

Scope of Works For Appointment of Consultants

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1. Renewable Solar EPC Specialist (Solar)

a: Junior Consultant:

The consultant shall conduct a comprehensive techno-commercial feasibility study for rooftop, ground-mounted, or hybrid solar PV systems for the textile unit. This shall include:

- Detailed facility loads profiling based on historical electricity consumption data (minimum 12 months).
- Physical site survey, rooftop measurement, and structural integrity assessment supported by engineering calculations.
- Shadow analysis using industry-recognized simulation software.
- Grid connectivity evaluation including transformer capacity, evacuation feasibility, and DISCOM interconnection requirements.
- Net/gross metering eligibility assessment and regulatory compliance review as per applicable state and national solar policies.
- Preparation of multiple system configuration scenarios comparing technical feasibility, energy yield, CAPEX, OPEX, and lifecycle economics.

Deliverable:

- Conduct techno-commercial feasibility assessment including load profiling, shadow analysis, structural review, grid connectivity and net-metering eligibility. And with recommended optimal solar configuration and implementation roadmap.
- Develop optimized system configurations with generation simulations and financial viability modelling.

b: Senior Consultant:

I. The consultant shall prepare a bankable proposal including:

- System sizing methodology and assumptions.
- Justification for module, inverter, mounting structure, and BOS component selection.
- Electrical Single Line Diagrams (SLD), layout drawings, and evacuation scheme.
- Energy generation forecast using location-specific solar irradiation databases and validated simulation tools.
- Performance assumptions including degradation rates, system losses, and Performance Ratio benchmarks.
- Lifecycle financial analysis covering CAPEX, O&M costs, tariff escalation, IRR, NPV, payback period, and sensitivity analysis under multiple tariff and policy scenarios.
- Estimation of annual and lifetime carbon emission reductions aligned with recognized GHG accounting methodologies.

II. Procurement Support, Implementation Oversight & Performance Validation: The consultant shall act in the owner's interest to support project procurement and implementation, including:

- Preparation of technical specifications and vendor prequalification criteria.
- Technical bid evaluation and comparative techno-commercial analysis.

- Advisory support in contract structuring, performance guarantees, warranty clauses, payment milestones and knowledge/documentation supports in availing state or national schemes.
- Periodic installation supervision and quality inspections.
- Commissioning validation including testing protocols, safety compliance verification, and generation performance confirmation.
- Post-installation performance benchmarking against bankable proposal estimates and assistance in acceptance certification.
- Review of as-built documentation, O&M manuals, and training of facility personnel.

Deliverable:

- Bankable proposal with technical drawings, simulation outputs, and financial model.
- Validate commissioning, performance benchmarking and establish ongoing monitoring framework.

2. Circular Textile Waste & Resource Efficiency Expert (Sorting/Grading & Recycling)

a: Junior Consultant:

The Consultant shall:

- Conduct detailed textile waste audits covering pre-consumer, post-industrial, post-consumer and packaging waste streams and quantify them by fibre type, contamination level, moisture content, recyclability and recovery potential.
- Develop material flow baseline analysis and prepare waste characterization matrices to support circular planning and traceability integration.
- Design practical sorting, grading and pre-processing systems including classification protocols, fibre segregation methods, quality grading parameters, bale coding standards and MSME-level operational workflows.
- Screen and compare feasible mechanical and chemical recycling options, outlining indicative cost ranges, recovery efficiencies and environmental performance indicators.

Deliverables

- Textile waste characterization and material flow analysis report with quantitative waste mapping and recyclability matrix.
- Draft SOP manual for sorting, grading and pre-processing including workflows, manpower norms and quality inspection checklists.
- Technology screening and preliminary feasibility assessment note for recycling and valorisation pathways.

b: Senior Consultant:

The consultant shall:

- Lead the overall design and structuring of technically robust and financially viable recycling and circular economy systems based on validated audit data.
- Standardize waste categorization, grading logic and performance indicators, and conduct detailed techno-economic evaluations including system sizing, capex–OPEX modelling, lifecycle costing and technology justification.
- Quantify environmental benefits including waste diversion, GHG reduction and virgin material substitution using recognized methodologies.
- Develop investment-ready financial models and assess implementation structures (unit-level, shared facilities, cluster-based systems).

Deliverables

- Comprehensive recycling and circular economy Detailed Project Report (DPR) integrating technical design, financial analysis and environmental assessment.
- Finalized SOPs aligned with operational best practices and quality control standards.

- Environmental and resource efficiency impact assessment quantifying diversion, emission reduction and savings.
- Implementation and performance validation framework with monitoring benchmarks and acceptance criteria.

3. Textile Sustainability, Traceability & Digital Compliance Expert (Digital Product Passport – DPP)

a: Junior Consultant:

The consultant shall:

- Map textile value chains at unit and cluster level from raw material sourcing to dispatch, and document process flows and traceability control points.
- Identify and document data capture points for materials, batch tracking, chemicals (MRSL/RSL), energy, water, emissions and product outputs, ensuring compatibility with ERP and MSME systems.
- Compile and verify product-level data required for Digital Product Passport (DPP), including fibre composition, recycled content, batch IDs, production site and key environmental and social indicators.
- Configure and test QR-based product tagging to link physical products with digital records.
- Support pilot DPP implementation, validate data accuracy and document operational gaps.

