



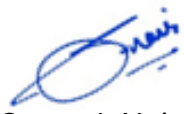

Project Verification Report Form (VR)	
<b>BASIC INFORMATION</b>	
<b>Name of approved UCR Project Verifier / Reference No.</b>	SQAC Certification Pvt Ltd.
<b>Type of Accreditation</b>	<input type="checkbox"/> CDM or other GHG Accreditation <input type="checkbox"/> ISO 14065 Accreditation <input checked="" type="checkbox"/> UCR Approved
<b>Approved UCR Scopes and GHG Sectoral scopes for Project Verification</b>	I-Renewable Energy Projects
<b>Validity of UCR approval of Verifier</b>	October 2021 onwards.
<b>Completion date of this VR</b>	19/07/2024
<b>Title of the project activity</b>	28 MW Biomass based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd.
<b>Project reference no.</b> (as provided by UCR Program)	UCR ID: <b>452</b>
<b>Name of Entity requesting verification service</b>	M/s. Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd. & Progressive Management Consultants.
<b>Contact details of the representative of the Entity, requesting verification service</b>	Progressive Management Consultants UCR ID: 110736904 Email: <a href="mailto:info@progressive-iso.com">info@progressive-iso.com</a>
<b>Country where project is located</b>	India
<b>Applied methodologies</b> (approved methodologies by UCR Standard used)	<b>CDM UNFCCC Methodology</b> <b>ACM0006:</b> Electricity and heat generation from biomass --- Version 16.0 UCR Standard for Baseline Grid Emission Factor





<b>GHG Sectoral scopes linked to the applied methodologies</b>	01 Energy industries (Renewable/Non-Renewable Sources)
<b>Project Verification Criteria:</b> Mandatory requirements to be assessed	<input checked="" type="checkbox"/> UCR Standard <input checked="" type="checkbox"/> Applicable Approved Methodology <input type="checkbox"/> Applicable Legal requirements /rules of host country <input checked="" type="checkbox"/> Eligibility of the Project Type <input checked="" type="checkbox"/> Start date of the Project activity <input checked="" type="checkbox"/> Meet applicability conditions in the applied methodology <input checked="" type="checkbox"/> Credible Baseline <input checked="" type="checkbox"/> Do No Harm Test <input checked="" type="checkbox"/> Emission Reduction calculations <input checked="" type="checkbox"/> Monitoring Report <input checked="" type="checkbox"/> No GHG Double Counting <input type="checkbox"/> Others (please mention below)
<b>Project Verification Criteria:</b> Optional requirements to be assessed	<input checked="" type="checkbox"/> Environmental Safeguards Standard and do-no-harm criteria <input checked="" type="checkbox"/> Social Safeguards Standard do-no-harm criteria
<b>Project Verifier's Confirmation:</b> The <i>UCR Project Verifier</i> has verified the UCR project activity and therefore confirms the following:	<p>The UCR Project Verifier SQAC Certification Pvt. Ltd., certifies the following with respect to the UCR Project Activity 28 MW Biomass based Grid supply power project by Shree Chhatrapati Shahu SSK Ltd.</p> <input checked="" type="checkbox"/> The Project Owner has correctly described the Project Activity in the Project Concept Note V2 dated 09/07/2024 including the applicability of the approved methodology ACM0006: Electricity and heat generation from biomass (Ver.16.0) & UCR Standard for Emission Factor and meets the methodology applicability conditions and has achieved the estimated GHG emission



	<p>reductions, complies with the monitoring methodology and has calculated emission reductions estimates correctly and conservatively.</p> <p><input checked="" type="checkbox"/> The Project Activity is generating GHG emission reductions amounting to the estimated 2,32,860 tCO<sub>2eq</sub>, as indicated in the MR V1, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable UCR rules, including ISO 14064-2 and ISO 14064-3.</p> <p><input checked="" type="checkbox"/> The Project Activity is not likely to cause any net-harm to the environment and/or society.</p> <p><input checked="" type="checkbox"/> The Project Activity complies with all the applicable UCR rules and therefore recommends UCR Program to register the Project activity with above mentioned labels.</p>
<b>Project Verification Report, reference number and date of approval</b>	Verification Report UCR Project ID: <b>452</b> dated 19/07/2024
<b>Name of the authorised personnel of UCR Project Verifier and his/her signature with date</b>	 Santosh Nair Lead Verifier (Signature) SQAC Certification Pvt Ltd 



## PROJECT VERIFICATION REPORT

### Section A. Executive summary

Progressive Management Consultants has contracted SQAC Certification Pvt. Ltd. to carry out the verification of the project activity of 28 MW Biomass based Grid supply Power Project by M/s. Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., Kagal, Maharashtra, India. UCR approved Project ID: **452**, to establish number of CoUs generated by project over the crediting period from **01/01/2016 - 31/12/2023** (8 years 00 months)

We believe that the total GHG emission reductions over the crediting / verification period stated in the Monitoring Report V1 (MR), submitted to us is accurate and in line with the UCR guidelines.

The GHG emission reductions were calculated based on UCR Protocols which draws reference from, ACM0006: Electricity and heat generation from biomass (Ver. 16.0) & UCR Standard for Baseline Grid Emission Factor. The verification was done remotely by way of video calls / verification, phone calls and submission of documents for verification through emails as per UCR guidelines.

SQAC is able to certify that the emission reductions from 28 MW Biomass based Co-generation by M/s. Shree Chhatrapati Sahu Sahakari Sakhar Karkhana Ltd., Kagal, Maharashtra, (UCR ID – **452**) for the period **01/01/2016 to 31/12/2023** amounts to **2,32,860 CoUs (2,32,860 tCO<sub>2</sub>eq)**

Project Verification team, technical reviewer and approver

### Section B. Project Verification Team

Sr. No	Role	Last name	First name	Affiliation	Involvement in		
					Doc review	Off-Site inspection	Interviews
1.	Team Leader	Nair	Santosh	n/a	yes	yes	yes
2.	Validator	Nair	Santosh	n/a	yes	yes	yes



## Technical reviewer and approver of the Project Verification report

Sr. No.	Role	Type of resource	Last name	First name	Affiliation
1.	Technical reviewer	IR	Shinganapurkar	Praful	SQAC Certification Pvt. Ltd
2.	Approver	IR	Shinganapurkar	Praful	SQAC Certification Pvt. Ltd

### Section C. Means of Project Verification

#### C.1. Desk/document review

As part of the review and validation process, Progressive Management Consultants submitted a comprehensive set of documents for examination by the Lead Verifier. The documents included the Project Concept Note V2 (PCN), Monitoring Report V1, Emission Reduction (ER) calculation sheet, Commissioning Certificate of the boilers & turbines, Power Purchasing Agreement, NOC-Maharashtra Pollution Control Board, Expansion of Sugar Factory Application form, Joint Meter Readings, Invoices, Meter Testing Report and additional data provided upon request pertaining to all related projects. These documents were thoroughly reviewed to ensure compliance with relevant standards and guidelines, and to validate the accuracy and completeness of the information provided.

