of hydro-coupling in ID fan); **SEEM** – (Gold Category award for Energy Conservation) for FY 2017-18; **Five-Star Rating** from Maharashtra Pollution Control Board in 2017-18; and **Outstanding Achiever in Power Sector by IPPAI Innovation Award** in Fuel Storage (New Alternate Fuel) Pyrolysis System in October 2017.

These recognitions reflect a consistent focus on optimal efficiency, Innovation and energy conservation. The Company utilises a life cycle based approach, and incorporates environmental and social concerns in the production of electricity, as well as in the selection of technology and equipment of higher efficiency. Further, risks and opportunities are identified at every stage of the operations. The major steps in the life cycle of our products and major activities are summarised below:

#### Thermal Power Plants:

- **Sourcing of raw material:** JSWEL procures primary fuel (viz. coal and lignite) as well as secondary fuels (e.g. heavy fuel oil and light diesel oil). Risks and opportunities are identified at the time of selection of coal while sourcing from multiple geographies. While selecting the source of coal, prime focus is on that type which has relatively less impact on the environment post combustion. On the other hand, Raj West Power Limited (RWPL) uses lignite as a fuel source; lignite is a low-grade coal that is currently sourced from captive mines of the joint venture Barmer Lignite Mining Company Ltd.
- **Transportation of raw material:** Imported coal utilised at Vijayanagar and Ratnagiri is brought in by the sea route, and then transferred to the coal stockyards via rail at Vijayanagar and direct coal conveying system from the port to the plant premises at Ratnagiri. The lignite for RWPL comes in from the contiguous Kapurdi Mines via belt conveyor over a distance of 4 km.
- **Production of electricity:** Risks and opportunities involved with thermal power production process are identified, and the risks are mitigated at the design stage itself; equipment having maximum efficiency is selected, and standard operating procedures are implemented. All environment-affecting parameters associated with the production processes are continuously monitored and maintained within the statutory limits.
- **Delivery of the product to the customer:** Efforts are taken to supply the electricity as per the requirement (schedule) of the customer.

#### Hydro Power Plants:

Hydro power is a form of renewable energy which is generated by non-consumptive use of water, and hence there is no reduction in the resource. During all stages of the product life cycle quality, occupational health and safety, and environmental parameters are considered important.

The plants of JSWEL are certified to the following management systems:

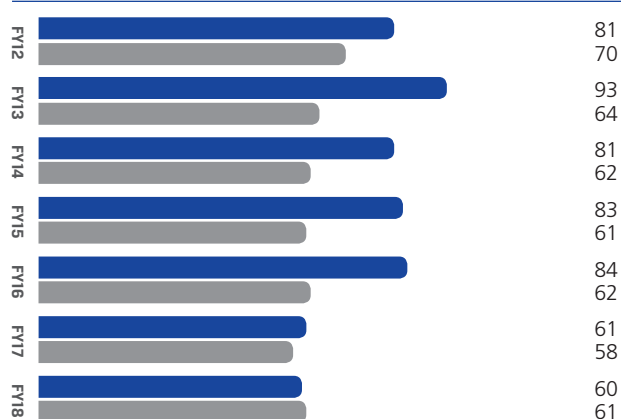
- **Ratnagiri (1,200 MW):** ISO 9001-2015, ISO 14001-2004, OHSAS 18001-2007 and ISO 50001-2011.
- **Vijayanagar (860 MW):** ISO 9001-2015, ISO 14001-2015, OHSAS 18001-2015 and ISO 50001-2011
- **RWPL (1,080 MW):** ISO 9001-2015, ISO 14001-2015, OHSAS 18001-2007 and ISO 50001-2011
- **HBPL (1,300 MW):** ISO 9001-2015, ISO 14001-2015 and OHSAS 18001-2007

2. For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product (optional):

i) Reduction during sourcing/ production/ distribution achieved since the previous year throughout the value chain?

Generation:

JSW Energy Ltd. - Standalone (%)



■ JSW Energy Ltd. Standalone PLF (Vijayanagar & Ratnagiri)

■ All India private sector thermal power plant PLF

Source: CEA

The PLF during FY 18 is less due to partial load operation, reserve shut down and backing down.