Deliverables

- Value chain mapping report with process flow diagrams and data capture matrix.
- Draft DPP data sheets populated with verified data and QR linkage.
- Pilot implementation notes with data validation results and improvement recommendations.

b: Senior Consultant:

The consultant shall:

- Work on the overall traceability and digital compliance architecture aligned with EU Digital Product Passport and Ecodesign requirements.
- Develop standardized data models and taxonomies for product, environmental and social attributes across MSMEs.
- Work on a scalable DPP framework integrating recycled content, chemical compliance, carbon footprint and resource intensity indicators.
- Recommend suitable digital infrastructure (QR, API integration, distributed ledger or hybrid systems) ensuring data integrity and controlled access.
- Establish governance protocols covering data ownership, validation workflows, audit mechanisms and cybersecurity controls.
- Oversee pilot validation, assess regulatory readiness and define a phased scale-up roadmap.

Deliverables

- Comprehensive traceability and digital compliance framework document with system architecture and governance structure.
- Finalized DPP framework including standardized templates, digital verification model and dashboard concept aligned with EU disclosure requirements.

4. Financial Consultant – Green Financing & Climate Finance Access

a: Junior Consultant:

- Identify and map relevant green and climate finance instruments for textile sustainability projects, including concessional loans, blended finance, sustainability-linked loans and carbon-linked mechanisms.
- Document eligibility criteria, financing limits, interest rates, repayment terms, collateral requirements and compliance conditions for each instrument.
- Collect and structure financial and operational data from textile units, including capex estimates, OPEX baselines, energy/resource consumption and projected savings.
- Prepare preliminary financial calculations for renewable energy, ETP/ZLD, recycling and energy efficiency projects, including capex, OPEX and savings estimates.
- Populate standardized financial model templates with depreciation, tax impacts, subsidies and indicative debt servicing capacity.
- Compile required documentation for financing submissions and track lender queries.

Deliverables

- Green finance mapping and opportunity note with eligibility and indicative financing terms.
- Draft financial model worksheets including cost estimates and preliminary cash flow projections.
- Compiled financing documentation file ready for submission to lenders or funds.

b: Senior Consultant:

- Lead structuring of green and climate finance strategies for textile decarbonization, resource efficiency and circular economy investments.
- Evaluate and compare financing instruments based on cost of capital, risk allocation, safeguard requirements and long-term sustainability.
- Develop lender-ready financial models incorporating capex, OPEX, projected savings, tax impacts, carbon credit revenue and scenario-based sensitivity analysis.
- Assess bankability through IRR, DSCR, payback and stress testing, and recommend optimal debt–equity structure and risk mitigation measures.
- Prepare bankable Detailed Project Reports integrating technical assumptions, financial viability and environmental benefits.
- Lead engagement with financial institutions through appraisal and financial closure, ensuring compliance with safeguard and climate finance reporting standards.

Deliverables

- Comprehensive green finance opportunity matrix with comparative financing analysis and recommended strategy.
- Bankable Detailed Project Report including integrated financial model and funding structure.
- Complete lender-ready funding proposal package with financial, environmental and ESG justification.

5. Textile Dyeing Optimization Specialist / Digital Textile Printing & Chemical Recovery Expert

a: Junior Consultant:

- Conduct shop-floor level data collection for dyeing and stentering operations including liquor ratio records, steam and thermic fluid consumption logs, chemical dosing sheets, machine loading data and effluent discharge parameters.
- Conduct preparation of baseline resource consumption matrices including water, steam, salt, alkali, dyes and auxiliary chemicals per kilogram of fabric processed.
- Conduct benchmarking of existing operations against industry best practices and best available techniques through comparative analysis and variance identification.
- Conduct preparation of structured gap analysis sheets identifying operational inefficiencies in bath management, rinse sequencing, machine loading patterns and rejection rates.
- Conduct preliminary assessment of low liquor ratio dyeing systems and digital textile printing feasibility under supervision of Senior Consultant.
- Conduct techno-commercial data compilation including preparation of basic capex and OPEX worksheets for optimization scenarios.
- Conduct data collection and documentation for feasibility assessment of chemical recovery systems including salt recovery, heat recovery from effluent and rinse water reuse potential.
- Conduct estimation of indicative water savings, steam savings, chemical reduction and wastewater load reduction under optimized scenarios.