#### C.2. Off-site inspection

Date of offsite inspection: 16/07/2024			
Sr. No.	Activity performed Off-Site	Site location	Date
1.	Interview conducted over Video call/Telephonic discussions	Kagal	16/07/2024
2	Supporting documents provided before, during, after the verification.	Kagal	16/07/2024



### C.3. Interviews

Sr. No.	Interview			Date	Subject
	Name	Designation	Affiliation		
1	Mr. B. M. Birje	Chief Engineer	M/s Shree Chhatrapati Shahu SSK Ltd,	16/07/2024	Calibration, Commissioning Certificate Compliance, etc.
2	Mr. Ishwar Swamy	Assistant Engineer	M/s Shree Chhatrapati Shahu SSK Ltd,	16/07/2024	JMR & Invoices
3	Mr. Amol Kumar Herwade	Mechanical Engineer	M/s Shree Chhatrapati Shahu SSK Ltd,	16/07/2024	Commissioning and overview
4	Mr. Uttam Parit	Electrical Engineer	M/s Shree Chhatrapati Shahu SSK Ltd,	16/07/2024	Power Purchasing Agreement, Meter Photos

### C.4. Sampling approach

Not applicable

### C.5. Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	No. of CL	No. of CAR	No. of FAR
<b>Green House Gas (GHG)</b>			
Identification and Eligibility of project type	Nil	Nil	Nil
General description of project activity	Nil	Nil	Nil
Application and selection of methodologies and standardized baselines			
- Application of methodologies and standardized baselines	Nil	Nil	Nil
- Deviation from methodology and/or methodological tool	Nil	Nil	Nil
- Clarification on applicability of methodology, tool and/or standardized	Nil	Nil	Nil



baseline			
- Project boundary, sources and GHGs	Nil	Nil	Nil
- Baseline scenario	Nil	Nil	Nil
- Estimation of emission reductions or net anthropogenic removals	Nil	Nil	Nil
- Monitoring Report	Nil	Nil	Nil
Start date, crediting period and duration	Nil	Nil	Nil
Environmental impacts	Nil	Nil	Nil
Project Owner- Identification and communication	Nil	Nil	Nil
<b>Total</b>	Nil	Nil	Nil

## Section D. Project Verification Findings

### D.1. Identification and eligibility of project type

<b>Means of Project Verification</b>	<p><b>Project Type:</b> The project is a 28 MW Biomass-Based Grid Supply Power Project using bagasse, a by-product of sugar manufacturing, for power generation.</p> <p><b>Methodology:</b> It follows the CDM UNFCCC Methodology ACM0006 for electricity and heat generation from biomass.</p> <p><b>Eligibility:</b> The project displaces CO<sub>2</sub> emissions from fossil fuel-based power plants by supplying renewable biomass-based electricity to the grid.</p> <p><b>Compliance:</b> The project meets the criteria of the UCR and UNFCCC CDM methodology, ensuring it is not a debundled component of a larger project and does not involve double counting of emission reductions.</p>
<b>Findings</b>	<p>Upon verification, the project of 28 MW biomass-based grid supply power project by Shree Chhatrapati Shahu SSK Ltd., is identified as a renewable energy project utilizing biomass (bagasse) for electricity generation. It displaces CO<sub>2</sub> emissions from fossil fuel-based power plants, meeting the eligibility criteria under the UCR and UNFCCC CDM methodologies. The project is included in the positive list of approved types under the</p>



	<p>UCR CoU Standard, confirming its eligibility. Additionally, it does not involve any public funding from Annex I Parties, ensuring no diversion of official development assistance.</p>
<p><b>Conclusion</b></p>	<p>In conclusion, the project, a 28 MW biomass-based grid supply power project by Shree Chhatrapati Shahu SSK Ltd., is eligible under the UCR and UNFCCC CDM methodologies. It utilizes renewable biomass (bagasse) for electricity generation, displacing fossil fuel-based grid electricity. The project meets the criteria for large-scale renewable energy projects and is included in the positive list of approved UCR project types. Additionally, it adheres to the environmental and technological standards required for such projects</p>

## D.2. General Description of Project Activity

<p><b>Means of Project Verification</b></p>	<p><b>Purpose:</b> The project aims to generate electricity using renewable biomass (bagasse) to reduce greenhouse gas emissions by replacing fossil fuel-dominated grid electricity with biomass-based renewable electricity.</p> <p><b>Technology:</b> The project uses a high-pressure steam-turbine configuration, with bagasse-fired boilers generating steam to produce power.</p> <p><b>Integration:</b> The project is integrated with alcohol distillation and power generation, exporting surplus power to the Maharashtra State Electricity Distribution Co. Ltd. grid.</p> <p><b>Environmental Impact:</b> The project reduces carbon dioxide emissions, introduces efficient cogeneration technology, and fosters sustainable economic growth in the sugarcane industry</p>
<p><b>Findings</b></p>	<p>Upon verification, it was found that the project aims to generate electricity using renewable biomass (bagasse)</p>





	<p>and reduce greenhouse gas emissions by replacing fossil fuel-dominated grid electricity with biomass-based renewable electricity. The project displaces carbon-intensive grid energy with a renewable, carbon-neutral energy source, contributing to environmental sustainability. Additionally, it introduces efficient high-pressure cogeneration technology to the Indian sugar industry and supports sustainable economic growth by promoting energy self-sufficiency and resource conservation</p>
<b>Conclusion</b>	<p>In conclusion, the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd. aims to generate electricity using renewable biomass (bagasse) to reduce greenhouse gas emissions. Located in Kagal, Maharashtra, the project displaces carbon-intensive grid energy with renewable, carbon-neutral energy. It introduces efficient high-pressure cogeneration technology to the Indian sugar industry, reduces power shortages in Maharashtra, and promotes sustainable economic growth. The project exports surplus power to the Maharashtra State Electricity Distribution Co. Ltd. grid, contributing to environmental sustainability and energy self-sufficiency.</p>



