

Terms of reference (ToRs) for the procurement of services above the EU threshold

CONFIDENTIAL

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Subject of the tender procedure:	Transaction number:
Scaling Up Implementation and Institutional Capacity for Energy Management Systems (EnMS) in Pakistan	10018913

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0. List of abbreviations

CAPEX	Capital Expenditure
CBA	Cost-Benefit Analysis
CDS	Capacity Development Strategy
CNA	Capacity Needs Assessment
EE	Energy Efficiency
EnM	Energy Management
EnMS	Energy Management Systems
EnPI	Energy Performance Indicator
ESCO	Energy Service Company
GHG	Greenhouse Gas
GTC	General Terms and Conditions of Contract for supplying services and work on behalf of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
IRR	Internal Rate of Return
KE	Key Expert
KOMP	Cost per Output Monitoring and Forecast
LoI	Letter of intent
MC	Municipal Corporation
MOI	Module Objective Indicator
MoU	Memorandum of Understanding
NEECA	National Energy Efficiency and Conservation Authority
NEECP	National Energy Efficiency and Conservation Policy
NPV	Net Present Value
O&M	Operation and Maintenance
OPEX	Operational Expenditure
PPP	Public-Private Partnership

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RMO	Risk Management Office
ROI	Return on Investment
SEC	Specific Energy Consumption
SEU	Significant Energy User
SOP	Standard Operating Procedure
STE	Short Term Expert
TC	Technical Corporation
TL	Team Leader
TMA	Tehsil Municipal Administration
ToRs	Terms of reference
ToT	Train-the-Trainer
WASA	Water Supply and Sanitation Agency
WP	Work Package
WSSC	Water and Sanitation Services Company

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1. Context

Pakistan's urban population, approximately 40%, is growing rapidly, leading to challenges in municipal services due to rising energy costs and budget constraints. In response to these challenges, the Government of Pakistan has set the National Energy Efficiency and Conservation Policy (NEECP), aiming to achieve approximately 100,000 GWh by 2030.

The National Energy Efficiency and Conservation Policy (NEECP) recommends introducing Energy Management Systems (EnMS) in cities. However, its action plan lacks concrete implementation measures. As a result, EnMS is not yet sufficiently institutionalised within municipal organisations, and capacities to establish, operate, and continuously improve systems in line with ISO 50001 remain limited. Furthermore, Energy Management (EnM) practices are not well integrated into planning, budgeting, procurement, and operational decision-making. Energy data is also often poorly documented and analysed, limiting the identification and implementation of effective energy efficiency (EE) measures.

In light of this context, hands-on technical assistance and advisory support are required to implement and operationalise EnMS in 6 partner municipal organisations. The support shall enable partner municipal organisations to establish energy baselines, conduct regular monitoring and review of the established Energy Performance Indicators (EnPIs), undertake corrective action planning, and achieve systematic improvement in energy performance. The support shall also cover identification, prioritisation, and support in the implementation of EE measures within water supply and sanitation infrastructure.

For selected EE and EnM measures, the project, through the consultancy, will also support the preparation of bankable proposals and business cases, including the necessary technical and financial analyses and process-related information required to mobilise financing for the priority EE and EnM investments. Furthermore, the service contract will provide organisation-focused recommendations to embed EnMS into municipal structures and procedures and offer advisory support for designing organisational EE incentive mechanisms.

A key component of this assignment is capacity development and knowledge exchange. The project envisages that by the end of the implementation period, municipal experts, managers, and decision-makers will be equipped with the knowledge and skills necessary to independently integrate EnMS into Pakistan's water supply and sanitation services. This objective is central to all capacity development initiatives undertaken in the assignment. Following the development of a capacity development strategy, the consultancy will develop relevant knowledge products and carry out tailored capacity development activities, including training sessions, workshops, and knowledge exchange initiatives. To facilitate the scaling and dissemination of results and to showcase both international and national best practices in municipal EnM, the consultancy will organise a national conference, serving as a platform for knowledge exchange and dialogue among stakeholders in the sector. Furthermore, advisory inputs will be provided to support the creation of an enabling framework for EnMS, which will include recommendations for policy and institutional support measures at both national and provincial levels.

Lastly, the project aims to support women's representation in Pakistan's energy sector by improving their employability and supporting their participation in energy-related roles. To support this, a training programme will be conducted on municipal EnMS for recently graduated female engineers. The technical training, coupled with supporting career skills

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sessions, will better equip them to transition into their role as energy professionals.

2. Tasks to be performed by the contractor

2.1 Term

The expected term of the contract for services must be specified in the 'Special terms and conditions of contract'. The definitive term and service delivery period are set out in the contract award notification.

2.2 Objectives, indicators, work packages, milestones

The contractor contributes to achieving the objectives and indicators described in this document and is responsible for achieving the targets mentioned for the service contract.

Module objective: The scaling up of systematic EnM in municipal organisations in Pakistan has been initiated.

Module objective indicators (MOI):

MOI 1 The savings potential of EE measures initiated by municipal organisations in Pakistan on the basis of their systematic EnM has increased from 2,050 MWh to 10,000 MWh.

Note: Savings of 4,100 MWh have already been achieved; under this service contract, the value needs to be raised to 10,000 MWh.

MOI 2 150 experts and managers from municipal organisations have confirmed their use of the disseminated information and services on systematic EnM in their working environment by providing an example.

Note: Under this service contract, a minimum target of 90 experts and managers shall be achieved.

MOI 3 10 municipal organisations in Pakistan have each implemented systematic EnM.

Note: Under this service contract, the target is 6 municipal organisations.

Output 1:

The organisational capacities of Pakistan's municipal organisations to establish systematic energy management have been strengthened.

Output indicators:

1.1 In 10 municipal organisations, the decision-makers have each received 2 recommendations developed in collaboration with municipal representatives for organisational development measures to mainstream systematic EnM.

Note: Under this service contract, the target is 6 municipal organisations.

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1.2 In 10 municipal organisations, the decision-makers have a current action plan on EE measures that has been developed or revised by the relevant EnM teams.

Note: Under this service contract, the target is 6 municipal organisations.

Output 2:

The professional competencies of experts and managers in municipal organisations have been strengthened in the area of systematic energy management.

Output indicators:

2.1 Intermediary organisations have communicated content on EnM and EnMS to 1,000 experts, managers and municipal decision-makers, 200 of them in personal exchanges.

Note: Under this service contract, the minimum target is 200 experts, managers and municipal decision-makers in personal exchanges.

2.2 100 representatives of national and municipal stakeholders from the political sphere, the scientific and academic community, the private sector, local administrations and municipal organisations have confirmed that exchanges at a national conference on municipal EnM have improved their expertise in this area.

Note: Under this service contract, the target is 1 conference with a minimum of 50 representatives confirming exchange as defined above.

Output 3:

Design options for improved frameworks for municipal EnM, including gender-responsive approaches, are available to stakeholders promoting the energy sector or municipal development in Pakistan.

Output indicators:

3.1 1 programme to promote the employment of women in the energy sector relating to municipal EnM, is being piloted by a national intermediary organisation for 150 women.

Note: Under this service contract, the target is to train 100 women.

3.2 15 recommendations that were drawn up in a participatory process for measures to promote an EnM in municipal organisations are available for implementation to decision-makers within the intermediary organisations, including 1 with gender-responsive approaches.

Note: Under this service contract, the target is a minimum of 04 recommendations.

The contractor is responsible for providing the following Work Packages (WPs) and for achieving the corresponding milestones:

Inception Phase:

- The consultant shall organise a kick-off meeting with the project team to clarify project objectives, deliverables, and timelines.
- Develop an English inception report with brief methodological approach, deliverables and timeline for all WPs. Implementation of activities shall commence upon review and approval of the Inception Report by the project team.

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- Please note that, where appropriate and / or required, certain activities may be implemented in coordination with other grants or service contracts under the project to maximise synergies and ensure efficient use of resources.