Deliverables

- Baseline operational data report including machine-wise resource intensity documentation and liquor ratio mapping.
- Preliminary benchmarking and inefficiency identification report with short-term optimization recommendations.
- Structured financial data workbook supporting capex–OPEX modelling and savings estimation.

b: Senior Consultant:

- Undertake comprehensive techno-commercial diagnostic evaluation of dyeing and stentering operations including advanced liquor ratio optimization modelling and energy intensity benchmarking.
- Conduct detailed chemical dosing efficiency analysis, batch rejection root cause mapping and effluent load quantification aligned with best available techniques.
- Develop a structured technical transition roadmap toward low liquor ratio dyeing systems or digital textile printing technologies including retrofitting advisory and nozzle geometry optimization.
- Design automated dosing system integration strategy and intelligent bath management framework for reduction of salt, alkali, steam and water consumption per kilogram of fabric.
- Perform detailed techno-commercial feasibility assessment including investment appraisal, payback analysis and ROI modelling.
- Evaluate feasibility of chemical recovery systems including salt recovery, multi-effect evaporation integration, heat recovery and rinse water reuse supported by techno-economic modelling.
- Quantify reduction potential in total dissolved solids, wastewater treatment load and chemical procurement cost savings.
- Provide strategic advisory on productivity enhancement, shade reproducibility improvement and ESG-aligned process decarbonization pathways.

Deliverables

- Comprehensive dyeing process benchmarking and root cause analysis report with prioritized intervention roadmap.
- Detailed capex–OPEX comparative financial model quantifying water, steam, salt, chemical and energy savings including payback period and ROI.
- Environmental impact assessment report including CO₂ reduction estimates, wastewater load reduction metrics and TDS reduction projections.
- Strategic implementation roadmap including phased investment plan, risk assessment matrix and monitoring framework for sustainable dyeing transformation.

6. Industrial Water Treatment & SCADA Automation Expert (ETP / ZLD)

a: Junior Consultant:

- Conduct collection and documentation of existing Effluent Treatment Plant (ETP) and Zero Liquid Discharge (ZLD) system process flow diagrams, design capacities, operational logs and water balance data.
- Conduct monitoring of key operational parameters including pH, COD, BOD, TDS, flow rates, sludge generation, chemical dosing patterns and recovery percentages.
- Conduct preparation of baseline water balance assessment including fresh water intake, process water consumption, recycle water utilization and discharge quantities.
- Conduct identification of operational inefficiencies in primary, secondary and tertiary treatment units including aeration performance, clarifier efficiency and filtration systems.
- Conduct preliminary assessment of ZLD components including Multiple Effect Evaporator (MEE), Agitated Thin Film Dryer (ATFD), RO recovery systems and salt recovery processes.
- Conduct documentation of SCADA system configuration including sensor mapping, PLC integration points and real-time monitoring dashboards.
- Conduct preparation of gap analysis report comparing existing system performance with design capacity and regulatory discharge standards.
- Conduct preparation of basic capex and OPEX data sheets for optimization and automation improvements under guidance of Senior Consultant.

Deliverables

- Baseline ETP/ZLD operational performance report including water balance diagram and treatment efficiency mapping.
- Preliminary gap assessment report identifying inefficiencies in treatment stages and recycle systems.
- Structured operational data workbook including chemical consumption, energy usage and sludge generation metrics.
- SCADA documentation file including instrumentation mapping and monitoring parameter summary.

b: Senior Consultant:

- Conduct comprehensive technical and performance audit of ETP and ZLD systems including hydraulic load assessment, treatment efficiency benchmarking and regulatory compliance verification.
- Develop optimized water balance model integrating process water minimization, recycle maximization and discharge reduction aligned with zero liquid discharge objectives.
- Perform detailed evaluation of biological treatment efficiency, aeration optimization, sludge management strategy and tertiary polishing system performance.

- Assess technical feasibility and performance enhancement of advanced systems including MEE optimization, ATFD efficiency improvement, high-recovery RO integration and salt recovery mechanisms.
- Design structured SCADA automation framework including sensor calibration strategy, PLC logic optimization, predictive monitoring dashboards and alarm-based control systems.
- Develop energy optimization roadmap for ETP/ZLD operations including pump efficiency improvement, aeration energy reduction and steam optimization in evaporators.
- Conduct techno-commercial feasibility analysis including capex estimation, OPEX optimization modelling, payback period calculation and lifecycle cost assessment.
- Develop regulatory compliance strengthening framework including discharge monitoring protocols, statutory reporting systems and audit preparedness strategy.

Deliverables

- Comprehensive ETP/ZLD technical audit report including performance benchmarking, compliance verification and prioritized intervention roadmap.
- Optimized integrated water balance model including quantified fresh water reduction, recycle enhancement and discharge minimization projections.
- Detailed capex–OPEX comparative financial model including energy savings, chemical savings and sludge disposal cost reduction analysis.
- SCADA automation design document including system architecture, instrumentation layout, control logic framework and real-time performance dashboard structure.
- Strategic implementation roadmap including phased investment plan, risk assessment matrix, operational SOP framework and monitoring indicators for sustainable water management.