### D.3. Application and selection of methodologies and standardized baselines

#### D.3.1 Application of methodology and standardized baselines

<p><b>Means of Project Verification</b></p>	<p>Sectoral Scope: The project falls under Sectoral Scope 01 for energy industries (renewable/non-renewable sources).</p> <p>Project Type: It is classified as a Large-Scale Renewable Energy Project.</p> <p>Methodology: The project uses the ACM0006 methodology for electricity and heat generation from biomass, Version 16.0.</p> <p>Baseline Emission Factor: The baseline grid emission factor is determined using the UCR CoU Standard for the 2013-2023 period.</p>
<p><b>Findings</b></p>	<p>Upon verification, the PCN V2 &amp; MR V1 outlines that the project activity uses the ACM0006 methodology for electricity and heat generation from biomass, ensuring it meets the UCR and UNFCCC CDM eligibility criteria. The project displaces CO<sub>2</sub> emissions from fossil fuel-based power plants by using biomass (bagasse) for electricity generation. It confirms that the biomass is not stored for more than a year and is not chemically or biologically processed before combustion. The project does not involve co-firing fossil fuels beyond the 15% limit, ensuring compliance with the UCR protocol.</p>
<p><b>Conclusion</b></p>	<p>In conclusion, the project activity involves a biomass (bagasse) cogeneration power plant that displaces CO<sub>2</sub> emissions from fossil fuel-based electricity generation. It meets the primary applicability criteria of the UCR and UNFCCC CDM methodology, as it uses biomass residues for power generation and supplies it to the local grid. The project is included in the positive list of approved types of activities under the UCR CoU Standard. The methodology ensures that the project</p>



	activity is eligible for carbon credits by displacing more GHG-intensive electricity generation in the grid.
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### D.3.2 Clarification on applicability of methodology, tool and/or standardized baseline

<b>Means of Project Verification</b>	<p><b>Project Boundary:</b> Verification will ensure that the spatial extent of the project boundary encompasses all relevant plants and power sources.</p> <p><b>Emission Reductions Calculation:</b> The emission reductions will be calculated as the difference between baseline emissions and the sum of project emissions and leakage.</p> <p><b>Monitoring Plan:</b> Verification will involve checking the monitoring of electricity data, biomass consumption, and steam data, ensuring all values are recorded accurately.</p> <p><b>Calibration and Records:</b> Verification will confirm that all meters are calibrated annually by an independent agency and that all records are maintained as per the Project Concept Note V2 (PCN)</p>
<b>Findings</b>	<p>Upon verification, the project activity uses the ACM0006 methodology for electricity and heat generation from biomass, which is applicable as it involves a biomass (bagasse) cogeneration power plant. The project meets the criteria for large-scale renewable energy projects under the UCR CoU Standard. The biomass used is a by-product of sugar production, ensuring no dedicated plantations are involved. Additionally, the project does not co-fire fossil fuels beyond the 15% limit, adhering to the UCR Protocol. Therefore, the methodology and tools applied are appropriate and compliant with the standardized baseline requirements.</p>
<b>Conclusion</b>	<p>In conclusion, the document outlines that the project</p>



	<p>activity is a biomass-based cogeneration power plant using bagasse, which meets the primary applicability criteria of the UCR and UNFCCC CDM methodology. The project displaces CO<sub>2</sub> emissions from fossil fuel-based electricity generation in the grid. It adheres to the ACM0006 methodology for electricity and heat generation from biomass, ensuring compliance with the UCR CoU Standard. Therefore, the methodology, tools, and standardized baselines applied are appropriate and valid for this project.</p>
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### D.3.3 Project boundary, sources and GHGs

<p><b>Means of Project Verification</b></p>	<p><b>Project Boundary:</b> Verification will encompass all plants generating power and/or heat at the project site, all power plants connected to the electricity system that the project plant is connected to, and the means of transportation of biomass to the project site.</p> <p><b>Sources of GHGs:</b> Verification will focus on CO<sub>2</sub> emissions from fossil fuel in grid baseline power generation, and emissions from biomass project activity, including on-site fossil fuel and electricity consumption, and transportation of biomass residue.</p> <p><b>GHGs Included:</b> The primary GHG included for verification is CO<sub>2</sub>, as it is the major source of emissions. CH<sub>4</sub> and N<sub>2</sub>O are excluded for simplification and conservativeness.</p> <p><b>Leakage Emissions:</b> Verification confirms that leakage emissions are not applicable as the project does not use technology or equipment transferred from another activity</p>
<p><b>Findings</b></p>	<p>Upon verification, the project boundary for the 28 MW Biomass-Based Grid Supply Power Project includes all plants generating power and/or heat at the project site, all power plants connected to the electricity system that the project plant is connected to, and the means of</p>



	<p>transportation of biomass to the project site. The primary source of GHG emissions in the baseline scenario is CO<sub>2</sub> from fossil fuel-based grid power generation. The project activity itself does not have significant on-site fossil fuel or electricity consumption emissions. Leakage emissions are not applicable as the project does not use transferred technology or equipment. Overall, the project effectively displaces CO<sub>2</sub> emissions by utilizing biomass residues for power generation</p>
<b>Conclusion</b>	<p>In conclusion, the project boundary for the 28 MW Biomass-Based Grid Supply Power Project encompasses all plants generating power and/or heat at the project site, all power plants connected to the electricity system that the project plant is connected to, and the means of transportation of biomass to the project site. The primary source of GHG emissions in the baseline scenario is CO<sub>2</sub> from fossil fuel-based grid power generation. The project activity itself does not involve significant on-site fossil fuel or electricity consumption, and thus, project emissions are minimal. Leakage emissions are also not applicable as the project does not use transferred technology or equipment.</p>

#### D.3.4 Baseline scenario

<b>Means of Project Verification</b>	<p><b>Baseline Emissions Calculation:</b> The baseline emissions are determined by the net quantity of electricity generation due to the project activity, multiplied by the CO<sub>2</sub> emission factor for the electricity displaced by the project activity.</p> <p><b>Emission Factor:</b> The CO<sub>2</sub> emission factor for grid-connected power generation is calculated using the UCR Standard emission factor of 0.9 tCO<sub>2</sub>/MWh for the period 2013-2023.</p> <p><b>Electricity Generation Records:</b> Verification involves</p>
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	<p>checking the net quantity of electricity supplied to the grid, which is recorded and monitored daily.</p> <p>Conservativeness Principle: Transport emissions are calculated by applying a net-to-gross adjustment of 10% to ensure conservativeness in emission reduction calculations.</p>
<b>Findings</b>	<p>Upon verification, the baseline scenario for the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd. involves the displacement of electricity generated from fossil fuels in the Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) grid. The project replaces this with renewable biomass-based electricity, reducing greenhouse gas emissions. The baseline emissions are calculated based on the net quantity of electricity generated and fed into the grid, multiplied by the CO<sub>2</sub> emission factor for the grid. This results in significant reductions in CO<sub>2</sub> emissions, contributing to the project's overall environmental benefits.</p>
<b>Conclusion</b>	<p>In conclusion, the baseline scenario for the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd. involves the displacement of more greenhouse gas (GHG)-intensive electricity generation from the Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) grid. In the absence of this project, the grid would rely on fossil fuel-based power plants, leading to higher CO<sub>2</sub> emissions. The project uses bagasse, a renewable biomass, to generate electricity, thereby reducing the reliance on fossil fuels and lowering GHG emissions. The baseline emissions are calculated based on the net quantity of electricity generated and fed into the grid, multiplied by the grid's CO<sub>2</sub> emission factor.</p>