JSW Energy Consolidated Net Generation (MUs)

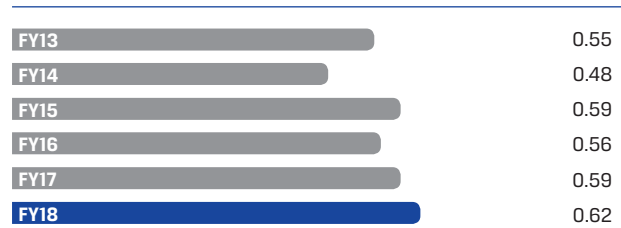
Consolidated (Vijayanagar, Ratnagiri, RWPL & HPBCL)



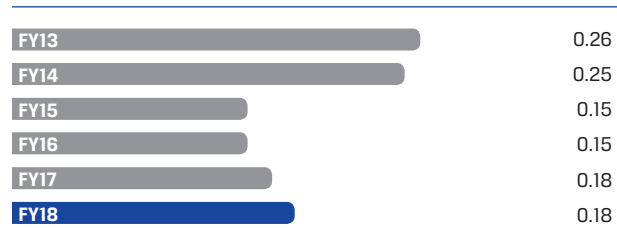
Net Generation during FY 17 is less due to partial load operation, reserve shut down and backing down

Performance Parameters: JSW Energy (Thermal - 3,140 MW)

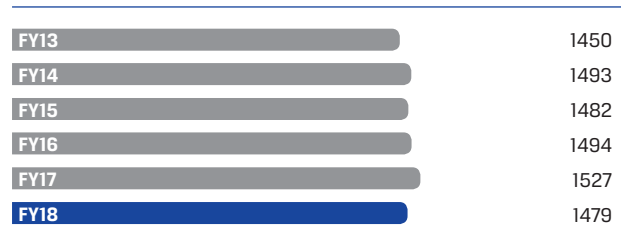
Sp. Coal Consumption (kg / kWh)



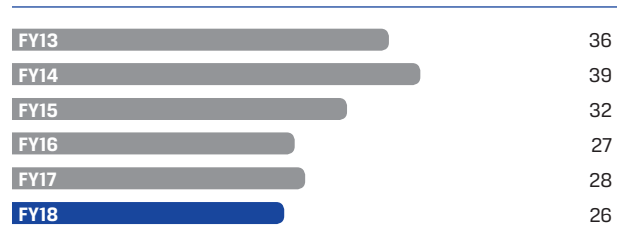
Sp. Oil Consumption (mL / kWh)



Sp. Raw Water Consumption (m³ / MUs)



Sp. DM Water Consumption (m³ / MUs)



ii). Reduction during usage by consumers (energy, water) has been achieved since the previous year?

Not applicable since the Company is only into power generation and not into power distribution

**3. Does the Company have a mechanism to recycle products and waste? If yes what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%). Also, provide details thereof, in about 50 words or so.**

The Company recycles and utilises wastes, as per details furnished below.

**Fly Ash Utilisation:**

Vijayanagar (JSWEL)	Ratnagiri (JSWEL)	Barmer (RWPL)
100% for nearly a decade	100% for last 3 years	100% for last 2 years
Cement companies: 68%	Ready-mix concrete: 78%	Cement companies: 89%
Ash pond bunds: 22%	Cement plant: 24.8%	Bricks: 10%
Brick-making: 10%	Bricks / blocks: 8.35%	Mine filling: 1%

**Recycle/reuse at Sites:**

**Ratnagiri:**

Coal reject from the pulverisers is re-used. The percentage of the reject coal with respect to total coal used in FY-18 is 0.093%.

The used oil/waste oil is included under hazardous waste category, and are therefore sent to government-approved vendors for recycling.

The sewage treatment plant receives the wastewater from the plant and canteen, whereas waste from the canteen is disposed in the bio-gas plant. The bio-gas is used for cooking.

**Vijayanagar:**

The waste oil/used oil is included under hazardous waste category, and are therefore sent to government-approved vendors for recycling. The e-wastes are disposed of through authorised recyclers. Other wastes, such as steel and wood are reused internally.

The entire wastewater is treated in the effluent treatment plant based on reverse osmosis (RO) technology, and the recycled product, i.e. water, is used in cooling towers as make-up water, while the RO reject stream is used for plantation. Thus, zero discharge of effluent is achieved.