7. Sustainability, EMS & Compliance Expert (Regulatory)

a: Junior Consultant:

I. Compliance Data Collection & Assessment Support:

- Collect statutory permits, monitoring records, environmental data, and operational documentation from the facility.
- Conduct site walkthroughs, interviews, and checklist-based compliance verification.
- Map existing practices against applicable environmental regulations, SPCB consent conditions, ISO standards, and ZDHC requirements.
- Compile evidence logs and prepares preliminary non-conformity and compliance status summaries.

II. EMS Documentation Development:

- Prepare environmental aspect-impact register and legal compliance matrix.
- Draft environmental policy, SOPs, operational controls, and documentation templates.
- Develop monitoring formats, inspection logs, compliance registers, and reporting templates.
- Prepare internal audit checklists and corrective/preventive action tracking formats.
- Support testing and refinement of EMS tools during pilot implementation.

III. GHG Inventory Preparation & Analysis:

- Collect activity data including fuel consumption, electricity use, production volumes, and logistics information.
- Calculate Scope 1 and Scope 2 emissions and prepare screening-level Scope 3 estimates using approved emission factors.
- Prepare calculation sheets, supporting documentation, and emission datasets.
- Develop emission intensity indicators per unit of production.
- Draft the GHG inventory report and ESG disclosure templates for review.

IV. Reporting & Documentation Support:

- Prepare draft compliance gap assessment report with supporting tables and annexures.
- Compile EMS toolkit documents into structured deployment-ready format.
- Maintain version control of documents and update revisions based on senior consultant feedback.
- Assist in preparation of presentations, dashboards, and client reporting materials.

Deliverables:

- Compiled repository of permits, statutory records, and environmental data.
- Site inspection checklist reports and photographic evidence logs.
- Draft regulatory applicability matrix and compliance mapping tables.
- Preliminary non-conformity registers with supporting evidence.
- Draft Compliance Gap Assessment Report for senior review.
- Environmental aspect-impact register or legal compliance registers and tracking sheet.

- Draft environmental policy document and SOP manuals for operational environmental controls.
- Environmental monitoring templates and inspection formats. And Internal audit checklists.
- Corrective & preventive action (CAPA) workflow templates.
- EMS reporting dashboard formats and compiled EMS toolkit in deployment-ready format.
- Activity data collection sheets (fuel, electricity, production, logistics, etc.).
- Emission calculation spreadsheets with referenced emission factors.
- Scope 1 and Scope 2 emission estimates and screening Scope 3 dataset.
- Emission intensity indicators per production unit.
- Draft GHG Inventory Report and supporting annexures.
- Updated documents incorporating senior consultant feedback.

b: Senior Consultant:

I. Regulatory Compliance Strategy & Oversight:

- Lead the design of the regulatory compliance assessment methodology covering national environmental regulations, State Pollution Control Board consent conditions, ISO 14001, ISO 50001, ZDHC requirements, and relevant EU environmental and ESG directives.
- Interpret regulatory applicability and define compliance evaluation criteria, risk-ranking methodology, and certification readiness indicators.
- Validate compliance findings, risk categorization, and corrective action prioritization prepared by the project team.
- Provide expert advisory on statutory approvals, environmental risk exposure, and long-term compliance strategy.

II. EMS Framework Design & Institutionalization:

- Architect the Environmental Management System aligned with ISO 14001 requirements and international sustainability governance best practices.
- Approve environmental policy structure, compliance tracking system, governance hierarchy, and management review mechanism.
- Validate environmental aspect-impact evaluation methodology and significance thresholds.
- Provide guidance on integrating EMS into operational decision-making, procurement practices, and ESG reporting workflows.
- Review and approve all EMS documentation prior to client submission.

III. GHG Accounting & Sustainability Roadmap Leadership:

- Define organizational and operational boundaries for GHG accounting in line with the GHG Protocol.
- Approve emission factor sources (DEFRA, IPCC, or equivalent) and calculation methodology.
- Validate Scope 1, Scope 2, and screening Scope 3 emission estimates and emission intensity metrics.
- Develop a strategic decarbonization pathway including reduction opportunities, investment prioritization, and monitoring indicators.

- Provide advisory on ESG disclosure alignment with buyer requirements and EU sustainability expectations.

IV. Stakeholder Engagement & Quality Assurance:

- Lead senior-level consultations with management, auditors, buyers, or regulators as required.
- Conduct periodic technical reviews of junior consultant outputs and ensure accuracy, completeness, and regulatory alignment.
- Deliver final presentations and strategic recommendations to client leadership.
- Provide certification readiness guidance and support during external audits if required.