### D.3.6 Estimation of Emission Reductions or Net Anthropogenic Removal

<p><b>Means of Project Verification</b></p>	<p>Monitoring of Electricity Data: Power generation from turbine generators and auxiliary consumption of the power plant are metered. Main meters are attached to each turbine generator to determine total generation.</p> <p>Operational Records: Documented, collected, and archived in hard copies or electronic formats. Includes energy generation, biomass consumption, steam quantity, temperature, and pressure.</p> <p>Calibration and Measurement: Energy meters are calibrated annually by third-party agencies. Biomass consumption is measured by a calibrated weighbridge, and steam values are monitored using calibrated meters.</p> <p>Cross-Verification: Data such as the total amount of bagasse generated is cross-checked using annual energy balances and plant records. Calibration certificates and third-party analysis reports are used for verification.</p>
<p><b>Findings</b></p>	<p>Upon verification, the document outlines the Estimation of Emission Reductions for the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd. The project achieved a total of 2,32,860 tCO<sub>2</sub> emission reductions over the monitoring period from 2016 to 2023. This was calculated by subtracting the project emissions and leakage from the baseline emissions. The project primarily reduced emissions by displacing fossil fuel-based electricity with renewable biomass-based power. The methodology used ensures that the emission reductions are accurately measured and verified.</p>
<p><b>Conclusion</b></p>	<p>In conclusion, based on the document, the total estimated GHG emission reductions for the monitoring period from 2016 to 2023 is 232,860 tCO<sub>2</sub>. This</p>



	<p>reduction is achieved through the 28 MW biomass-based power project by Shree Chhatrapati Shahu SSK Ltd. The project displaces carbon-intensive grid electricity with renewable biomass-based electricity, primarily using bagasse. The methodology applied ensures that the emission reductions are accurately calculated and verified, contributing significantly to climate change mitigation.</p>
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### D.3.7 Monitoring Report

<p><b>Means of Project Verification</b></p>	<p>Metering and Recording: Electricity generation and auxiliary consumption are metered continuously. Data is recorded hourly by shift attendants and entered into logbooks, which are signed off by engineers and the power plant manager.</p> <p>Calibration: Energy meters are calibrated annually by independent third-party agencies. Calibration certificates are available for verification.</p> <p>Operational Records: Operational records and other evidence are documented, collected, and archived in hard copies or electronic formats.</p> <p>Monthly Reports: Data is collated into monthly reports, which are reviewed by management during quarterly meetings. These reports are available for verification during the project activity.</p>
<p><b>Findings</b></p>	<p>Upon verification, the Monitoring Report for the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd. indicates that the project successfully reduced greenhouse gas emissions by 2,32,860 tCO<sub>2</sub> over the monitoring period from 2016 to 2023. The project utilized bagasse, a by-product of sugar production, to generate renewable electricity, displacing fossil fuel-based grid electricity. The report confirms that the project met all regulatory requirements, including obtaining environmental</p>





	<p>clearances and conducting impact assessments. Additionally, the project contributed to local employment and sustainable development, aligning with multiple United Nations Sustainable Development Goals (SDGs).</p>
<p><b>Conclusion</b></p>	<p>In conclusion, the Monitoring Report for the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd. concludes that the project has successfully reduced greenhouse gas emissions by 2,32,860 tCO<sub>2</sub> over the monitoring period from 2016 to 2023. The project utilized renewable biomass (bagasse) to generate electricity, displacing fossil fuel-based grid electricity. The report confirms that the project has met its objectives of reducing GHG emissions, contributing to sustainable development, and providing environmental and economic benefits. The project has also complied with all necessary environmental regulations and monitoring requirements.</p>

#### D.4. Start date, crediting period and duration

<p><b>Means of Project Verification</b></p>	<p>Start Date: The project started on 01/01/2016.</p> <p>Crediting Period: The first crediting period is from 01/01/2016 to 31/12/2023.</p> <p>Duration: The monitoring period is 8 years, from 01/01/2016 to 31/12/2023.</p> <p>These details are documented in the monitoring report for the 28 MW Biomass-Based Grid Supply Power Project by Shree Chhatrapati Shahu SSK Ltd.</p>
<p><b>Findings</b></p>	<p>Upon verification, the start date for the monitoring period is 01/01/2016, and the end date is 31/12/2023. The UCR project activity had been registered as a CDM project activity under the title: Shree Chhatrapati Shahu RE Project (CDM Project ID 1297) by the PP.</p> <p><b>CDM Registration Date:</b> 22/12/2006</p>



	<p><b>CDM Crediting Period:</b> 01/04/2007 - 31/03/2014 (Fixed)</p> <p><b>CERs Issued (MR Period 1):</b> n/a (Project was rejected)</p> <p>Hence the UCR project activity has never been issued voluntary carbon credits for the current 2016- 2023 vintage years and there is no double counting of the credits envisioned.</p> <p>Additionally, the same will be stated in the undertaking provided in the Double Counting Avoidance Assurance Document (DAA) by M/s. Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd. This period marks the first UCR monitoring and crediting period for the project. The project has not received any voluntary carbon credits for the current vintage years, ensuring no double counting of credits.</p>
<b>Conclusion</b>	<p>In conclusion, the monitoring period for the UCR project activity, registered under the CDM project titled "Shree Chhatrapati Shahu RE Project" (CDM Project ID 1297), spans from 01/01/2016 to 31/12/2023. Despite being registered on 22/12/2006 with a fixed CDM crediting period from 01/04/2007 to 31/03/2014, the project was rejected and no CERs were issued. Consequently, no voluntary carbon credits have been issued for the 2016-2023 vintage years, avoiding any double counting. This is confirmed in the Double Counting Avoidance Assurance Document (DAA) by M/s. Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., marking the first UCR monitoring and crediting period for the project.</p>