WP 1: Covers MOI 1, MOI 3, & Output 1
Scaling up EnMS Implementation in Municipal Organisations in Pakistan

The work package aims to strengthen the organisational capacities of Pakistan’s municipal organisations to implement EnMS. Additionally, EnMS is to be implemented in 6 partner municipal organisations, which are water supply and sanitation companies. For ease of reference, they are hereinafter referred to as ‘municipal organisations’ in this document.

WP 1.1. Implementation of EnMS in partner municipal organisations

Tasks

- Implementation of EnMS shall be done in close collaboration with municipal management and Energy Teams using a participatory and hands-on approach to develop capacities and enable partner municipal organisations to sustain the EnMS cycle beyond the project duration independently.
- Initial in-person meetings shall be conducted with 6 pre-selected partner municipal organisations to formally initiate cooperation, introduce the project, and obtain documented commitment from municipal management to implement EnMS within their organisation.
- Conduct bilateral kick-off meetings with the management of each municipal partner organisation to communicate roles, expectations, and the EnMS implementation roadmap, characterised by the following 7 elements:
 1. Energy Team is created and identified on the organisation chart and trained
 2. Scope of application defined
 3. Energy policy adopted
 4. Systematic data collection established
 5. Data evaluation carried out
 6. Objectives and action plans adopted
 7. EnPIs with energy baselines available
- For the 7 elements defined above, a measure is deemed to have been started if one of the following conditions is met:
 - Budget has been applied for
 - Financing is available
 - Invitation to tender (services, procurement of materials and equipment) has been published
 - Internal regulation has been implemented by management (e.g. procedural and operating instructions).
- The following table outlines the 7 EnMS elements and corresponding tasks:

Element Number	EnMS Element	Description of Tasks
1	Energy Team	<ul style="list-style-type: none"> • Facilitate the selection and establishment / or revival of Energy Teams in partner municipal organisations, including

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		<p>guidance on defining Energy Team composition, roles, and responsibilities.</p> <ul style="list-style-type: none"> • Support conduct of regular Energy Team meetings and provide technical support for structuring weekly / bi-weekly objectives and meeting agendas for operationalising EnMS. This includes: <ul style="list-style-type: none"> - Establishment of Energy Team meeting frequency (weekly or bi-weekly, as appropriate) - Development of structured meeting plans and step-by-step agendas aligned with the Energy Management cycle (planning, implementation, monitoring, and review) - Support identification, prioritisation, and tracking of weekly / bi-weekly objectives and actions in line with EnMS implementation requirements - Assist Energy Teams in consistently monitoring operational characteristics related to energy performance, identifying and implementing energy efficiency interventions, and providing guidance on measures to enhance and sustain energy efficiency in municipal operations - Systematic review of progress against the defined EnMS implementation steps / elements • Facilitate documentation of meetings action items, decisions and timelines to ensure knowledge retention and continuity, particularly in the context of staff turnover.
2	Scope of EnMS Application	<ul style="list-style-type: none"> • Define with justification, the scope and boundaries of EnMS implementation within each partner municipality through collaboration with municipal management and Energy Teams.
3	Energy Policy	<ul style="list-style-type: none"> • Support the development and approval of municipal energy policies by respective municipal management. Define the essential elements of an effective energy policy, including scope, objectives, targets, commitments, and implementation responsibilities, in collaboration with municipal Energy Teams and facilitate their submission and approval by senior management.
4,5, & 7	Systematic Data collection established / Data evaluation carried out / EnPIs with energy baselines available	<ul style="list-style-type: none"> • Establish systematic energy data collection and analysis processes within partner municipal organisations by integrating energy data management into routine EnM processes and regular Energy Team meetings. • Support Energy Teams in defining data requirements and implementing appropriate tools (e.g. Excel-based) and methods for the collection, validation, management, and analysis of energy-related data within the agreed scope and boundaries. • In collaboration with municipal Energy Teams, collect energy consumption data for each partner organisation for 2026 (baseline), and 2027, based on the agreed scope and boundaries.

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		<ul style="list-style-type: none"> • Analyse EnM / EE-related processes within each partner organisation, covering organisational, operational, and documentation aspects, using desk studies and bilateral meetings with municipal management and Energy Teams. • Organise, evaluate, and synthesise the collected data into a systematic dataset to establish energy baselines. • Identify Significant Energy Users (SEUs) by analysing energy consumption patterns, operational conditions, influencing factors, and other technical and operational drivers of energy use. • Develop and define EnPIs, including all dependent variables linked to operational conditions that influence energy consumption, suitable for monitoring relative efficiency and energy performance. • Include Specific Energy Consumption (SEC) indicators, ensuring each SEC is clearly defined, measurable, and based on appropriate units of service delivery (i.e., kWh/m³/m). • Compile a comprehensive energy baseline report for each partner municipal organisation, encompassing: <ol style="list-style-type: none"> 1. Defined EnMS implementation scope and boundaries 2. Analysis of current EnM / EE processes 3. Established energy baseline • The energy baseline report shall cover: <ol style="list-style-type: none"> 1. Identification of energy consumers and historical and current energy consumption, including consultations with respective Energy Teams and higher management for the development of a comprehensive baseline of EnM / EE-related processes for each municipal partner organisation 2. Analysis of SEUs and their SECs over the baseline period, considering variations in operational conditions and system load to establish a representative baseline, including the definition of the number of EnPIs per SEU and alignment of EnPIs with SMART criteria (Specific, Measurable, Achievable, Relevant, and Time-bound) 3. Assessment of operational characteristics and challenges of key utilities within the defined scope and boundaries, including identification of measurement points and key variables influencing energy consumption 4. Completion of the data validation process for the energy baseline and SEU calculations 5. Stakeholder engagement on the energy baseline, SEUs, and EnPIs 6. Identification of relevant energy performance industry standards 7. Assessment of the energy performance of motors and associated pumping systems, including benchmarking against applicable industry efficiency standards, where relevant 8. Identification and documentation of performance gaps and EE improvement opportunities based on the established energy baseline, SEU analysis, and EnPI evaluation.
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6	Action Plans	<ul style="list-style-type: none"> • Develop / update EnM / EE action plans with Energy Teams for each municipal partner organisation, incorporating objectives, updated targets, and agreed measures. These may include EnM and EE recommendations, developed under WP 1.2 and WP 1.3, respectively. • Developed action plans must include: <ul style="list-style-type: none"> - Timeliness i.e., created or revised for the year of evaluation - Specification of planned EE / EnM measures, including identification of priority measures - Calculation of energy savings potential and ROI for the EE / EnM measures - Schedule and timelines for the planned measures - Action plan with defined responsible persons and verification sources - Financial and resource planning for the execution of planned measures • Conduct validation sessions for finalising the action plans with Energy Teams and facilitate submission and approval of action plans by senior municipal management. • Provide advisory support for early-stage implementation.
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- In addition to the 7 EnMS elements and corresponding tasks, utilise the systematic energy dataset to identify, quantify, and verify energy savings achieved through EnM and EE interventions implemented under the project, and energy savings at the end of each year.
- Additionally, provide technical advisory support to the previously supported partner organisations (CDA, PDA, WASAL, WSSP, WSSCM, and WSSCA), as required, to facilitate the continuation and further institutionalisation of their EnMS cycle.