Deliverables:

- Approved compliance assessment methodology and evaluation framework.
- Validated regulatory applicability matrix covering national, SPCB, ISO, ZDHC, and EU ESG requirements. Reviewed and signed Final Compliance Gap Assessment Report including: Risk ranking and severity classification, Compliance exposure analysis, Prioritized corrective action roadmap, Certification readiness timeline etc.
- Executive presentation summarizing compliance risks and strategic recommendations.
- Approved EMS architecture aligned with ISO 14001 and sustainability governance best practices.
- Finalized environmental policy framework and compliance tracking structure.
- Approved aspect-impact evaluation criteria and significance thresholds.
- Reviewed and endorsed complete EMS documentation toolkit for implementation.
- Management review framework and EMS governance structure note.
- Approved GHG boundary definition and accounting methodology aligned with GHG Protocol.
- Validated emission calculations (Scope 1, Scope 2, screening Scope 3).
- Final GHG Inventory & Baseline Emission Report with methodology disclosure.
- Strategic carbon reduction roadmap with priority actions and monitoring indicators.
- ESG disclosure structure aligned with buyer/EU sustainability reporting expectations.
- Technical review notes on junior consultant submissions.
- Senior-level stakeholder consultation meetings and closing presentation report.
- Advisory note for certification readiness / external audit preparation (if applicable).

8. Occupational Health & Safety (OHS)

a: Junior Consultant:

I. Risk Assessment Execution:

- Conduct site walkthroughs covering production, utilities, storage, and worker facilities.
- Collect safety records, incident logs, machine lists, chemical inventories, and training data.
- Perform checklist-based hazard identification for: Chemical handling and storage, Dyeing and processing operations, Boilers and thermopack systems, Confined spaces, Electrical systems, Ergonomics risks, Machine guarding compliance, Fire and evacuation readiness etc
- Prepare hazard mapping charts and preliminary risk rating tables.
- Document photographic evidence and compliance observations.

II. OHS Documentation Development:

- Draft OHS policy document and SOP manuals for operational safety controls.
- Prepare PPE requirement matrix and usage protocols.
- Draft chemical storage and handling guidelines with SDS tracking formats.
- Prepare accident reporting formats and incident investigation templates.
- Develop safety training curriculum modules and attendance formats.
- Compile documentation toolkit into structured implementation package.

III. Emergency Response & Monitoring Tools:

- Prepare evacuation layout drafts and assembly point plans.
- Develop mock drill formats and reporting templates.
- Draft near-miss reporting forms and incident logs.
- Create safety KPI tracking sheets and dashboard templates.
- Prepare periodic safety audit checklist and inspection formats.

Deliverables:

- Site inspection reports with photographic documentation.
- Compiled safety data repository (incidents, chemicals, machines, permits).
- Draft hazard identification sheets and **hazard mapping charts**.
- Preliminary **risk prioritization matrix** and observation register.
- Draft **OHS Risk Assessment Report** for senior review.
- Draft **OHS Policy document** or SOP manuals for operational safety procedures.
- PPE matrix and compliance tracking format.
- Chemical safety management templates and SDS register format.
- Accident/incident reporting and investigation templates.
- Safety training curriculum and documentation formats.
- Draft evacuation plans and mock drill reporting templates.
- Near-miss reporting system formats.
- Safety performance dashboard model and KPI tracking sheets.
- Final compiled documentation set incorporating senior feedback.

b: Senior Consultant:

I. OHS Risk Assessment Leadership:

- Design the hazard identification and risk assessment (HIRA) methodology and risk scoring criteria.
- Validate assessment coverage across chemical handling, dyeing operations, boiler/thermos-pack systems, confined spaces, electrical hazards, ergonomics, fire safety, machine guarding, and evacuation readiness.
- Review risk severity classification, legal compliance interpretation, and corrective action prioritization.
- Provide expert recommendations on engineering controls, administrative measures, and safety investments.
- Conduct leadership briefing on critical safety risks and compliance exposure.

II. OHS Management Framework Design:

- Architect the Occupational Health & Safety management system aligned with: National labour and factory safety regulations, Buyer codes of conduct (e.g., international textile brands), ISO 45001 principles / global best practices
- Approve OHS policy framework, governance structure, and compliance tracking system.
- Review SOP structures, PPE standards, chemical safety governance, and medical surveillance design.
- Validate accident reporting workflows and safety training architecture.
- Ensure system readiness for external audits or buyer inspections.

III. Emergency Preparedness & Safety Culture Strengthening:

- Design emergency preparedness strategy including fire detection philosophy, evacuation planning standards, and incident command structure.
- Approve incident investigation methodology and near-miss reporting framework.
- Define safety KPIs and monitoring indicators for continuous improvement.
- Provide strategic guidance on integrating safety performance into management review systems.

Deliverables:

- Approved HIRA methodology and risk scoring framework.
- Reviewed and signed Final OHS Risk Assessment Report including:
 - Hazard maps and severity classification or Compliance benchmarking summary
 - Prioritized corrective action roadmap and approved OHS Management System architecture note.
- Final validated OHS Policy & SOP Manual ready for implementation.
- Approved Medical surveillance and safety governance framework.
- Final Emergency Preparedness & Response Strategy including command structure and monitoring indicators.
- Executive presentation for management on safety risks and compliance readiness.
- Formal sign-off on all technical deliverables and audit-readiness advisory note.