**RWPL:**

The used oil/waste oil is included under hazardous waste, and all of it is sent to the government-approved vendors for recycling.

The wastewater is treated in the reverse osmosis (RO) based effluent treatment plant and recycled water is combined with raw water as part of the feed to the

demineralised water plant or as part of the make-up water to the cooling towers, while the RO reject water is used for plantations and ash / lignite spray, etc. Thus, zero effluent discharge is achieved.

The food waste is converted and used as organic compost.

**Waste Oil Generated and Recycled in KL**

FY13	193
FY14	218
FY15	54
FY16	55
FY17	48
FY18	56.05

*Includes waste oil recycled in HBPL*

**4. Does the Company have procedures in place for sustainable sourcing (including transportation)?**

**i) If yes, what percentage of your inputs was sourced sustainably? Also, provide details thereof, in about 50 words or so.**

Not applicable for Hydro generation.

**JSW Energy, Ratnagiri** operates on imported coal and constantly attempts to make the sourcing and inbound logistics as sustainable as possible. The plant is located on the coast; while all its imported coal comes via the sea route to the port at Ratnagiri, the coal is then transported to the stockyard inside the plant via covered conveyor belts.

**JSW Energy, Vijayanagar** is also based on imported coal and like Ratnagiri, it strives to make the sourcing and inbound logistics as sustainable as possible. Imported coal for the plant is received by the sea route either at Goa or at Krishnapattanam, and then transported to the stockyard by rail in covered wagons, then to the plant via covered conveyor belts.

In both cases all vendors are registered only after they sign up on a commitment on environment and social parameters.

**5. Has the Company taken any steps to procure goods and services from local & small producers, including communities surrounding their place of work?**

**If yes, what steps have been taken to improve their capacity and capability of local and small vendors?**

**HBPL** generates energy from hydro by non-consumptive use of water as raw material. The Company has not only implemented a variety of community development initiatives to support the local people around the project area, it also engages with local contractors for the CSR activities, especially construction related.

In order to improve their capacity and capabilities, engineers / supervisors from the Company are always monitoring their work and offer suggestions whereby they could improve and be more efficient.

#### **JSWEL Ratnagiri**

The Company involves the local people right from the stage of the construction of the plants and in certain cases also trains them. This not only makes them employable but also actually get employed. The Company encourages its contractors to involve the local people. In certain cases, the Company even employs the local people directly, and engage them in Operation and Maintenance (O&M) activities. The contractors are constantly encouraged to procure their construction material from local and small vendors. Small suppliers, predominantly civil contractors and transporters who help them in securing work contracts at nearby locations are being promoted and encouraged. Further, the Company has worked with the local communities and prepared check dams in the vicinity of villages to ensure water availability in the summer months and consequently increased the crop production.

Local procurement is done for items available in local market to the extent possible. It is ensured that most of the manpower deployment is done from surrounding areas. As a part of CSR activities, local communities are trained and provided infrastructure for production of items which can be used by JSW (e.g. plates made from leaves of betel nut). Skill development through vocational training of persons living in contiguous communities is also being carried out to increase employability.

The Company organises training of farmers every year to improve the yield of crops of fruits and vegetables. The farmers are allowed to set up stalls at the Company canteen and in the township to sell the fruits and vegetables grown by them. The Company has started a rural BPO to increase the employment and create an earning opportunity.

The Company has arranged for courses on fashion designing in the direct influence zone for women; this entails minimum fees and enables them to set up their own stitching business. About 40 girls are being trained every year. Further, a 3-year technical training course equivalent to diploma is provided to 45 children of surrounding villages (Classes 10 and 12); they are then absorbed in Company's payroll as Employees in executive category. Finally, the Company has arranged for 3-month technical course on topics such as basic electrical, basic electronics, welding technology, etc. to 36 persons of surrounding villages and engaged them as associate employees.

#### **JSWEL Vijayanagar**

The Company is promoting and encouraging local small suppliers, and contractors for civil, housekeeping and horticulture jobs, and transporters, from surrounding areas; this helps them in securing work contracts. The Company encourages its contractors to involve the local people in operation and maintenance activities. For example, nearly 600 persons out of 726 persons employed by contractors are local. Further, contractors are also encouraged to procure the construction materials from local and small vendors.