#### D.5. Positive Environmental impacts

<p><b>Means of Project Verification</b></p>	<p>Reduction in GHG Emissions: The project generates renewable energy, reducing greenhouse gas emissions by displacing fossil fuel-based electricity.</p> <p>Pollution Reduction: The project avoids local and global pollution, reducing harmful gases like NO<sub>x</sub> and SO<sub>x</sub>.</p> <p>Resource Conservation: By using biomass (bagasse), the project conserves finite natural resources like coal and oil.</p> <p>Indirect Benefits: The project serves as a case example for other sugar mills, promoting high-capacity cogeneration and reducing ash generation due to lower ash content in bagasse compared to coal.</p>
<p><b>Findings</b></p>	<p>Upon verification, the project has several positive environmental impacts. It generates renewable energy using biomass (bagasse), reducing reliance on fossil fuels and lowering greenhouse gas emissions. This helps in minimizing the depletion of finite natural resources like coal and oil. Additionally, the project reduces local and global pollution, including harmful gases like NO<sub>x</sub> and SO<sub>x</sub>, and decreases ash generation due to the lower ash content in bagasse compared to coal. The project also serves as a model for other sugar mills to adopt similar high-capacity cogeneration configurations.</p>
<p><b>Conclusion</b></p>	<p>In conclusion, the project has several positive environmental impacts. It utilizes renewable biomass (bagasse) to generate electricity, reducing reliance on fossil fuels and lowering greenhouse gas emissions. The project also helps in conserving natural resources like coal and oil and reduces local and global environmental pollution. Additionally, it promotes sustainable development by providing a model for other sugar mills to adopt similar high-capacity cogeneration configurations.</p>



#### D.8. Project Owner- Identification and communication

<p><b>Means of Project Verification</b></p>	<p>Identification: The project involves unique IDs for biomass boilers, turbines, and energy meters, ensuring clear identification within the project boundary.</p> <p>Communication: The project owner is responsible for collecting and reporting data, which is verified and approved by the Manager (O&amp;M). Monthly reports are prepared and reviewed by the management during quarterly meetings. Calibration certificates and logbooks are maintained for verification purposes.</p>
<p><b>Findings</b></p>	<p>Upon verification, the project owner, M/s. Shree Chhatrapati Shahu SSK Ltd., has effectively identified and communicated the project's details. They have provided comprehensive information about the project's purpose, location, and technical specifications. The project aims to generate electricity using renewable biomass (bagasse) and reduce greenhouse gas emissions. The communication includes detailed descriptions of the project's environmental, social, and economic benefits, ensuring transparency and clarity for stakeholders.</p>
<p><b>Conclusion</b></p>	<p>In conclusion, the project owner, M/s. Shree Chhatrapati Shahu SSK Ltd., has successfully implemented a 28 MW biomass-based power project in Kagal, Maharashtra. The project utilizes bagasse, a by-product of sugarcane processing, to generate renewable electricity, reducing greenhouse gas emissions. The project has been monitored for an 8-year period from 2016 to 2023, achieving a total emission reduction of 2,32,860 tCO<sub>2</sub>. The project has also contributed to local employment, sustainable development, and energy security in the region.</p>



## Positive Social Impact

<b>Means of Project Verification</b>	<p>Employment Generation: The project contributes to employment for both skilled and unskilled workers in the local area, ensuring efficient operation and maintenance of equipment.</p> <p>Community Engagement: The project works closely with local farmers, focusing on better cane development and farm management techniques.</p> <p>Economic Growth: By generating steady, higher-value jobs and contributing to national energy security, the project supports the local economy.</p> <p>Technological Advancement: The project introduces proven and safe technology, promoting capacity building and technological awareness among local people.</p>
<b>Findings</b>	<p>Upon verification, the project has a positive social impact by generating employment opportunities for both skilled and unskilled workers in the local area. It supports thousands of farmers through better cane development and farm management techniques, such as intercropping and drip irrigation. The project also contributes to the local economy by creating higher-value jobs and promoting energy self-sufficiency. Additionally, it fosters technological advancement and capacity building among local communities</p>
<b>Conclusion</b>	<p>In conclusion, the project has a positive social impact by generating employment for both skilled and unskilled workers in the local area, contributing to the local economy. It supports thousands of farmers through better cane development and farm management techniques, such as intercropping and drip irrigation. Additionally, the project promotes energy self-sufficiency and resource conservation in India's sugarcane industry. Overall, it fosters</p>



	sustainable economic growth and technological advancement in the region
--	---

**Sustainable development aspects (if any)**

<b>Means of Project Verification</b>	<p>Social Benefits: Employment generation for both skilled and unskilled workers, better cane development, and farm management techniques.</p> <p>Environmental Benefits: Utilization of biomass for power generation, reduction in GHG emissions, and conservation of natural resources like coal and oil.</p> <p>Economic Benefits: Creation of employment opportunities, conservation of natural resources and contribution to the sustainable development of the region.</p> <p>Technological Benefits: Introduction of efficient high-pressure cogeneration technology and capacity building in the local community.</p>
<b>Findings</b>	<p>Upon verification, it was found that the project significantly contributes to sustainable development by generating employment for both skilled and unskilled workers, supporting local farmers, and promoting better agricultural practices. Environmentally, it reduces greenhouse gas emissions by using biomass instead of fossil fuels, minimizes pollution, and conserves natural resources. Economically, the project creates jobs, conserves depleting resources like coal and oil, and promotes green technologies in a backward region, thus supporting sustainable economic growth and environmental conservation.</p>
<b>Conclusion</b>	<p>In conclusion, the project demonstrates significant contributions to sustainable development. It generates renewable energy using biomass, reducing reliance on fossil fuels and lowering greenhouse gas emissions. The project also creates employment opportunities for both</p>



	skilled and unskilled workers, enhancing the local economy. Additionally, it promotes environmental sustainability by conserving natural resources and reducing pollution. Overall, the project aligns well with the United Nations Sustainable Development Goals (SDGs).
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**Section E. Internal quality control**

Throughout the verification process, meticulous internal quality control measures were implemented to ensure accuracy and reliability. This included regular internal reviews of procedures, documentation, and reports to quickly address any errors or discrepancies. Verification staff received ongoing training to maintain their proficiency and efficiency. Standard Operating Procedures (SOPs) were established to provide clear guidance on data collection, analysis, and reporting, ensuring consistency and adherence to best practices. Robust documentation management practices were adopted to maintain transparent records of activities, including data sources and methodologies. Peer reviews and team discussions validated findings and ensured consensus on conclusions. Continuous improvement processes were instituted to assess and enhance verification practices, identifying areas for improvement and enhancing overall performance over time.