Milestones for WP 1.1	Delivery period
Inception Report (developed during the inception phase) (approved by GIZ)	1 month after the date of contract award
Documentation of the onboarding of all 6 partner municipal organisations, including documented management commitment to the implementation of the EnMS and participation in the project activities foreseen under this assignment, as well as meeting minutes from the onboarding meetings. (approved by GIZ).	1 month after the date of contract award
Kick-off meeting documentation of meetings with the management of each municipal partner, including meeting minutes and EnMS	2 months after the date of contract award

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implementation roadmap with timelines (approved by GIZ)	
Notifications of Energy Team establishment, including weekly / bi-weekly meeting agendas and minutes (approved by GIZ)	Within 2 months after the date of the contract, notifications and the meeting plan. Energy Team minutes to be shared weekly / bi-weekly
Approved municipal Energy Policies for each partner organisation (approved by GIZ)	4 months after the date of contract award
Comprehensive Energy Baseline Report for each partner organisation as specified (based on 2026 data, with annual updates using 2027 data for ongoing monitoring) (approved by GIZ)	Initial version 2026 energy data, 3 months after the date of contract award, and the updated version with 2027 energy data, after 13 months of contract award.
Updated and approved by respective municipal management EE / EnM action plans for each partner municipal organisation, as per specifications outlined in WP 1.1 (approved by GIZ)	6 months after the date of contract award
Report with energy savings data from implemented EnM and EE measures for each partner municipality, including validation of achieved savings (approved by GIZ)	15 months after the date of contract award
Documentation of technical support provided to previous partners for continuation of their EnMS cycle (approved by GIZ)	15 months after the date of contract award

WP 1.2. Recommendations for organisational development measures to mainstream EnMS

Tasks

- Conduct gap assessment of institutional structures, Standard Operating Procedures (SOPs), staff capacities, utilisation of monitoring equipment/techniques, and identify gaps against international best practices, with a focus on identifying organisational development measures required for the effective mainstreaming and long-term sustainability of EnMS.
- Building on the completed EnMS gap analysis, recommend international best practices for the identified gaps, covering institutional structures, SOPs, staff capacities, and utilisation of monitoring equipment / techniques.

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- Develop a minimum of two tailored organisational recommendations to mainstream EnMS for each partner municipal organisation, in collaboration with their management and Energy Team.
- Recommendations must include the definition of objectives, schedule and action plan, estimation of the costs and potential impacts of the measure, and shall focus on organisational development measures and shall include, but not be limited to, the following areas:
 - adjustments to organisational structures, processes, responsibilities, and mandates
 - integration of KPIs into the organisation’s objective system
 - development of SOPs
 - budgeting provisions and public reporting mechanisms.
- Submit recommendations to municipal management and facilitate their approval through providing support and advisory where required. Provide follow-up advisory to Energy Teams on the initial steps of implementation after approval.

Milestones for WP 1.2	Delivery period
Report/s of recommendations for organisational development measures to mainstream EnMS (2 recommendations for each partner municipality), with gap assessment and gap analysis reports, developed in collaboration with Municipal Management and Energy Teams (approved by GIZ)	6 months after the date of contract award
Evidence of submission of recommendations to the management of each partner municipal organisation (emails, meeting minutes) and documentation of approval by management (approved by GIZ)	Within 9 months after the date of contract award

WP 1.3. Implementation of EE Measures

Tasks

- Conduct desk reviews of existing EnM / EE action plans and partner municipal documentation if available, to assess the scope, status, and effectiveness of ongoing and past EE measures.
- Perform on-site assessments with municipal Energy Teams to evaluate the technical performance, operational practices, and efficiency of existing equipment, systems, and energy-related procedures.
- If applicable, assess any previously implemented or ongoing EE measures against international best practices, considering technical efficiency, operational control, maintenance practices, and actual or potential energy savings.
- Prepare EE assessment reports for each partner municipal organisation, documenting current performance, implementation gaps, and improvement opportunities.

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- Develop technically sound, context-specific EE recommendations for each partner (minimum 2 - 3 per partner municipality), in consultation with Energy Teams and senior management, including potential savings, implementation requirements, and prioritisation criteria. An estimate of implementation costs shall also be included.
- Provide advisory support to municipal Energy Teams on the implementation of selected EE measures, including technical specifications, operational practices, and monitoring approaches.
- Prepare implementation reports documenting recommended EE measures, selected interventions, progress, initial results, lessons learned, and next steps.
- EE recommendations should cover but are not limited to: water supply and sanitation systems (i. e., pumping stations), municipal buildings, electrical systems and controls, and routine operational measures.
- Calculate and document actual and potential energy savings for implemented and recommended EE measures using baseline comparisons and monitoring data, in line with the defined EnMS scope and identified SEUs, at the end of each year.

Milestones for WP 1.3	Delivery period
EE Assessment Report for each partner municipal organisation, including evaluation of existing EE measures, identification of implementation gaps, and technical recommendations for improved EE performance (approved by GIZ)	3 months after the date of contract award
Submission of Technical EE Recommendations Report for each partner municipality, including prioritised EE measures, potential energy savings, implementation requirements, and advisory inputs provided to Energy Teams (approved by GIZ)	Within 4 months after the date of contract award
Submission of EE Implementation and Monitoring Report for each partner municipal organisation, documenting selected EE interventions, implementation progress, and calculated actual and potential energy savings (approved by GIZ)	15 months after the date of contract award (near end of contract)

WP 1.4. Advice on Design and Introduction of Organisational EE Incentive Mechanisms

Tasks

- The aim is to provide advice and support to municipal organisations on the design and introduction of organisational EE incentive mechanisms.
- Conduct structured consultations with municipal Energy Teams, senior management, human resource units, finance departments, and relevant municipal line departments

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to assess existing incentive mechanisms, organisational arrangements, budgeting practices, and decision-making processes related to EE and EnM.

- Review applicable national and provincial legal, regulatory, and administrative frameworks governing municipal operations, human resource management, budgeting, procurement, and incentive schemes, and coordinate with relevant provincial line departments to assess compliance requirements, enabling conditions, constraints, and approval pathways for EE incentive mechanisms.
- Analyse the effectiveness of existing organisational and municipal-level incentive mechanisms, including staff and department-level arrangements, and identify gaps and opportunities to strengthen accountability, motivation, and performance for EE implementation.
- Compile relevant international and national best practices on organisational and municipal EE incentive mechanisms applicable to public-sector and municipal contexts, taking into account regulatory, institutional, and fiscal constraints.
- Design tailored two-tier EE incentive mechanisms for each partner municipal organisation and relevant line departments, addressing:
 - organisational / HR-level incentives (staff, Energy Teams, departments)
 - municipal / institutional-level incentives (planning, budgeting, and performance management)

while ensuring alignment with municipal mandates, staffing structures, budgetary processes, and applicable regulatory frameworks.

- Conduct validation workshops and consultation meetings with municipal Energy Teams, senior management, HR and finance units, and relevant provincial line departments to refine and agree on the proposed incentive mechanisms.
- Prepare and submit consolidated EE incentive mechanism recommendations to each partner municipal organisation and relevant provincial line departments, incorporating stakeholder feedback and regulatory requirements, and provide advisory support for the formal introduction and initial implementation of approved mechanisms.
- Incentive mechanisms may include performance-based rewards, recognition systems, financial or non-financial incentives, and institutional measures to promote energy efficiency, with flexibility for other context-specific approaches.

Milestones for WP 1.4	Delivery period
Submission of consolidated report on organisational EE incentive mechanisms, including: gap analysis, stakeholder consultations, review of regulatory frameworks and best practices, and validated recommendations for partner municipal organisations (approved by GIZ)	12 months after the date of contract award
Documentation of advisory support for the formal introduction and implementation of EE incentive mechanisms in partner municipal organisations (approved by GIZ)	14 months after the date of contract award

WP 1.5. Support to Municipal Organisations on the Development of Bankable Proposals and Business Cases