The Company involves the local people for construction of the plants, and enrolls them under apprenticeship schemes to the ITI holders in order to develop their skills and better opportunities for employment. For example, 14 ITI apprentices were enrolled in FY 2018.

The local contractors are being imparted with high quality safety standard under contract safety management system, thereby their capacity is enhanced to compete with their peers.

Local procurement is done for items available in local market to the extent possible. It is ensured that most of the manpower deployment is done from surrounding areas. As a part of CSR activities, local communities are trained and provided infrastructure for production of items which can be used by JSW (like plates from leaves of the betel nut plants). Skill development of nearby communities is also being carried out through Vocational Training Centre (VTC) to increase employability.

### **Principle 3: HUMAN CAPITAL**

1. Please indicate the total number of employees.  
JSWEL: 527, RWPL: 327, HBPCCL: 931  
TOTAL: 1,785
2. Please indicate the Total number of employees hired on temporary/ contractual/ casual basis.  
JSWEL: 1,377, RWPL: 998, HBPCCL: 744  
TOTAL: 3,119
3. Please indicate the Number of permanent women employees.  
JSWEL: 38, RWPL: 4, HBPCCL: 26  
TOTAL: 68 (up from 27 in 2016-17)
4. Please indicate the Number of permanent employees with disabilities  
JSWEL: nil, RWPL: nil, HBPCCL: 06
5. Do you have an employee association that is recognized by management?  
Ratnagiri: no, Vijayanagar: no, Barmer: no, HBPCCL: yes (Workers' Trade Union)



6. What percentage of your permanent employees is members of this recognized employee association?

Ratnagiri, Vijayanagar, Barmer: not applicable; HBPL: 58%

7. Please indicate the Number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.

Ratnagiri, Vijayanagar, Barmer, HBPL: all Nil

#	Category	No. of complaints filed during the financial year	No. of complaints pending as on end of the financial year
1	Child labour/ forced labour/ involuntary labour	Nil	NA
2	Sexual harassment	Nil	NA
3	Discriminatory employment	Nil	NA

8. What percentage of your under mentioned employees were given safety & skill up-gradation training in the last year?

- Permanent Employees: 100%
- Permanent Women Employees: 100%
- Casual/ Temporary/ Contractual Employees: 100%
- Employees with Disabilities: 100%

#### Principle 4: STAKEHOLDER ENGAGEMENT

Has the Company mapped its internal and external stakeholders? Yes/No

Yes. The stakeholders have been mapped and the key stakeholders are as follows:

- a) Government and regulatory authorities
- b) Investors and Shareholders
- c) Employees
- d) Customers
- e) Local Communities
- f) Suppliers / contractors.
- g) Lenders
- h) NGOs

There is a defined set of processes for interacting and engaging with various stakeholders at various levels. A Committee of the Board deals with the grievances and engage with the Investors and shareholders. Likewise, departments have been set up at Project locations for interacting and engaging with other stakeholders at various levels. The specialised teams ensure communication with

various stakeholders internally and externally which helps the Company in understanding their concerns and respond to them appropriately.

The Company has taken following initiatives to engage with the disadvantaged, vulnerable and marginalised stakeholders:

- a) Three special-abled schools were identified where the Company provides material for physiotherapy exercise, development of physiotherapy room and sports material. The Company organises stalls to sell materials made by Special-abled children as well as organises picnic for them every year.
  - b) The Company is helping 14 Aganwadi Kendras (170 students) in DIZ area by providing material like cub-boards, chairs etc. doing thematic painting; training to AWC workers and also providing supplementary food.
  - c) The Company is helping 15 Primary schools (330 Students) in DIZ area by providing material like cub-boards, chairs, education software, doing wall painting; providing supplementary food. The Company has constructed one school building and compound wall for one school. The Company has given safety first-aid training to all teachers and safety training to 330 students in DIZ area. Company organizes drawing competition for all school students.
  - d) The Company has started 'ARMAAN' and 'm-Mitra Phone Sakhi' programme for 279 pregnant and lactating women of the direct and indirect influence zones. Counselling is provided to them via mobile phones and are regularly advised to go for health check-up through government PHC of Khandala & Malgund. every Monday & Thursdays. They also give support information to all pregnant women.
  - e) The Company has renovated the PHC Operation Theatre, Labour room and premises at Khandala.
1. Out of the above, has the Company identified the disadvantaged, vulnerable & marginalized stakeholders.