**Section F. Project Verification opinion**

The GHG emission reductions were calculated based on UCR Protocols which draws reference from, Applied Baseline Methodology:ACM0006: Electricity and heat generation from biomass (Ver. 16.0) & UCR Standard for baseline Grid Emission Factor. The verification was done remotely by way of video calls / verification, phone calls and submission of documents for verification through emails.

SQAC is able to certify that the Emission reductions from 28 MW Biomass based Co-generation by M/s. Shree Chhatrapati Shahu SSK Ltd., Kagal, Maharashtra, India. (UCR ID – **452**) for the period 01/01/2016 to 31/12/2023 amounts to **2,32,860, CoUs (2,32,860 tCO<sub>2eq</sub>)**

**Appendix 1. Abbreviations**

<b>Abbreviations</b>	<b>Full texts</b>
PP/PO	Project Proponent / Project Owner
PA	Project Aggregator
PPA	Power Purchase Agreement
ER	Emission Reduction
COUs	Carbon offset Units.
tCO <sub>2e</sub>	Tons of Carbon Dioxide Equivalent



CDM	Clean Development Mechanism
SDG	Sustainable Development Goal
CAR	Corrective Action Request
CR	Clarification Request
FAR	Forward Action Request
GHG	Green House Gas
UCR	Universal Carbon Registry
MR	Monitoring report
PCN	Project Concept Note
VR	Verification Report
VS	Verification Statement
COD	Commercial Operation Date

## Appendix 2. Competence of team members and technical reviewers

Sr. No	Role	Name	Education Qualification	Related Experience
1.	Team Leader / Lead Verifier / Validator	Santosh Nair	BE (Chemical) Lead Auditor in ISO 9001,14001, 45001,13485,2230 1,22000,27001,14064-1,2,3	Carbon Verifier for all major sectors such as Wind, Solar, Hydro, Biomass, Biogas, Waste Heat Recovery, Biofuel, etc.
2.	Technical reviewer	Praful Shinganapurkar	BE (Mechanical) Certified Energy Auditor Lead Auditor in ISO 9001,14001 & 45001	Carbon Verifier for all major sectors such as Wind, Solar, Hydro, Biomass, Biogas, Waste Heat Recovery, Biofuel, etc.

## Appendix 3. Document reviewed or referenced

Sr No	Author	Title	Provider
1	Progressive Management Consultants	Project Concept Note V2 (PCN)	Progressive Management Consultants
2	Progressive Management Consultants	Monitoring Report V1 (MR)	Progressive Management Consultants
3	Progressive	Emission Reduction (ER)	Progressive





	Management Consultants	calculation sheet	Management Consultants
4	Maharashtra State Electricity Distribution Company Ltd.	Joint Meter Reading	Progressive Management Consultants
5	Shree Chhatrapati Shahu SSK Ltd.	Invoices	Progressive Management Consultants
6	Shree Chhatrapati Shahu SSK Ltd.	Commissioning Certificate of Boilers.	Progressive Management Consultants
7	M/s. Shree Chhatrapati Shahu SSK Ltd.	Commissioning Certificate of Turbines.	Progressive Management Consultants
8	Maharashtra State Electricity Distribution Co Ltd.	Meter Testing Report	Progressive Management Consultants
9	Maharashtra State Electricity Distribution Co. Ltd. & M/s. Shree Chhatrapati Shahu SSK Ltd.	Power Purchase Agreement	Progressive Management Consultants
10	Maharashtra Pollution Control Board	NOC - Maharashtra Pollution Control Board	Progressive Management Consultants
11	M/s. Shree Chhatrapati Shahu SSK Ltd.	Expansion of Sugar Factory Application form	Progressive Management Consultants

#### Appendix 4. Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

<b>CL ID</b>	00	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of CL</b>				
<i>n/a</i>				
<b>Project Owner's response</b>				<b>Date:</b> DD/MM/YYYY
<i>n/a</i>				
<b>Documentation provided by Project Owner</b>				
<i>n/a</i>				
<b>UCR Project Verifier assessment</b>				<b>Date:</b> DD/MM/YYYY
<i>n/a</i>				

Table 2. CARs from this Project Verification

<b>CAR ID</b>	00	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of CAR</b>				



n/a	
<b>Project Owner's response</b>	<b>Date: DD/MM/YYYY</b>
n/a	
<b>Documentation provided by Project Owner</b>	
n/a	
<b>UCR Project Verifier assessment</b>	<b>Date: DD/MM/YYYY</b>
n/a	

Table 3. FARs from this Project Verification

FAR ID	00	Section no.	Date: DD/MM/YYYY
<b>Description of FAR</b>			
n/a			
<b>Project Owner's response</b>			<b>Date: DD/MM/YYYY</b>
n/a			
<b>Documentation provided by Project Owner</b>			
n/a			
<b>UCR Project Verifier assessment</b>			<b>Date: DD/MM/YYYY</b>
n/a			

**Shree Chhatrapati Shahu  
Sahakari Sakhar Karkhana Ltd., Kagal**  
Achieved International Quality Rating

**Turbine Specifications**

Make: SIEMENS Limited

Speed :7500 RPM

Power : 12.5 MW

Type : DECR.

**Date of Commissioning – 15/03/2008**

For Shri Chh.Shahu S.S.K.Ltd,Kagal

J.A.Chavan  
Managing Director

"Shrimant Jaysingrao Ghatge Bhavan" Kagal-416 216, Dist - Kolhapur, Phone No. (02325) 244211 to 244214  
 Fax No. - 244241 Kolhapur Office - (0231) 2654450 E-mail - mail@shahusugar.com, Website - www.shahusugar.com  
 • I.T.PAN No. AAAA1032M • VAT TIN No. - 2727041083TV • CST TIN No. - 2727041083TC •  
 • G.S.T No. 27AAAAS1032M1ZL •

**Shree Chhatrapati Shahu  
Sahakari Sakhar Karkhana Ltd., Kagal**  
Achieved International Quality Rating

**Boiler capacity -70 TPH**

**Design Pressure- 67 ATA**

**Design Temperature – 485 Degree Centigrade.**

**Date of Commissioning – 15/03/2008**

For Shri Chh.Shahu S.S.K.Ltd,Kagal

J.A.Chavan  
Managing Director

"Shrimant Jaysingrao Ghatge Bhavan" Kagal-416 216, Dist - Kolhapur, Phone No. (02325) 244211 to 244214  
 Fax No. - 244241 Kolhapur Office - (0231) 2654450 E-mail - mail@shahusugar.com, Website - www.shahusugar.com  
 • I.T.PAN No. AAAA1032M • VAT TIN No. - 2727041083TV • CST TIN No. - 2727041083TC •  
 • G.S.T No. 27AAAAS1032M1ZL •



**Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., Kagal**  
 Achieved International Quality Rating

**Turbine Specifications-**

Make: TRIVENI TURBINES

Speed : 8300 RPM

Power : 9.0 MW

Type : BACK PRESSURE

**Date of Commissioning** - 25/11/2012

For Shri Chh.Shahu S.S.K.Ltd,Kagal

J.A.Chavan  
Managing Director

"Shrihari Jayasingra Chhalga Bhavai" Kagal-416 216, Dist - Kolhapur, Phone No. (02235) 244211 to 244214  
 Fax No. - 244211 Kolhapur Office - (0231) 2654430 E-mail - mail@shahusagar.com, Website - www.shahusagar.com  
 • I. T. PAN No. AAAAS1032M • VAT TIN No. - 27270410837V • CST TIN No. - 27270410837C •  
 • G.S.T. No. 27AAAAS1032M1ZL

**Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., Kagal**  
 Achieved International Quality Rating

**Boiler capacity** -60 TPH

**Design Pressure**-67 ATA

**Design Temperature** – 510 Degree Centigrade.

**Date of Commissioning** - 25/11/2012

For Shri Chh.Shahu S.S.K.Ltd,Kagal

J.A.Chavan  
Managing Director

"Shrihari Jayasingra Chhalga Bhavai" Kagal-416 216, Dist - Kolhapur, Phone No. (02235) 244211 to 244214  
 Fax No. - 244211 Kolhapur Office - (0231) 2654430 E-mail - mail@shahusagar.com, Website - www.shahusagar.com  
 • I. T. PAN No. AAAAS1032M • VAT TIN No. - 27270410837V • CST TIN No. - 27270410837C •  
 • G.S.T. No. 27AAAAS1032M1ZL

**MAHARASHTRA POLLUTION CONTROL BOARD**

Tel: 24010706/24010437  
 Fax: 24023516  
 Website: http://mpcb.gov.in  
 Email: cac-cell@mpcb.gov.in

Kalpataru Point, 2nd and 4th floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai-400022

**RED/L.S.I (R60)** Date: 15/12/2022  
 No:- Format1.0/CAC/UAN No.MPCB-CONSENT-0000149844 & MPCB-CONSENT-0000148466/CE/2212001086

To,  
**Shree Chhatrapati Shahu S.S.K. Ltd., 144,148,149,150,151,155,156,Kagal, Tal. Kagal, Dist. Kolhapur**

**Sub: Consent to Establish or Expansion for Distillery unit from 60 KLPD to 340 KLPD and installation of dryer.**

**Ref:**

- Existing renewal of consent granted by Board vide No. Format1.0/CAC/UAN No. MPCB/CONSENT-139003/CR/2208001590, dated 31.08.2022 which is valid up to 31.08.2027.
- Environmental Clearance granted vide J-11011/225/2015-II (I) dated 06.12.2022.
- Minutes of CAC Meeting dttd. 23.11.2022.

Your application No.MPCB-CONSENT-0000149844 Dated 04.10.2022

For: Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions as detailed in the schedule I, II, III & IV annexed to this order:

- The consent to establish is granted for a period up to commissioning of the unit or up to 5 year whichever is earlier.
- The capital investment of the project is Rs.159 Crs. (As per undertaking submitted by pp (Distillery Expansion-150 Crs. + Dryer 9 Crs = 159 Crs))
- Consent is valid for the manufacture of:

Sr No	Product	Maximum Quantity	UOM
1	Ethanol	250	KL/D
2	Fusel Oil	4.1	MT/M
3	Carbon Dioxide Bottling	7650	MT/M
4	Spentwash Powder (Granules)	8160	MT/M
5	Bio-CNG	1000	MT/M
6	Electricity	6.3	MW

Expansion by 250 KLPD of Distillery and Cane crushing 2000 TCD for Ethanol only.

Shree Chhatrapati Shahu S.S.K. Ltd., Kagal/CE/UAN No.MPCB-CONSENT-0000149844/Indus-30.7660  
 (13-12-2022 05:53:50 pm) /QMS.P08, P01.00 Page 1 of 8

**4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr No	Description	Permitted (in CMD)	Standards to be achieved	Disposal Path
1.	Trade effluent	2120	As per Schedule-I	methanation- MEE & dryer to achieve ZLD
2.	Domestic effluent	5	As per Schedule-I	On land for irrigation.

**5. Conditions under Air (P & CP) Act, 1981 for air emissions:**

Sr No.	Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
1	3	Boiler No.4 (70 TPH)	1	As per Schedule -II

**6. Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity UoM	Treatment	Disposal
1	Yeast Sludge	500	MT/M	Drying & use as manure
2	CPU Sludge	3.0	MT/M	Drying & use as manure

**7. Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for treatment and disposal of hazardous waste:**

Sr No	Category No./ Type	Quantity UoM	Treatment	Disposal
	NA			

- The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
- Industry shall comply all the conditions stipulated in Environmental Clearance granted vide J-11011/225/2015-II (I) dated 06.12.2022.
- This consent is issued pursuant to the decision of the Consent Appraisal Committee Meeting held on 13.11.2022.
- Industry shall install online continuous monitoring system as per CPCB guidelines & data to be transmitted directly from Data Logger to Board server.
- PP shall submit BG of Rs. 25 Lakh towards compliance of consent & EC conditions.
- The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before actual commencement of the Unit/Activity. (Establish)

This consent is issued as per communication letter dated 03/11/2022 which is approved by competent authority of the board.

Shree Chhatrapati Shahu S.S.K. Ltd., Kagal/CE/UAN No.MPCB-CONSENT-0000149844/Indus-30.7660  
 (13-12-2022 05:53:50 pm) /QMS.P08, P01.00 Page 2 of 8



**MAHARASHTRA POLLUTION CONTROL BOARD**  
 Tel: 24010706/24010437  
 Fax: 24023516  
 Website: <http://mpcb.gov.in>  
 Email: [cac-cell@mpcb.gov.in](mailto:cac-cell@mpcb.gov.in)

Kalpataru Point, 2nd and 4th floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai-400022

No: Format 1.0/CAC/UAN No.MPCB-CONSENT-0000138934/CR/2207001671 Date: 30/07/2022

To,  
**Shree Chhatrapati Shahu S.S.K. LTD., Kagal,**  
 144/1/B,144/2, 148-151, 153-157, 159-161, 164-172,  
 186, 24/B, 247/2/3, 61/3/2,  
 Kagal, Kolhapur.