Tasks

- Identify areas where support is required for the development of business cases and/or bankable proposals across partner municipal organisations, and identify a minimum of 2–3 feasible opportunities per municipality. These may cover recommended EE measures (from WP 1.3), innovative technical solutions, and other opportunities for improved energy efficiency. Identified opportunities shall be supported by preliminary energy baseline calculations and energy demand profiling.
- Develop concept notes for each identified opportunity and, in consultation with the respective municipal Energy Teams and management, undertake screening and prioritisation based on key criteria including technical viability, expected energy savings and financial benefits, indicative investment requirements, institutional readiness, municipal priorities, and potential funding opportunities. Based on this process, 1–2 priority opportunities per municipality shall be selected for further development.
- In collaboration with municipal Energy Teams and management, undertake techno-economic feasibility studies for the selected priority opportunities (minimum 1–2 per municipality), in line with municipal requirements and the level of available information. Assessments shall include CAPEX/OPEX breakdowns, key technical assumptions, design parameters, expected performance metrics, and sensitivity analysis of key variables.
- Based on feasibility outcomes, identify and assess suitable financing mechanisms for the selected priority opportunities, including international donor grants, federal/provincial funding programmes, concessional financing from international financial institutions, ESCO/EPC and PPP models, and blended finance structures. The assessment shall cover eligibility criteria, approval requirements, regulatory and institutional constraints, indicative financing structures, risk allocation, co-financing requirements, and affordability considerations for municipal budgets.
- Support the preparation of business cases and, where appropriate, bankable proposals (minimum 1–2 outputs per municipality). The determination of the required output shall be agreed with the respective municipality and based on municipal priorities, level of readiness, availability of technical and financial information, institutional capacity, intended financing approach, and requirements of prospective funding sources.
- Business cases and/or bankable proposals shall include, as appropriate, definition of scope, assessment of technical options, capital and operating costs, financial and economic analysis (including CBA, ROI, NPV, IRR, payback period, and lifecycle costing), cash-flow modelling, risk and sensitivity analysis, expected energy savings or generation, associated GHG emission reductions, implementation and procurement arrangements, financing requirements, and alignment with municipal priorities and funding criteria.
- Prepare and deliver presentations of assessed opportunities, business cases, and bankable proposals to municipal management and relevant stakeholders, including guidance on decision-making, implementation sequencing, interpretation of financial indicators, risk exposure, and affordability implications.

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- Provide initial follow-up advisory support for submission of bankable proposals to potential funding sources, including compliance requirements, approval pathways, monitoring arrangements, definition of key performance indicators, and establishment of monitoring frameworks in line with donor and financier requirements.

Milestones for WP 1.5	Delivery period
Concept notes for identified feasible opportunities per municipal organisation (minimum 2–3), including recommended EE measures and preliminary assessment inputs (approved by GIZ)	4 months after the date of contract award
Screening and prioritisation outputs for concept notes developed with municipal Energy Teams and management, including identification of priority opportunities for further development (approved by GIZ)	Within 5 months after the date of contract award
Technical/economic feasibility studies for selected priority opportunities (minimum 1–2 per municipality) (approved by GIZ)	7 months after the date of contract award
Business cases and/or bankable proposals for selected priority opportunities (minimum 1–2 per municipality), as appropriate to municipal requirements and financing pathways (approved by GIZ)	Within 8 months after the date of contract award
Proof of submission of business cases and/or bankable proposals to municipal management and relevant stakeholders, including presentation materials and briefing notes (approved by GIZ)	Within 10 months after the date of contract award
Documentation of advisory support for submission to funding and financing mechanisms, including compliance requirements, approval pathways, and donor/financier reporting and monitoring requirements (approved by GIZ)	Within 14 months after the date of contract award

WP 1.6. Evaluation of the implementation of EnMS in partner municipal organisations

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- Conduct a comprehensive evaluation of the EnMS in each partner municipal organisation, including previous partners, by verifying the effective implementation of the seven core EnMS elements defined under WP 1.1.
- Review and confirm the identification, documentation, and periodic assessment of SEUs within the defined EnMS scope and boundaries.
- Verify the implementation and operational status of planned EE and EnM interventions across municipal facilities and infrastructure, and their actual/potential energy savings.
- Assess the adoption of organisational and institutional EnMS strengthening measures developed under WP 1.2.
- Assess the establishment and functioning of energy monitoring and evaluation processes, including data collection, validation, and the use of EnPIs for performance tracking.
- Collect, consolidate, and validate municipal energy consumption data, ensuring consistency with established energy baselines and EnPIs.
- Evaluate energy performance against established baselines, including analysis of trends, deviations, and effectiveness of implemented EnMS and EE/EnM interventions.
- Calculate and verify EnPIs, quantify energy and cost savings, and assess the financial performance and ROI of implemented measures.
- Evaluate the achievement of approved energy objectives and targets defined in EnM/EE action plans, including progress of planned measures and identification of performance gaps.
- Conduct an internal EnMS audit in line with ISO 50001 principles, assessing conformity with documented procedures, reliability of energy data, and overall effectiveness of implemented measures.
- Prepare a consolidated EnMS evaluation report summarising energy performance, verified savings, target achievement, audit findings, and implementation challenges.
- Facilitate management review sessions to support evidence-based decisions on corrective actions, resource allocation, and priorities for the next EnMS cycle.
- Provide actionable recommendations and lessons learned to strengthen institutional capacity, ensure sustainability of energy performance improvements, and support continuous improvement and scaling.

Milestones for work package 1.6	Delivery period
<p>Submission of the Evaluation Report for each partner municipal organisation, including:</p> <ul style="list-style-type: none"> • Verified implementation of the seven EnMS elements (per WP 1.1) • Verified operational status of planned EE and EnM interventions, including organisational and institutional strengthening follow-up • Verified energy and cost savings, and ROI for implemented EE/EnM measures • Consolidated lessons learned and actionable recommendations <p>(approved by GIZ)</p>	<p>15 months after contract award (near end of contract)</p>

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WP 2: Covers MOI 2 & part of Output 2 - OI 2.1

Capacity Development and Knowledge Exchange for Municipal Staff and Stakeholders for improved Professional Competencies in EnMS

The primary goal of this work package is to develop personnel and organisational capacities and to equip municipal experts, managers, and decision-makers with the knowledge, practical skills, and tools, required to independently implement and mainstream EnMS in Pakistan's water supply and sanitation sector.

The capacity development activities will be implemented through a two-tier approach. This structure ensures that interventions are tailored to the specific roles, responsibilities, and decision-making levels of each group, thereby improving their relevance and effectiveness. Where appropriate, certain capacity development activities may overlap between tiers, subject to prior agreement with the project team. The approach is outlined as follows:

Tier 1:

- It is the regulatory and management tier, comprising senior municipal management, political stakeholders, and key decision-makers, with a target of at least 90 unique participants. These 90 experts and managers must also confirm their use of the disseminated information and services on EnMS in their working environment by providing an example.
- For this tier, a horizontal training model is preferred, emphasising peer learning and knowledge exchange among institutions and stakeholders.

Tier 2:

- This is the technical tier, comprising technical managers, Energy Teams, and municipal energy experts, with a target of training 500 unique participants.
- A vertical training model is recommended for this tier, including hands-on technical training for municipal experts.
- Under the Capacity Development Strategy, Tier 2 targets a minimum of 500 unique participants: 200 through personal exchanges under this service contract, and 300 through knowledge dissemination via roadshows and seminars. The organisation and delivery of roadshows and seminars are outside the scope of this service contract; however, the development of all related knowledge and dissemination materials is included and must be covered under WP 2.1 and WP 2.2.

WP 2.1. Conducting Capacity Needs Assessment (CNA) and Capacity Development Strategy (CDS)

Tasks

The CNA and CDS should separately address both Tier 1 and Tier 2 participants, with activities tailored to the specific roles, responsibilities, and decision-making levels of each tier.

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- Conduct bilateral meetings and structured surveys with municipal and political stakeholders, managers, Energy Teams, and experts to assess existing municipal EnM practices, EE measures, regulatory frameworks, and the efficiency of existing procedures, equipment, and decision-making processes, among other relevant areas. These shall be analysed from both a regulatory and organisational lens, for mainstreaming EnMS.
- Identify capacity gaps for Tier 1 participants in areas of governance, regulatory knowledge, and other relevant areas to mainstream EnMS in water supply and sanitation companies and municipal organisations in Pakistan.
- Identify capacity gaps for Tier 2 participants in technical expertise, operational knowledge, and EnMS implementation.
- For Tier 2, determine core competencies required for effective EnMS implementation. These should include, but not be limited to, the following areas:
 - Operation and maintenance (O&M) of energy infrastructure and equipment to ensure sustained system performance and efficiency
 - Energy data management, including monitoring, reporting, and verification (MRV), as well as analysis of energy consumption and performance trends
 - Application of EnPIs to support evidence-based energy decision-making and performance tracking
 - Preparation of technical reports and energy performance documentation to support adoption of EnMS
 - Use of Excel-based or other existing simple digital tools for energy data analysis, visualisation, optimization, and decision support without procurement or any software development. For Tier 2, the CNA shall identify requirements for Excel-based EnM and EE tools to support energy data collection, energy baseline development, EnPI calculation, energy performance monitoring, reporting, and decision support. This assessment will inform the design, functionality, and complexity of tools developed under WP 2.2.