9. Skill Development Consultant Recycled Textile Industries

a: Junior Consultant:

I. Social Compliance Audit Execution

- Collect statutory labour records including wage registers, attendance logs, contracts, overtime sheets, and policy documents.
- Conduct worker interviews, facility walkthroughs, and checklist-based compliance verification.
- Review practices related to: Wage payment and statutory benefits, working hours and overtime compliance, Employment contracts and consent records, Migrant worker protections, Child/forced labour prevention controls, Grievance redressal mechanisms
- Document observations, evidence logs, and photographic records where appropriate.
- Prepare draft findings and preliminary risk categorization tables.

II. Corrective Action & Documentation Toolkit Preparation

- Draft corrective action tracker with root cause fields and monitoring columns.
- Prepare templates for: Wage registers and attendance tracking, Worker grievance forms and registers, Worker consent and employment documentation, Policy declarations and compliance acknowledgements
- Draft worker awareness training materials and attendance formats.
- Support formation documentation for internal compliance committee.

III. Due Diligence Reporting Support

- Compile supplier and supply chain information for human rights risk mapping.
- Prepare draft human rights risk assessment tables.
- Draft stakeholder consultation formats and whistleblower reporting forms.
- Prepare transparency disclosure templates and social KPI datasets.
- Draft due diligence readiness report and supporting annexures.

Deliverables:

- Site audit checklists and worker interview summaries.
- Compiled repository of labour records and compliance evidence.
- Photographic documentation logs (where applicable).
- Draft non-compliance registers and preliminary risk matrix.
- Draft **Social Compliance Audit Report**.
- Corrective action tracking template with monitoring fields.
- Wage registers and attendance tracking formats.
- Grievance mechanism forms and tracking register.
- Worker consent and employment documentation templates.
- Draft policy declaration formats aligned with buyer expectations.
- Worker awareness training materials and documentation formats.
- Supply chain human rights risk mapping dataset.
- Draft whistleblower protection and reporting templates.

- Draft transparency disclosure template.
- Draft Due Diligence Readiness Report.
- Final compiled documentation set updated after senior review.

b: Senior Consultant:

I. Social Compliance Audit Leadership:

- Design audit methodology and compliance evaluation framework aligned with national labour laws, buyer codes of conduct, and EU due diligence expectations.
- Define risk classification criteria for labour violations, ethical risks, and governance gaps.
- Oversee audit coverage including wage compliance, working hours, overtime calculation, employment contracts, migrant worker protections, grievance systems, and prevention of child/forced labour.
- Validate findings, legal interpretations, and corrective action prioritization.
- Conduct management-level consultation on critical compliance risks and reputational exposure.

II. Corrective Action & Institutional Compliance Systems

- Lead development of corrective action planning methodology including root cause analysis approach.
- Approve policy revisions, compliance governance structure, and accountability mechanisms.
- Guide formation of internal compliance committee and escalation hierarchy.
- Validate worker awareness strategy and ethical labour training architecture.
- Provide advisory on strengthening documentation controls and audit trails to ensure long-term compliance sustainability.

III. Human Rights Due Diligence & ESG Integration

- Define framework for supply chain human rights risk mapping and prioritization.
- Approve stakeholder consultation protocols and whistleblower protection system design.
- Validate transparency disclosure structure and due diligence reporting approach.
- Guide integration of social compliance indicators into ESG reporting and buyer disclosure systems.
- Provide readiness advisory for buyer audits or EU-aligned due diligence reporting.

Deliverables:

- Approved social compliance audit methodology and risk scoring framework.
- Reviewed and signed Final Social Compliance Audit Report including:
- Verified findings and legal interpretations or Risk severity classification
- Prioritized corrective action roadmap with timelines
- Approved Corrective Action & Compliance Governance Framework.
- Final validated Social Compliance Policy & Documentation Toolkit.
- Approved Human Rights Due Diligence Framework including supply chain risk mapping model.
- Final Transparency Disclosure & ESG Social Indicator Structure.

- Executive presentation to management on compliance risks and remediation priorities.
- Formal sign-off note confirming audit and due diligence readiness.

10. Certified Energy Auditor / Energy Manager – Textile & Utilities Specialist

a: Junior Consultant:

- The Junior Energy Consultant shall support the Senior Consultant in data collection, field measurements, equipment monitoring, and preliminary analysis of energy consumption across textile processes and utility systems.
- The role involves conducting on-site measurements such as electrical load monitoring, lux level measurement, steam pressure-temperature recording, thermography scans, compressed air leakage checks, fuel consumption tracking, and water-energy correlation studies.
- The consultant will assist in preparing energy balance sheets, utility mapping diagrams, load distribution charts, and process flow energy mapping.
- He/she will compile historical energy bills, production data, fuel usage logs, and operational records to establish consumption patterns and detect anomalies.
- The Junior Consultant shall also assist in identifying low-cost and no-cost energy saving opportunities including behavioural improvements, operational scheduling optimization, and minor retrofits.
- The role includes supporting the development of monitoring templates, dashboard preparation, Excel-based energy tracking sheets, and documentation required for BEE compliance or buyer sustainability audits. Coordination with plant engineers and maintenance staff for data validation will also be part of the assignment.