Among the stakeholder populace residing in DIZ, a baseline survey was conducted in project affected villages to identify the disadvantaged people. It forms the basis of the Company's CSR initiatives design to make it more focused towards improving life quality of villagers in general and women and marginalized in particular.

2. Are there any special initiatives taken by the Company to engage with the disadvantaged, vulnerable and marginalised stakeholders? If so, provide details thereof, in about 50 words.



To meet the prime motive of the Company's CSR philosophy, a comprehensive approach to improve the citizen services of providing safe drinking water and sanitation, public health, school and vocational/technical education is taken up since inception. Besides this, empowering women through making them self-reliant and conserving traditional natural resource management system and conservation of cultural heritage of the Thar Desert is an integral part of the CSR program delivery.

### Principle 5: HUMAN RIGHTS

- Does the policy of the Company on human rights cover only the Company or extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs/ Others?

JSW Energy has formulated & circulated a policy on Prevention of Sexual Harassment at Workplace, Whistle-blower Policy, etc. It has also created an email id: [energycares@jsw.in](mailto:energycares@jsw.in) for collecting the grievances and their handling.

The Company has also extended strong support to associate manpower by covering them in Group Personal Accident & Group Mediclaim policy. The Company abides by all the rules and regulations related to human rights which is applicable in the area of operations.

It covers every one. JSW Energy has formulated & circulated a policy on Prevention of Sexual Harassment at Workplace, Whistle-blower Policy etc. It has also created an email ID: [energycares@jsw.in](mailto:energycares@jsw.in) for collecting the grievances and their handling. The Company does not have a stated human rights policy. However, most of the aspects are covered in the manner in which the Company conducts its business as well as in its human resources practices. All rules and regulations related to human rights which are applicable in the area of operations are abided by.

- How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management?

80 complaints were received in 2017-18, and all were resolved.

### Principle 6: ENERGY AND ENVIRONMENT

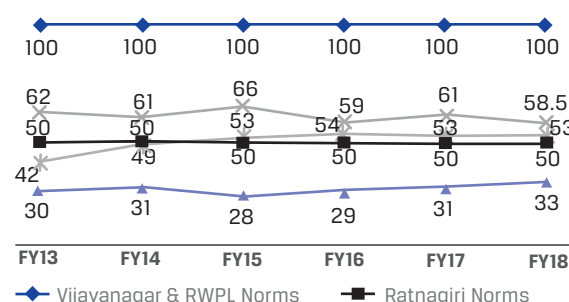
- Does the policy related to Principle 6 cover only the Company or extends to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs/ others.

The scope of JSW Energy's Integrated Management Policy covers the conservation and preservation of the environment, and the entire value chain. In other words, the policy is applicable to Joint Ventures, suppliers, contractors, NGOs, and others. All the plants maintain the generation of emissions and waste within the permissible limits.

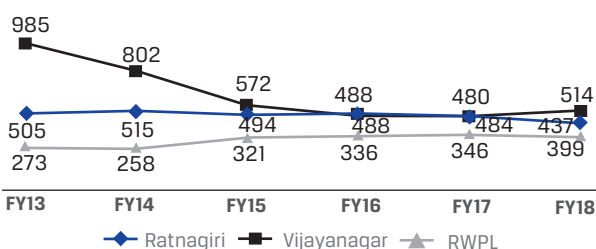
The Company has taken on the responsibility to address and tackle global long-term challenges such as demographic change, climate change, and diminishing resources, in a socially, ecologically and economically responsible manner.

A few glimpses of the environmental performance trends are provided in the following charts.