CDS:

- Based on the CNA findings, the CDS shall establish a structured, role-specific approach for Tier 1 and Tier 2 participants to strengthen EnMS implementation in Pakistan's water supply and sanitation sector.
- The CDS shall define clear objectives and learning outcomes addressing identified capacity gaps for both Tier 1 and Tier 2.
- The CDS shall outline an action plan for organising and delivering capacity development activities, including the sequence, timeline, number and type of events, participant allocation, and roles for implementation and coordination.
- The CDS shall ensure achievement of 90 unique Tier 1 participants and 500 unique Tier 2 participants, comprising 200 participants trained directly under this assignment and 300 participants reached through dissemination activities such as roadshows and seminars.
- The CDS shall define capacity development formats for both Tiers, which shall include but are not limited to the following:
 - Trainings, including technical on-site trainings for Tier 2, and workshops
 - Train-the-Trainer (ToT) programme on a comprehensive EnMS module tailored to water supply and sanitation operations, delivered to trainers of Al Jazari Academy and other WASA training institutions, for integration into ongoing institutional training programmes

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- At least two knowledge exchange visits to successful municipal utilities, pilot projects, or relevant stakeholders to facilitate peer learning and practical insights
- Roadshows and seminars to disseminate knowledge materials
- The CDS shall include a monitoring and evaluation framework, including tracking of the number of participants trained, pre/post training assessments, adjusting training content and modalities based on observed performance and feedback. It shall also include a mechanism for confirmation from a minimum of 90 Tier 1 participants on the application of disseminated EnMS knowledge and services in their work, supported by practical examples.

Milestones for WP 2.1	Delivery period
Consolidated CNA for Tier 1 & Tier 2 (approved by GIZ)	2 months after the date of contract award
CDS covering all capacity development activities, both Tier 1 and Tier 2 (approved by GIZ)	Within 2 months after the date of contract award

WP 2.2. Development of Knowledge Products and Training Materials

Tasks

- All knowledge products and learning materials shall be aligned with the CDS and approved by the project team, tailored to the operational and institutional context of water supply and sanitation companies, integrate relevant global and local best practices, and include interactive elements to ensure practical application.
- Ensure that content for Tier 1 focuses on strategic, regulatory, organisational, and financial aspects of EnMS implementation and institutionalisation, including mechanisms to confirm application of disseminated knowledge as outlined in WP 2.1, while Tier 2 content focuses on technical and operational aspects with emphasis on practical application and use of tools.
- Finalise capacity development topics, activities, and knowledge products to be developed in collaboration with the project team.
- Develop all required knowledge products and capacity development outputs, including concept notes, agendas, presentations, analytical tools, and training content, ensuring coverage of learning objectives, delivery approaches, technical content, and expected outcomes.
- The table below presents the key outputs and knowledge products to be produced:

No.	Output Category	Key Contents / Scope
1	Knowledge materials for workshops	Develop knowledge products for workshops, including, but not limited to, the following topics:

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		<ul style="list-style-type: none"> • Policy and regulatory frameworks supporting EE and EnMS adoption at municipal and national levels, including integration into municipal planning, budgeting, and asset management processes, as well as organisational incentives and regulatory mechanisms to promote EE in the water and sanitation sector • Stakeholder engagement and coordination, and public-private partnerships for EE implementation, including risk management, regulatory approvals, and permitting processes for EE transformation projects • Identification of high-impact EE intervention concepts based on international and national best practices, and techno-economic feasibility analysis of EE interventions including cost-benefit assessment, payback calculations, and lifecycle analysis • Development of bankable project proposals, business cases, and funding pathways for EE interventions, supported by interactive case studies demonstrating successful municipal EnMS and EE interventions • Use of data visualisation and dashboards for energy performance monitoring, and institutionalisation of EnMS across the water supply and sanitation sector and other regulatory topics
2	Knowledge materials for Trainings	<p>Develop technical modules including presentations, practical exercises, and reference materials covering:</p> <ul style="list-style-type: none"> • Identification, design, and implementation of effective EE interventions in municipal pumping systems, lighting, and fleet • Pump efficiency analysis: selection, sizing, alignment, and interpretation of pump performance curves • System-level energy analysis across facilities, networks, and processes using load profiling and benchmarking • Energy audit methodology, including measurement & verification protocols • Training sessions shall explicitly utilise the developed digital EnM and EE tools for hands-on exercises
3	Comprehensive EnMS Module and supporting materials for Train-the-Trainers (ToT) Programme for WASA Training Academy	<p>Develop a comprehensive module on EnMS, specifically tailored to operational context of water supply and sanitation companies, aligned with ISO 50001, including:</p> <ul style="list-style-type: none"> • EnMS governance structures, roles, and responsibilities within municipal organisations • Energy planning cycle: energy review, baseline development, EnPI selection, and target setting • Integration of EnMS into strategic municipal plans and operational processes • Energy data management, monitoring, reporting, and analytics, including overview of energy dashboards. • Management review, continuous improvement, and corrective / preventive action processes • Incorporation of global and local municipal best-practice case studies for practical learning

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		Develop supporting knowledge materials and other products required to conduct ToT for WASA Training Academy trainers on the EnMS module.
4	Comprehensive EnMS Manuals and SOP Manuals	<p>Prepare EnMS and SOP manuals in English and local language(s) covering:</p> <ul style="list-style-type: none"> • Proper operation and maintenance of pumps, motors, and other critical energy-consuming equipment • Installation of proper earthing, grounding, and electrical safety protocols • Health, safety, and environmental (HSE) procedures specific to municipal facilities • Day-to-day EnMS SOPs, including maintenance scheduling and predictive maintenance practices using energy monitoring data • Supporting materials including visual aids (posters and infographics), documentation in English and local language(s), and step-by-step procedural checklists for EnMS and EE implementation
5	Excel-based EnM and EE Tools (at least 3)	<ul style="list-style-type: none"> • The contractor shall develop innovative and practical Excel-based analytical tools to support the implementation of EnM and EE measures, focusing on technical analysis and performance optimisation
6	Knowledge Exchange Visits (at least 2)	<ul style="list-style-type: none"> • Identification of relevant municipal stakeholders and participants • Develop pre-briefing materials, and other knowledge products/guides required • Documentation templates for capturing key lessons and transferable best practices
7	Knowledge Materials for Seminars and Roadshows	<p>Develop presentations, knowledge products, and supporting materials for dissemination, including:</p> <ul style="list-style-type: none"> • Demonstration of municipal EnMS implementation and EE interventions through practical examples and case studies • Stakeholder engagement materials targeting decision-makers, municipal staff, to support awareness and uptake of EE practices • Communication materials including brochures, handouts, posters, and infographics summarising key EE and EnMS practices • Templates and tools for capturing feedback, participation inputs, and lessons learned for continuous improvement

Milestones for WP 2.2	Delivery period
Finalised knowledge products, learning activities, and training materials, differentiated separately for each tier. (approved by GIZ) These must include:	Within 4 months after the date of contract award

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<ul style="list-style-type: none"> • EnM / EE excel tools, EnMS manual and SOP manuals, knowledge products and other materials for knowledge exchange visits, and other materials mentioned / requested (approved by GIZ) • Finalised EnMS Module for WASA Training Academy (approved by GIZ) 	
<p>Concept notes and agendas for capacity development sessions / activities for each tier (approved by GIZ)</p>	<p>Within 4 months after the date of contract award</p>