Deliverables

- Field data collection sheets and measurement logs
- Equipment-wise energy consumption analysis
- Utility system mapping diagrams
- SEC calculation support documentation
- Identification of low-cost energy saving measures
- Support in preparing draft energy audit report
- Assistance in CO₂ emission calculation worksheets
- Energy monitoring dashboard (Excel-based)
- Monthly energy performance tracking report
- Post-implementation savings validation data

b: Senior Consultant:

- The Senior Energy Consultant shall lead the overall energy management strategy for textile manufacturing units including spinning, knitting, dyeing, processing, finishing, and utility sections such as boilers, thermos-packs, compressors, chillers, cooling towers, DG sets, and ETP operations.

- The consultant will be responsible for conducting comprehensive Grade I, II, or III energy audits as per Bureau of Energy Efficiency (BEE) guidelines and international best practices.
- The role includes establishing energy baselines, identifying high energy-consuming equipment, developing SEC (Specific Energy Consumption) benchmarks, and preparing plant-level and process-level performance indicators.
- The consultant shall design and recommend advanced energy conservation measures including waste heat recovery systems, VFD integration, condensate recovery optimization, steam trap audits, compressed air leakage reduction programs, insulation audits, power factor correction, and renewable energy integration such as rooftop solar or biomass substitution.
- The Senior Consultant will also assess carbon footprint impact and align recommendations with ESG and decarbonization roadmaps for export-oriented textile units.
- He/she will engage with plant leadership, maintenance teams, and management to ensure technical feasibility, financial viability, and phased implementation planning with clear CAPEX–OPEX projections and payback analysis.

Deliverables

- Comprehensive Detailed Energy Audit Report (Textile + Utilities)
- Baseline energy performance and SEC benchmarking report
- Utility system optimization roadmap (Boiler, Steam, Compressed Air, HVAC, ETP)
- Waste heat recovery and decarbonization strategy
- Renewable energy feasibility assessment (Solar / Biomass / Hybrid)
- Investment-grade DPR with IRR, NPV, and payback calculations
- CO₂ emission reduction quantification and carbon savings report
- Energy Monitoring & Target Setting Framework (ISO 50001 aligned)
- Management presentation and board-level briefing note
- Implementation supervision and post-intervention verification report

11. Social Compliance & EU Due Diligence Specialist

a: Junior Consultant:

- Assist in field-level data collection including worker interviews, attendance record verification, wage sheet review, overtime calculation checks, and document compilation.
- Support the review of statutory registers including ESI, PF, wage registers, contractor documentation, age verification records, and employment contracts.
- Conduct floor-level assessments of working conditions, health and safety practices, fire safety compliance, sanitation facilities, and dormitory standards.
- Prepare compliance checklists aligned with buyer-specific code of conduct requirements and support gap identification.
- Assist in drafting corrective action plans based on audit findings and monitor progress through structured follow-up templates.
- Support documentation preparation required for third-party audits, buyer inspections, and EU due diligence verification requests.
- Help organize worker awareness sessions on rights, grievance mechanisms, workplace harassment policies, and safety protocols.
- Maintain compliance documentation repositories (digital and physical) for easy audit traceability.
- Assist in preparing monthly compliance dashboards and risk reporting summaries.
- Support stakeholder coordination including interaction with HR teams, line supervisors, and compliance managers for corrective action tracking.

Deliverables

- Worker Interview Summary Sheets
- Compliance Documentation Checklist
- Wage & Working Hour Verification Sheets
- Audit Support File Compilation
- Corrective Action Monitoring Tracker
- Monthly Compliance Dashboard
- Training Attendance & Awareness Records
- Evidence Repository (Digital Filing System)
- Draft Sections of Compliance Reports

b: Senior Consultant:

- Lead the overall social compliance strategy for textile and manufacturing units in alignment with international buyer codes of conduct and EU regulatory frameworks including the Corporate Sustainability Due Diligence Directive and Corporate Sustainability Reporting Directive.
- Conduct comprehensive social compliance gap assessments covering labour standards, working conditions, wage compliance, grievance redressal mechanisms, gender equity, child labour risk, and forced labour prevention in line with International Labour Organization conventions.

- Develop factory-level Human Rights Due Diligence (HRDD) frameworks incorporating risk identification, impact assessment, mitigation planning, stakeholder consultation, and remediation tracking.
- Establish compliance systems aligned with international standards such as SA8000 and ISO 45001 for structured documentation and policy integration.
- Design Standard Operating Procedures (SOPs) for ethical recruitment, wage calculation (including minimum and living wage considerations), working hour management, and contractor/vendor compliance monitoring.
- Develop supply chain traceability protocols ensuring transparency of subcontracting units, homeworkers, and informal workforce integration, especially relevant to textile clusters like Panipat and Ludhiana.
- Conduct management and supervisory training programs on anti-harassment policies, prevention of discrimination, ethical leadership, and grievance redressal effectiveness.
- Support factories in buyer audit preparedness including mock audits, corrective action plan (CAP) preparation, root cause analysis, and follow-up verification.
- Align compliance interventions with EU Green Deal expectations and evolving sustainability-linked procurement requirements.
- Provide board-level advisory on reputational risk mitigation, brand compliance positioning, and long-term responsible sourcing strategies.