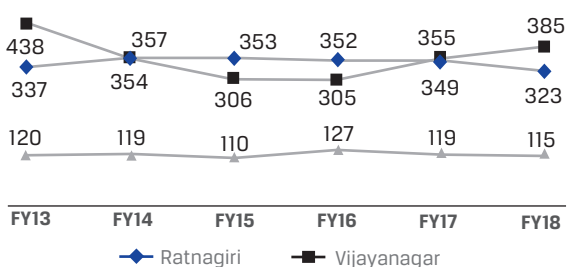
SPM (mg / Nm<sup>3</sup>)



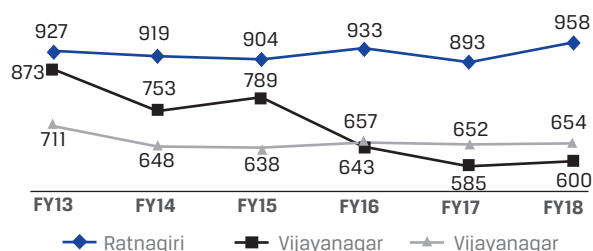
SO<sub>x</sub> (mg / Nm<sup>3</sup>)



NO<sub>x</sub> (mg / Nm<sup>3</sup>)



Specific GHG Emissions (MT CO<sub>2</sub>e / MU)



\* Since, HBPC is Hydro Power Project. There are no emissions

### Energy Saving (MUs)

FY13	10.82
FY14	41.21
FY15	15.13
FY16	29.83
FY17	35.46
FY18	85.55

Energy saving is consisting of Vijayanagar, Ratnagiri, RWPL & HBPL

### Tree Plantations

BEFORE FY12	132,640
FY12	24,947
FY13	38,030
FY14	49,148
FY15	145,655
FY16	25,091
FY17	48,260
FY18	21,199

Plantation of trees across all locations till March 2018

- Does the Company have strategies/initiatives to address global environmental issues such as climate change, global warming, etc.? Y/N. If yes, please give hyperlink for webpage etc.

JSW Energy has adopted an integrated approach to address global environmental issues such as climate change, global warming etc. Initiatives taken to make water available for operation of plants and community use and to address natural resource management, promotion of green belt and livelihood generation. Available lands around the sites and open spaces within the premises are being covered into green belts, leading to reduction of dust, reduction in evaporation losses of water, covered coal shed in coal stock yard and improved micro-climate conditions.

Glimpse of actions taken during FY 18 are summarized below:

#### Ratnagiri:

Following projects are implemented to address global environmental issues.

- Installation of spacers in ID Fans to reduce aux. power consumption.
- Lowering of CT hot water duct in Unit-4 to improve heat rate which resulted in less coal consumption.

#### Vijayanagar:

- We have improved the emission standards, by changing the ESP fields spike type electrodes with

spiral type electrodes and there by increased the availability of ESP fields and better SPM levels.

- We have reduced the fossil fuel consumption by reduce the auxiliary power consumption by 1382 kWh by carrying out various inhouse operation/process improvements like Installation of VFD, spacer coupling in ID fans and ESP power consumption optimisation by changing the charge ratios, HPSV replaced with LED lamps which had resulted in reduction in GHG emission.
- To increase the green belt surrounding the operating area, we have carried out plantation of 1038 trees within plant and nearby areas covering 1.85 Hectares.

#### HBPL

The Company addresses the environmental issues by the following activities:

- Afforestation/Plantation drives

Compensatory Afforestation for both the power stations have been got carried out through Himachal Pradesh Forest Department. Over and above, plantation drives have been consistently taken up and in 2017-18 more than 6,000 new plantations (Robinia, Dreack, Popular, Neoja, Weeping Willow, Allanthus etc.) have been completed.

- Reclamation of muck dumping site

To avoid spillage of the muck in the river system, dumping sites have been protected with the retaining structures and reclaimed with plantation. So far about 1,13,000 plantations have been done on these dumping sites. Since power stations are already operational, no fresh generation of muck takes place.

- Reservoir Rim Treatment

Reservoir Rim Treatment is essential to ensure stability of hill slopes around the periphery of the reservoir. Based on the recommendations of IIT Roorkee, necessary protection measures for the vulnerable slopes have been provided along Sutluj and Baspa rivers.

- Installation of 30 kW on grid Solar Plant

By creating additional power generation from Solar other than hydro, the Company is constantly fulfilling its obligation to reduce the carbon foot print, thereby addressing the global environmental issue.

Both the Plants, i.e. Karcham Wangtoo HEP and Baspa-II HEP taken over by JSW Energy w.e.f. 1<sup>st</sup> September, 2015 of HBPL are Run-of-River Hydro Project. Being producer of clean energy, they do not have any adverse effect on climate change, global warming. These hydro projects also play a vital role

during morning and evening peak power demand, thereby ensuring the energy security of the country.