WP 2.3. Conducting Capacity Development Sessions

- Logistically organise and implement capacity development activities and events for both tiers, in close coordination with and approval of GIZ, including arranging venues and equipment, identifying and inviting participants, and reimbursing travel costs and allowances in line with GIZ policies.
- Capacity development activities covering all modalities and knowledge products shall be executed in line with WP 2.1 and WP 2.2, except for seminars and roadshows.
- Conduct at least 2 knowledge exchange visits for relevant stakeholders, including logistical organisation, participant coordination, and preparation of pre-briefing and documentation materials.
- Conduct pre- and post-training surveys to measure learning outcomes and application readiness.
- Ensure dissemination reaches at least 200 unique participants under Tier 2.
- After a minimum of three months, verify that at least 90 unique participants under Tier 1 demonstrate practical application of EnMS / EE knowledge through documented examples.
- Prepare and submit comprehensive reports for all activities, including:
 - Compilation of modules, presentations, and other knowledge materials
 - Attendance lists and consolidated headcount for both tiers
 - Survey evidence confirming application of knowledge by 90 Tier 1 participants
- To support institutionalisation and sustainability:
 - Provide support and ensure the integration of the EnMS module into Al Jazari Academy and other WASA institutions.
 - Provide support to embed the use of digital EnM and EE tools within municipal operational procedures and workflows

Milestones for WP 2.3	Delivery period
<p>Capacity development event reports for each activity, including agendas, participant lists, analysed pre- and post-training surveys, presentations, and knowledge products (approved by GIZ)</p>	<p>Within 12 months after the date of contract award</p>

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Documentation of the integration of the EnMS training module into the curricula of Al Jazari Academy and other WASA training institutions, evidence of the integration of digital EnM and EE tools into municipal energy management processes, operational procedures, and workflows (approved by GIZ)	Within 13 months after the date of contract award
Confirmation of use of disseminated information and services on EnMS in working environment by 90 individuals under Tier 1 by providing an example through a survey (approved by GIZ)	Within 14 months after the date of contract award

WP 3: Covers part of Output 2 - OI 2.2
Organisation of National Conference on EnM and EnMS

Tasks

- Organise, coordinate, and implement the national conference on EnM and EnMS for a minimum of 70 participants, including representatives from national and provincial authorities, municipal organisations, academia, the private sector, and other relevant stakeholders, with the objective of strengthening knowledge exchange and practical understanding of municipal EnM. Out of the 70 participants, 50 must confirm through a survey, improved expertise in municipal EnM due to exchanges at the conference.
- Book and manage the conference venue and oversee all related logistical arrangements, including event visibility requirements such as digital standees, SMD (Surface-Mounted Device) screen or another suitable screen for digital backdrop, and any other required materials as required.
- Identify and formally invite at least 70 participants through official invitation letters using the GIZ template, in close collaboration with the project team, to ensure participation of a minimum of 50 attendees.
- Arrange hotel accommodation for out-of-station participants and facilitate reimbursement of eligible travel costs and allowances in accordance with GIZ guidelines and applicable procedures.
- Draft the national conference concept note, clearly outlining key themes, objectives, and expected outcomes, in close coordination with the project team and NEECA.
- Develop the conference agenda, presentations, knowledge materials, communication products, digital standees, and backdrop in close coordination with the project team, and support the identification and invitation of speakers, participants, and relevant stakeholder groups.
- Prepare and deliver presentations highlighting success stories, case studies, and innovative practices related to EnMS, linking data with previous successful EE and EnM implementations within Pakistan’s municipal organisations as well as relevant global experiences.

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- Design and facilitate active conference sessions to enable effective exchange of information, experiences, and ideas among national and municipal stakeholders, with a focus on strengthening regulatory, institutional, and operational frameworks for municipal EnM. Conference topics and session themes may be adjusted based on stakeholder and GIZ requirements, while remaining aligned with municipal EnM objectives.
- Capture event photographs of all sessions, speakers, and key moments during the conference to document participation and support reporting.
- Design and administer post-conference participant surveys to evaluate the conference’s effectiveness, capturing both qualitative and quantitative feedback, and ensuring that at least 50 participants demonstrate measurable improvement in municipal EnM knowledge and skills.
- Prepare a comprehensive conference report, including the final participant list, session summaries, presentations and knowledge materials (as annexures), event photographs, and an analysis of post-conference survey results.

Milestones for WP 3	Delivery period
Conference concept note, draft agenda, and draft presentations and knowledge products (approved by GIZ)	Within 12 months after the date of contract award
Conference report with: finalised agenda, participant list, analysed survey forms, finalised presentations and knowledge products (as annexures) (approved by GIZ)	Within 15 months after the date of contract award

WP 4: Covers part of Output 3 - OI 3.2
 Development of Recommendations for Policy and Institutional Support Measures to Promote Systematic EnM in Municipal Organisations

Tasks

- Conduct key interviews with national policy stakeholders to assess their role and potential influence in promoting municipal EnM.
- Analyse current regulatory / policy frameworks on national level and identify gaps through bilateral meetings with the selected stakeholders. Develop a stakeholder map of relevant municipal, provincial, and national actors based on the analysis.
- Assess the potential for fast-acting regulatory, financial, organisational and communicative measures to promote municipal EnM.
- The project has already developed 11 recommendations; hence, the topics for additional recommendations will be finalised in collaboration with the GIZ project team to ensure relevance and avoid duplication.
- Recommend framework options (minimum of 4 recommendations) with action plan to enhance national policies and SOPs for EnMS in municipal organisations with collaborative involvement of policy level stakeholders and municipal organisations.
- The recommendations shall include definition of objectives, timeline, and estimation of costs and potential impacts.

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- Prepare the agenda and timeline for a workshop series to develop policy recommendations and national-level design options.
- Conduct workshop(s) to participatorily develop and finalise framework recommendations with relevant national and provincial stakeholders.
- Disseminate the developed recommendations and design options to relevant stakeholders.

Milestones for WP 4	Delivery period
Analysis report on policy stakeholders and regulatory framework with policy gaps, stakeholder map, meeting minutes / interview notes as supporting documents. (approved by GIZ)	3 months after the date of contract award
Workshop reports with agenda, attendance sheet, and outcomes (approved by GIZ)	6 months after the date of contract award
Report of developed policy / framework design option recommendations (approved by GIZ)	6 months after the date of contract award
Proof of submission of recommendations to relevant stakeholders (emails, meeting minutes) (approved by GIZ)	Within 12 months after the date of contract award

WP 5: Part of Output 3 - OI 3.1

Training Programme for female engineers on municipal EnM and EnMS

The training programme will be implemented in collaboration with a national intermediary organisation. Under this arrangement, the service contract team will be responsible for the development of the technical training module, including the EnMS curriculum, preparation of the required technical training and assessment materials, and implementation of the technical training and on-site practical learning components. This will also include the preparation of related visibility and documentation materials, including photos and videos of training activities, and the collection and recording of trainee testimonials.

The national intermediary organisation will manage the administrative aspects of the programme, including advertisement of the programme, selection and induction of trainees, issuance of monthly stipends, delivery of supporting career skills and professional development sessions, including facilitation of networking and hiring opportunities, and issuance of certificates.

Monitoring, documentation, and reporting of programme progress and results is to be undertaken collaboratively between the service contract team and the national intermediary organisation. Collaboration shall be done with the intermediary organisation as required to streamline activities where necessary.

Tasks

- Identify suitable host water supply and sanitation companies from partner organisations for the placement of women engineering trainees through bilateral meetings with municipal management.