Deliverables

- Detailed Social Compliance Gap Assessment Report
- Human Rights Risk Mapping & Due Diligence Framework
- Policy Manual (Labour, Anti-Harassment, Child Labour, Forced Labour)
- Supply Chain Transparency & Subcontractor Compliance System
- Buyer Audit Readiness & Mock Audit Report
- Corrective Action Plan (CAP) Tracker
- Living Wage Assessment Summary
- Worker Grievance Mechanism Framework
- EU Due Diligence Alignment Note
- Management & Board Presentation Deck

12. Decarbonisation Planning & GHG Reduction Expert

a: Junior Consultant:

- Conduct collection and compilation of historical energy consumption data including electricity, coal, biomass, diesel, furnace oil, LPG, and process fuel usage for minimum last 12 months for baseline development.
- Conduct data validation and reconciliation of production volumes with energy consumption to establish baseline energy intensity indicators (kWh/kg fabric, kg steam/kg production, fuel per unit output).
- Conduct preliminary GHG inventory preparation for Scope 1 and Scope 2 emissions using recognized emission factors such as DEFRA, IPCC, and Central Electricity Authority (CEA) database under supervision of Senior Consultant.
- Conduct plant-level emission source mapping including stationary combustion, mobile combustion, process emissions, fugitive emissions, and purchased electricity.
- Conduct preparation of emission calculation sheets and maintain documentation trail aligned with GHG Protocol Corporate Standard requirements.
- Conduct identification of energy efficiency improvement opportunities including boiler efficiency enhancement, insulation improvement, waste heat recovery, VFD installation, compressed air optimization, and lighting retrofits.
- Conduct basic techno-commercial data compilation for decarbonisation options such as solar rooftop, biomass conversion, fuel switching, electrification of thermic systems, and process optimization.
- Conduct carbon intensity benchmarking against industry averages and best available techniques for textile sector operations.
- Conduct preparation of draft decarbonisation action tracker including short-term, medium-term, and long-term mitigation measures.
- Conduct coordination support during internal sustainability reviews, buyer climate disclosure submissions, and third-party GHG verification processes.

Deliverables

- Conduct baseline energy and GHG emission inventory report (Scope 1 & 2) with calculation sheets and emission source mapping summary.
- Conduct emission intensity analysis report linked with production data and process benchmarking indicators.
- Conduct preliminary decarbonisation opportunity register with estimated emission reduction potential and indicative investment range.
- Conduct supporting documentation pack for climate disclosure requirements and ESG reporting alignment.

b: Senior Consultant:

- Conduct comprehensive corporate-level GHG accounting aligned with GHG Protocol, Science Based Targets methodology, and emerging regulatory frameworks including EU CBAM and global buyer climate disclosure requirements.

- Conduct strategic carbon footprint assessment covering Scope 1, Scope 2, and relevant Scope 3 screening categories including upstream fuel extraction, purchased materials, transportation, and waste treatment impact.
- Conduct development of science-aligned decarbonisation roadmap targeting 2030 and 2050 milestones including near-term emission reduction targets and net-zero pathway modelling.
- Conduct marginal abatement cost curve (MACC) analysis to prioritize emission reduction interventions based on cost per ton CO₂e avoided.
- Conduct feasibility evaluation of renewable energy integration including onsite solar, offsite PPA structures, biomass conversion, green hydrogen readiness, electrification of thermal systems, and waste heat recovery systems.
- Conduct financial modelling for decarbonisation investments including IRR, NPV, payback period, carbon price sensitivity, and climate risk exposure analysis.
- Conduct internal carbon pricing mechanism advisory and climate governance framework structuring including ESG integration within board-level oversight mechanisms.
- Conduct development of carbon neutrality strategy including offset strategy evaluation under voluntary carbon markets and verification mechanisms.
- Conduct alignment advisory with international frameworks including TCFD, CDP Climate Disclosure, SBTi target validation preparation, and buyer-specific climate compliance standards.
- Conduct capacity building workshops for management and technical teams to institutionalize decarbonisation strategy implementation and continuous performance monitoring systems.

Deliverables

- Conduct comprehensive GHG Inventory Report (Scope 1, 2 & screened Scope 3) with third-party verification readiness documentation.
- Conduct 5–10-year Decarbonisation Roadmap including emission reduction targets, phased CAPEX plan, and implementation strategy.
- Conduct Marginal Abatement Cost Curve and investment prioritization model with financial sensitivity analysis.
- Conduct Climate Risk & Opportunity Assessment Report aligned with global ESG disclosure standards.
- Conduct Carbon Neutrality & Net-Zero Strategy Framework document with implementation governance structure and monitoring KPIs.