3. Does the Company identify and assess potential environmental risks? Y/N

Yes, Potential environmental risks are identified by JSW Risk Management Department and discussed quarterly by the Directors of the Risk Committee. Once risk is identified, steps are taken to measure and mitigate risk through the Management System approach.

Both the plants under HBPCCL have detailed Environment Impact Assessment (EIA) and Environment Management Plan (EMP) in place. Both the EIA & EMP have been duly approved by the MoEF & CC (Ministry of Environment, Forest & Climate Change). Moreover, Disaster Management Plan (DMP) and Emergency Action Plan (EAP) have also been prepared and implemented for both the plants.

4. Does the Company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if Yes, whether any environmental compliance report is filed?

Yes, both 1,000 MW Karcham Wangtoo (KWHPS) and 300 MW Baspa II are registered as a CDM projects. Process has been started to bring both the projects under VCS (Voluntary Carbon Standard) programme under the present owner, HBPCCL.

Environmental Compliance Report (Half-Yearly) is submitted to MOEF, Government of India for both the power stations. In addition, Environment Statement (Form-V) is submitted to Himachal Pradesh State Pollution Control Board annually.

5. Has the Company undertaken any other initiatives on – clean technology, energy efficiency, renewable energy, etc. Y/N. If yes, please give hyperlink for web page etc.

The Company has undertaken the following initiatives on clean technology, energy efficiency and renewable energy. The salient points are summarized below:

Hydro power generation itself is considered as renewable source of energy. Since both the projects under HBPCCL are run-of-river hydro scheme, with no large pond and no emission of greenhouse gases, both helps in the sustainable development under clean development mechanism.

Moreover, for energy efficiency following initiatives has been taken:

- Energy saving by replacement of inefficient lighting system by energy efficient LED lighting.

- Constantly monitoring the performance of electrical equipment, DG sets etc.

- Carryout energy audits at regular intervals to increase the efficiency of the plant equipment.

As a new initiative, HBPCCL has recently commissioned its first 30 kW on-grid solar renewable at its transit guest house, Bithal, Himachal Pradesh to further strengthen its commitment towards clean environment by focussing more on renewable.

#### RATNAGIRI

Following projects are implemented in JSWELR for Energy efficiency.

- Replacement of ID fan, Hydraulic coupling with Spacer coupling to reduce Aux. power consumption.
- Lowering of Cooling Tower hot water duct in Unit-4 to improve heat rate which resulted in less coal consumption.
- Optimization of Condensate Extraction Pump (CEP) discharge pressure to reduce Aux. power Consumption.

#### VIJAYANAGAR

Yes, under CSR initiative installed 64KW solar panel for rural electrification in for the public health centres and Akshaya Patra Foundation in surrounding villages.

6. Are the Emissions/Waste generated by the Company within the permissible limits given by CPCB/ SPCB for the financial year being reported?

#### Thermal Power Stations:

Yes, JSW Energy is in compliance with the prescribed permissible limits as per Central Pollution Control Board (CPCB), State Pollution Control Board (SPCB) for air emissions, effluent quality and discharge, solid and hazardous waste generation and disposal. Compliance reports/ statements are submitted to SPCB as well as Regional Office, Ministry of Environment, Forest & Climate Change (MoEF & CC) regularly, as applicable. However, we are finalising our action plan for the implementation of revised norms as prescribed by MoEF & CC.

#### Hydro Power Stations:

The plants neither produce any kind of gaseous emission, liquid, wastes or solid wastes compared to other conventional mode of energy generation.

However, the river water quality is analysed by the State Pollution Control Board as a part of environmental monitoring. No adverse effect of plant or it's generation on river water has been found or reported.

#### VIJAYANAGAR

Emission and waste are within permissible limits given by CPCB/ SPCB

- Emissions (particulate matter) was in between 65-70 mg/Nm<sup>3</sup> against the KSPCB norm of 100 mg/Nm<sup>3</sup>.
- Waste water of 1098 cum/day used in OBP (Ore Beneficiation Plant) of Steel plant for reusing against norm of 7,894 cum/day.