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- Prepare a Training Programme Concept for the technical component of the programme, clearly defining the programme scope, objectives, timeline, list of tentative/finalised participating municipal organisations, placement structure, and technical training approach, with the target of successfully training at least 100 trainees.
- Conduct formal consultations with selected partner organisations to confirm trainee placement arrangements, clarification of roles and responsibilities, supervision mechanisms, and participation in municipal EnM-related activities and processes with the municipal Energy Team and other technical staff. Obtain documented confirmation of the host organisations' commitment to host and support the trainees throughout the placement period.
- Develop a comprehensive, hands-on three-month training programme curriculum on EnM and EnMS for recently graduated women engineers, aimed at strengthening technical competencies and facilitating entry into the energy sector.
- The curriculum shall include structured learning materials aligned with ISO 50001 principles in the municipal EnMS context. The comprehensive EnMS Module developed under WP 2.2 shall serve as the core training curriculum, complemented by additional supporting training materials, including guided hands-on exercises and on-site practical training within municipal operational settings, as well as assessment methods developed to monitor progress and quality, as required in agreement with the GIZ project team.
- Implement the technical training component successfully for at least 100 trainees.
- The EnMS trainer shall ensure continuous coordination between trainees, municipal Energy Teams, and designated municipal supervisors to support effective learning and integration into municipal workflows.
- The trainer shall provide ongoing technical and mentoring support to trainees, including mechanisms to address technical concerns, questions, or challenges encountered during the placement.
- Trainer shall monitor trainee technical performance and learning progress through regular assessments and quizzes as part of the technical training programme. Attendance shall be monitored.
- Evaluation of the programme shall be done in collaboration with the intermediary organisation to gauge the success of the programme, through a structured survey from trainees.
- Collect structured testimonials from trainees on the programme's impact on employability and technical capacity development, as well as feedback from municipal staff on trainee contributions and organisational benefits, and compile these together with photos and videos documenting on-site training activities.
- Develop a Programme Completion Report in collaboration with the national intermediary organisation, providing an overview of technical training activities, compiled testimonials, documentation of training implementation across participating municipal organisations, evaluation through survey analysis, and lessons learned.

Milestones for WP 5	Delivery period
Training Programme Concept for the technical component of the programme (approved by GIZ)	1 months after the date of contract award
Documented commitment from each selected host municipal organisation agreeing to the placement of women engineering trainees,	2 months after the date of contract award

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including the agreed roles and responsibilities, supervision arrangements, placement duration, and participation in relevant municipal activities, together with the minutes of the consultation meetings (approved by GIZ)	
Training Programme Module Document, defining technical curriculum including the EnMS Module, any additional structured learning material, hands-on training exercises, and assessment methods (developed in coordination with the project team and national intermediary organisation) (approved by GIZ)	2 months after the date of contract award
Implementation of the three-month EnM and EnMS technical training programme, with documentation of training activities through photographs and videos (prepared in coordination with the national intermediary organisation) (approved by GIZ)	Within 12 months after the date of contract award
Programme Completion Report (prepared in collaboration with the national intermediary organisation) (approved by GIZ)	Within 14 months after the date of contract award

2.3 Project and knowledge management requirements

Requirements on the assignment of experts:

- The contractor is responsible for selecting, preparing, training and steering the experts assigned to carry out the advisory services.
- The consultant is responsible for attaining all the knowledge related to the energy and municipal sector of Pakistan.
- The consultant shall possess project management skills to ensure the effective and timely completion of the WPs.
- The consultant's experts shall possess knowledge of governmental and non-governmental actors in the field of energy efficiency, municipal organisations, and water supply and sanitation companies, including all relevant political and regulatory bodies.
- The consultant's experts shall exhibit the capacity to support institutionalisation of experience in implementing EnMS in a way that develops the capacities of municipal organisations and personnel, and in designing, delivering, and conducting capacity development programmes.
- The consultant's communication expert shall document and provide photos and videos of all project activities as requested by the project team.

Requirements on materials and equipment and operating costs:

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- The contractor makes the required materials, equipment and consumables available and covers their operating and administrative costs.

Requirements on expenditure management and cost control:

- The contractor manages costs and expenditures, accounting processes and invoicing in line with GIZ requirements.

Monitoring and reporting requirements:

- The contractor plays an active role in the results-based monitoring of the project. Regular monitoring activities must cover at least the following areas:
 - Degree to which activities are implemented
 - Degree to which the objectives, indicators and milestones listed in section 2.2 of these ToRs have been achieved
 - Results that have occurred in the contractor's sphere of responsibility
 - Risks
 - The contractor reports to GIZ regularly in accordance with the version of the General Terms and Conditions of Contract for supplying services and work on behalf of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ AVB) that is applicable to this contract.

The contractor reports to GIZ as follows:

In addition to the reports provided for in GIZ's General Terms and Conditions of Contract, the contractor submits the following reports in English:

- Inception report for implementation of all work packages, within one month of contract award
- Interim report(s) every 6 months
- Final report by the end of the project

The interim report(s) and the final report should provide information about the progress made towards objectives in each of the monitoring areas specified above.

Additionally, the contractor is required to produce:

- All reports, documents, and knowledge products as specified under section 2.2.
- Inception report
- Contributions to the report to GIZ's commissioning party (e.g. annual reports)

Requirements for company-wide learning, knowledge and innovation:

- The contractor provides support in implementing a project evaluation with special emphasis on ensuring the effectiveness of the knowledge management process.
- The contractor expresses willingness, if required, to support project assistants or staff members on temporary placements who, in the context of GIZ's separately financed training programmes for junior employees, work in and undertake special tasks for the project.

Backstopping requirements:

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The contractor ensures appropriate backstopping. The following services form part of the standard backstopping package. In accordance with GIZ's General Terms and Conditions for supplying services and work on behalf of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, these services – as well as the ancillary personnel costs – must be priced into the fee schedules of the staff listed in the tender:

- The contractor's responsibility for its own staff
- Ensuring the flow of information between GIZ and the contractor's field staff
- Process-oriented technical and conceptual steering of the consulting services
- Steering adaptations to changing framework conditions
- Performance monitoring
- Ensuring the administrative management of the project
- Ensuring compliance with reporting requirements
- Technical support by the contractor's staff for its personnel on the ground
- Making local use of and sharing the lessons learned by the contractor with the GIZ team
- Ensuring financial monitoring of the service contract and providing invoices as per GIZ guidelines

2.4 Data protection and information security

The provisions on data protection and information security of the current version of GIZ's General Terms and Conditions of Contract (section 1.11 Data protection) apply.

The performance of the contract may be associated with the processing of personal data by the contractor, such as (but not limited to) names and contact information. In such cases, the contractor shall act as an independent DATA CONTROLLER and must alone comply with ALL applicable data protection obligations, including those stemming from regional and local laws. The contractor shall process personal data only when a given goal cannot be reasonably attained without such data. The data protection principles such as lawfulness, data minimization, accuracy, purpose limitation, storage limitation, transparency, integrity and confidentiality, and accountability, as well as the numerous rights of the data subject must be paid due attention. GIZ is NOT in any way responsible for such processing.

Whenever the contractor executes the instructions of a partner to GIZ with regard to such processing, the partner shall be the data controller, and the data processing shall be carried out in accordance with the partner's instructions as well as laws and standards to which it is subject.

If the contractor is not subject to the GDPR and the applicable laws do not contain any explanation on the data protection principles and rights mentioned here, the definitions and meanings provided by the GDPR (Regulation (EU) 2016/679) should be considered.

2.5 Other requirements

Safeguards and gender measures with specific reference to services:

In order to promote gender equality and avoid or mitigate possible unintended negative impacts in its area of responsibility, the contractor should implement the following measures:

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Gender equality:

Gender-sensitive Recruitment:

- Ensure that gender considerations are integrated into recruitment practices. Promote equal opportunities for men and women in technical and managerial roles, emphasising female representation in leadership.

Monitoring and Evaluation:

- Establish mechanisms to track gender-related outcomes, such as the percentage of women benefitting from the project services, participation rates, and feedback collection, to assess gender impacts and make data-informed adjustments.
- Actively provide advisory support to trainees in WP 5 in obtaining jobs after completion of the program. Document and monitor the number of trainees receiving job offers, and report on employment outcomes to evaluate the effectiveness of training and placement initiatives.

The contractor's staffing profile should be balanced in terms of gender and age.

3. Technical-methodological concept

In this section, the tenderer is required to reflect on the objectives and terms of reference of the tender at hand, describe the partner system and its processes in the area of responsibility and present the technical-methodological concept for completing the tasks listed in section 2 and achieving the set objectives. In addition, the tenderer must describe the design of the project management process.