Sub: **Renewal of Consent for the 10,000 TCD and 28 MW Co-generation Power Plant.**

Ref: **1. Consent granted by the Board vide Format 1.0/CAC/UAN No. MPCB- CONSENT-0000138934/CR-2112001151 DTD. 22.12.2021**  
**2. Minutes of CAC Meeting dtd. 24.06.2022.**

Your application No.MPCB-CONSENT-0000138934 Dated 18.05.2022

For: grant of Consent to Renewal under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

- The Consent to Renewal is granted upto: **31.07.2024**
- The capital investment of the industry is **Rs.323.55 (Existing 319.3665 Crs+ Increase by 4.1876 Crs) Crs.** (As per C.A Certificate submitted by industry).
- Consent is valid for the manufacture of:

Sr No	Product	Maximum Quantity	UOM
1	Sugar	39000	MT/M
2	Electricity	28	MW
3	Molasses	12260	MT/M
4	Bagasse	87935	MT/M
5	Pressmud	12060	MT/M

(The cane crushing capacity of Sugar Industry shall not exceed 10000 TCD.)

4. Conditions under Water (P&CP) Act, 1974 for discharge of effluent:

Sr No	Description	Permitted in CFD	Standards to	Disposal
1.	Trade effluent	867.9	As per Schedule -I	66.9 CMD recycle & 799 CMD on land for irrigation.
2.	Domestic effluent	15	As per Schedule -I	On land for gardening

Shree CHHATRAPATI SHAHU S.S.K. LTD., KAGAL/CR/UAN No.MPCB-CONSENT-0000138934 (30-07-2022 03:09:56 pm) QMS.P06\_F02.00 Page 1 of 11

5. Conditions under the Air (P&CP) Act, 1981 for air emissions:

Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
1	Boiler (70 TPH & 60 TPH)	1	As per Schedule -II
2	Boiler (20 TPH)	1	As per Schedule -II
3	DG Set (500 KVA)	1	As per Schedule -II
4	DG Set (300 KVA)	1	As per Schedule -II
5	DG Set (100 KVA)	1	As per Schedule -II

(As per previous consent of existing unit)

6. Conditions about Non Hazardous Wastes:

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
1	Boiler Ash	32	MT/Day	--	Partially mixed in the composting process and rest is given to brick manufacturers free of cost
2	ETP Sludge	5.2	MT/M	--	Used as manure in own farm

7. Conditions under Hazardous & Other Wastes (M & T M) Rules 2008 for treatment and disposal of hazardous waste:

Sr No	Type of Waste	HW Category	Quantity & UoM	Treatment	Disposal
1	Spent oil	5.1	0.5 MT/M	Recycle	Sale to Authorized recycler.

The applicant shall ensure disposal to the Actual user having permissions under Rule 9 of Hazardous and other Waste (M & T M) Rules, 2016.

a. The applicant shall properly collect, transport & regularly dispose of the hazardous waste to CHWTSDF, in compliance of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and keep proper manifest thereof.

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.

9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.

10. The applicant shall comply with the conditions of the EC granted on 18.12.2019.

11. Industry shall connect online CMS data as per CPCB guidelines to CPCB & MPCB Servers.

12. This consent is issued as per the Consent Appraisal Committee meeting dated 24.06.2022.

13. The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.

Shree Chhatrapati Shahu S.S.K. Ltd., Kagal/CR/UAN No.MPCB-CONSENT-0000138934 (30-07-2022 03:09:56 pm) QMS.P06\_F02.00 Page 2 of 11

**Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., Kagal**

REF. NO.: ENVY/3219/2015-16 DATE: 21.08.2015

To,  
 The Member Secretary, (Industry-2)  
 Ministry of Environment & Forests (MoEF),  
 Government of India,  
 Parvathan Bhawan, CGO Complex,  
 Lodhi Road, New Delhi.

Sub: Submission of online application (FORM 1) for grant of Terms of References (ToR's) in respect of the Expansion of Sugar Factory from 4950 TCD to 7000 TCD, Co-generation from 12.5 MW to 28 MW & Molasses based Distillery unit from 45 KLPD up to 60 KLPD.

Dear Sir,

We Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., located at Kagal, Talu. Kagal, Dist.: Kolhapur, Maharashtra have planned to go for expansion of existing Sugar Factory from 4950 TCD to 7000 TCD, Co-generation from 12.5 MW to 28 MW & Molasses based Distillery unit from 45 KLPD up to 60 KLPD.

As per the provisions of "EIA Notification No. S.O. 1533 (E) dated 14.09.2006; as amended vide Notification No S.O. 3067 (E) dated 03.12.2006; the project comes under Category 'M', item No: 5 (a) & item No: 5 (b). There under, it is necessary to obtain an "Environmental Clearance" for our expansion of Sugar, Co-generation & Molasses based distillery unit from the Ministry of Environment & Forests (MoEF), New Delhi".

Office Memorandum dated 06.06.2014 on MoEF website has been put towards the online submission system for ToR/EC proposals. Accordingly, we are submitting herewith an application in the prescribed online format of "FORM 1" published by the MoEF. Our online ToR Proposal No. is IA/MH/IND/30200/2015.

Sir, all the relevant information has been presented in the online FORM 1 along with the requisite documents attached therewith. Also, a copy of Pre-Feasibility Report w.r.t expansion project is attached herewith. You are requested to kindly do the needful and grant us the Terms of Reference (ToR's) at your earliest.

Thanking you,  
 Yours faithfully,  
**Vijay Astade**  
 For Shree Chhatrapati Shahu S.S.K. Ltd.,  
 Managing Director

Encd.: Online application in form -I format & Pre-feasibility Report.

Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd., Kagal  
 Tel: 24010706/24010437 Fax: 24023516 Website: [www.shahusagar.com](http://www.shahusagar.com)  
 E: T. No. No. 4444444444 W: T. No. No. 2707408274 C: T. No. No. 2707408274

**भारतीय गैर न्यायिक भारत INDIA**  
**रु. 500 FIVE HUNDRED RUPEES**  
**पाँच सौ रुपये Rs. 500**  
**INDIA NON JUDICIAL**

MAHARASHTRA 2022 BS 113830

24 Nov 2022  
 Sub Treasury Officer, Kagal

Power Purchase Agreement

This agreement is executed at Mumbai on 13th of February 2024

Between  
 M/s. Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd. i.e. a Co-operative Sugar factory registered under the Co-operative Societies Act, 1960 and Amended as per Act 39 of 2002, and having factory & its registered office at Shri Ram Jyotindra Chhatre Bhawan, Kagal, Kolhapur (Maharashtra State), represented by its Managing Director hereinafter referred to as "Consumer" (which expression shall unless repugnant to the subject or context or meaning thereof deemed to include its successors, representatives and permitted assignees as party of the FIRST PART,

AND

For MSEDCL  
 Director (Commercial) Page 1