7. Number of show cause/legal notices received from CPCB/SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year

NIL

#### Principle 7

1. Is your Company a member of any trade and chamber or association? If Yes, Name only those major ones that your business deals with:

The Company is member of various trade and chamber associations. The major ones are:

Confederation of Indian Industry (CII)

Federation of Indian Chambers of Commerce & Industries (FICCI)

The Associated Chambers of Commerce and Industry of India (ASSOCHAM)

Association of Power Producers (APP)

2. Have you advocated/lobbied through above associations for the advancement or improvement of public good? Yes/No; if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others)

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

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

#### Principle 8: COMMUNITY DEVELOPMENT

- a) Does the Company have specified programmes/ initiatives/projects in pursuit of the policy related to Principle 8? If yes details thereof.

Considering the remoteness and difficult climatic conditions of the desert area programs have been designed to address the issues of literacy, women empowerment, drinking water and sanitation, public health in general and maternal and child health in particular. Creation and restoration of community infrastructures and improvement in farm productivity along with vocational skill development of rural youth is also undertaken to attain an overall improvement in quality of life of the people.

JSW Energy Limited, Ratnagiri involves in following CSR programs

- a) Agriculture development
- b) Educational development
- c) Skill development and employability through vocational training
- d) Women empowerment through SHGs.
- e) Preventive & curative health and sanitation, Biogas construction.
- f) Watershed development.

- b) Are the programmes/ projects undertaken through in-house team/ own foundation/ external NGO/ government structures/ any other organisation?

Considering the remoteness and difficult climatic conditions of the desert area programs have been designed to address the issues of literacy, women empowerment, drinking water and sanitation, public health in general and maternal and child health in particular. Creation and restoration of community infrastructures and improvement in farm productivity along with vocational skill development of rural youth is also undertaken to attain an overall improvement in quality of life of the people.

- c) Have you done any impact assessment of your initiative?

The Company conducts periodic assessment of our work through a third party and incorporate its recommendations in alignment of our programme. Last assessment was conducted in year 2016 through Institute of Development Studies, Jaipur.

- d) What is your Company's direct contribution to community development projects – Amount in INR and the details of projects undertaken?

Vijaynagar & Ratnagiri: ₹ 20.25 crore

RWPL: ₹ 9.2 crore

HBPL: ₹ 2.2 crore

Total = ₹ 31.65 crore

**e) Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words, or so.**

Identification and prioritisation of community initiatives is done through participatory exercise at village level which is further endorsed by Gram Panchayats. Implementation of mutually agreed interventions is done in participation of PRI members and community volunteers including women stakeholders; therefore, they are well received by the end user and further maintained by the community and Gram Panchayats.

**f) Watershed development**

Even though district receives annual rainfall in excess

of 3,500 to 4,000 mm, water scarcity in the non-monsoon season is reported in many villages. Rain water harvesting and water management techniques are the solution to address the problem of water stress.

Taking cognisance of this water scarcity in this region, the Company has started water storage system through cement dam, spring development, stone gully plugs, stone nallah plugs, gabion structures, water absorption trenches which will reduce water velocity, reduce top soil erosion, increase vegetative cover, recharge of ground water and increase soil moisture which help in trees.

Till now, JSW has constructed 20 small cement dams (since 2016) in this area which will help to store about 35,150 m<sup>3</sup> of water thereby benefitting 20,774 villagers.



**g) Paddy cultivation through SRT:**

SRT (Saguna Rice Technique) allows farmers to grow without 'ploughing' and 'puddling' and reduce all inputs such as water, fertiliser, seed, labour, chemicals by 50% and the doubling of production. More than 175 farmers are associated with JSW for latest farming technology and getting maximum yield production with less resources and machinery.

**Principle 9: CUSTOMER SATISFACTION**

1. What percentage of customer complaints/consumer cases are pending as on the end of financial year?

Nil

2. Does the Company display product information on the product label, over and above what is mandated as per local laws? Yes/ No/ N.A./ Remarks (additional information)

N.A.

3. Is there any case filed by any stakeholder against the Company regarding unfair trade practices, irresponsible advertising and/or anti-competitive behaviour during the last five years and pending as on end of financial year? If so, provide details thereof, in about 50 words or so.

Nil

4. Did your Company carry out any consumer survey/ consumer satisfaction trends?

Since the business primarily is with customers from Govt entities, with whom the Company continuously engages/interacts, no formal survey has been done.