3.1 Interpretation of objectives (section 1.1 of the assessment grid)

– Not applicable –

3.2 Processes and actors in the partner system (section 1.2 of the assessment grid)

– Not applicable –

3.3 Strategy (section 1.3 of the assessment grid)

The strategy for delivering the services in the tender is the core element of the technical-methodological concept. It is composed of the following elements:

- Procedure for achieving the objectives stated in section 2.2 of these ToRs
- Development of partnerships with the relevant actors
- Approaches for leverage effects and measures for scaling-up
- Consideration of environmental and social compatibility requirements (including gender equality)
- Appropriate consideration of further requirements.

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3.3.1 Strategic approach to achieving the objectives mentioned in the ToRs
(section 1.3.1 of the assessment grid)

The tenderer is required to describe and justify the approach it plans to adopt in order to achieve the milestones, objectives and results (see section 2) for which it is responsible.

3.3.2 Building partnerships with the relevant actors
(section 1.3.2 of the assessment grid)

The tenderer is required to develop and describe a strategy for developing the cooperation with the actors in the partner system who are relevant for the implementation of the services in the tender. The project partnerships already mentioned in section 1 must also be taken into account.

3.3.3 Approaches for leverage effects and measures for scaling-up
(section 1.3.3 of the assessment grid)

The tenderer is required to state whether there are promising approaches for leverage effects beyond the measures mentioned in section 2 (for example, through targeted measures in the field of 'knowledge management and retention, by developing an EnMS training module to be embedded in the regular curriculum of municipal training academies to achieve scaled-up and long-term impact) and to describe them. In doing so, the tenderer is required to present and explain measures that promote both horizontal and vertical scaling-up. In particular, the tenderer must submit proposals on how innovations that have been developed in the context of implementation can be disseminated beyond the sphere of influence of the project.

3.3.4 Consideration of environmental and social compatibility requirements
(section 1.3.4 of the assessment grid)

Gender equality

The tenderer is required to describe the main considerations on how to improve social compatibility with a focus on gender equality for the implementation of activities described in the WPs.

Environmental protection and climate action (climate change mitigation/adaptation)

– Not applicable –

Conflict and context sensitivity

– Not applicable –

Human rights

– Not applicable –

3.4 Project management

(section 1.4 of the assessment grid)

In this section, the tenderer presents the operational plan for implementing the services in the tender, describes the procedure for coordination with GIZ or the project and the project partners, and explains its monitoring procedure.

3.4.1 Operational plan

(section 1.4.1 of the assessment grid)

The tenderer is required to draw up and explain an operational plan for implementing the strategy described in section 3.3, including a plan for the assignment of all the experts included in the tender. The operational plan must include the assignment times (periods and expert days) and assignment locations of the individual experts, the milestones as presented in section 2 and, in particular, describe all the necessary work stages in detail and in chronological order. The tenderer can define further milestones beyond those prescribed in section 2 and map them out in the plan of operations.

3.4.2 Coordination with GIZ or the commissioning project

(section 1.4.2 of the assessment grid)

In the tender, the tenderer is required to describe the procedure for coordinating with the commissioning GIZ project.

Regular weekly coordination meetings will be held with the GIZ project team to review progress and ensure effective coordination.

3.4.3 Steering or coordination of measures with the relevant implementing partner

(section 1.4.3 of the assessment grid)

In the tender, the tenderer is required to name the implementing partners relevant for implementing the services and to describe and explain the procedure for steering or coordinating the measures with them.

3.4.4 Monitoring

(section 1.4.4 of the assessment grid)

In the tender, the tenderer is required to describe how it will regularly capture and document the status of completion of the tasks, the achievement of objectives, the results achieved and the risks in the area for which it is responsible in accordance with the specifications set out in section 2.

In the tender, the tenderer is required to describe how it can ensure that the requirements resulting from the monitoring system of the project or the partner are met (see section 2). In doing so, the tenderer is required to describe how the information that is relevant for monitoring is collected and in what form and at what intervals monitoring data are updated.

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3.5 Further requirements

(section 1.5 of the assessment grid)

– Not applicable –

4. Personnel

The tenderer is required to provide 'experts' for the positions referred to and described (scope of tasks and qualifications) in this section on the basis of corresponding CVs. **The requirements on the format and content of the CVs are described in section 6.**

The qualifications mentioned below correspond to the requirements for achieving the highest number of points in the technical assessment.

'One year of professional experience' is therefore defined as a cumulative 12 expert months with at least 18 expert days per month, provided no diverging definition is specified for individual qualifications.

Key Expert 1: Team Leader/ EnMS Expert with international experience (section 2.1 of the assessment grid)

This position is a key expert. A statement of availability for this expert must be attached to the tender as an annex.

Tasks of expert 1:

- Overall responsibility for delivery and quality of the WPs of the contractor, including all activities and deliverables under WP 1-5.
- Ensuring the coherence and complementarity of the contractor's services with other services delivered by the project at local and national level.
- Oversight of design, implementation, monitoring, and evaluation of capacity development activities for local partners as listed under WP 2 and the training programme under WP 5.
- Responsibility for taking cross-cutting themes into consideration (for example, gender equality).
- Staff management, in particular identifying the need for short-term assignments within the available budget, planning and managing the assignments and supporting experts.
- Ensuring that monitoring procedures are carried out.
- Regular reporting in accordance with deadlines.
- Responsibility for checking the use of funds and financial planning in consultation with the commission manager at GIZ.
- Supporting the commission manager in updating and / or adapting the project strategy, in evaluations and in preparing a follow-on phase.
- Maintaining contact and coordination with relevant energy and municipal-sector projects, including donor-funded initiatives to foster collaboration, knowledge sharing, and alignment of efforts.
- Operational supervision and day-to-day guidance in the implementation of activities across all WPs, ensuring effective coordination with all relevant experts.

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- Development and submission of recommendations for organisational development measures to mainstream EnMS.
- Responsible for the implementation of EnMS in 6 partner water supply and sanitation companies, including strategic guidance and supervision of the implementation of EnMS and its evaluation, as well as support to previous willing partner organisations to ensure the continued running of the EnMS cycle.
- Oversight and support in the development and implementation of EE recommendations, including translating techno-economic feasibilities of selected EE interventions into bankable proposals and business cases, and identifying suitable financing mechanisms.
- Design and support in the introduction of organisational EE incentive mechanisms, including the development of framework option recommendations.
- Design, organisation, and delivery of the National Conference on Municipal EnM, with the support of other experts and the project team.
- Support to Key Expert 3 in the development of knowledge materials and delivery of relevant capacity development sessions, especially for Tier 1, under WP 2.
- Identification of relevant municipal stakeholders for knowledge exchange visits, and the design and execution of these visits in collaboration with Key Expert 3.
- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of expert 1: (Team Leader)

Education/training (section 2.1.1 of the assessment grid):	University degree (Master's or equivalent) in electrical engineering, mechanical engineering, energy engineering, renewable energies, EE, EnM, economics, or a related technical discipline
Language (section 2.1.2 of the assessment grid):	Knowledge of English, C1-level in the Common European Framework of Reference for Languages
General professional experience (section 2.1.3 of the assessment grid):	10 years of professional experience in the EnM or EE sector
Specific professional experience (section 2.1.4 of the assessment grid):	5 years of professional experience in organisational EnMS implementation
Leadership/management experience (section 2.1.5 of the assessment grid):	5 years of management and leadership experience as a team leader or project manager with disciplinary responsibility for 10 people or more
International professional experience outside the country/region of assignment (section 2.1.6 of the assessment grid):	3 years of professional experience in Asia, Latin America, Africa or any other developing country other than Pakistan

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Professional experience in the country/ region of assignment (2.1.7 of the assessment grid):	2 years of professional experience in Asia
Experience in the field of development cooperation (section 2.1.8 of the assessment grid):	2 years of experience in development cooperation projects
Other (section 2.1.9 of the assessment grid):	- Not applicable -

Key Expert 2: Municipal EE Expert with international experience (section 2.2 of the assessment grid)

This position is a key expert. A statement of availability for this expert must be attached to the tender as an annex.

Tasks of expert 2

- Serve as the lead technical expert for municipal EE under the assignment, with particular expertise in motor and pumping system efficiency and water and sanitation infrastructure, providing technical leadership, oversight, and quality assurance for the work of Key Experts 7–10.
- Provide technical guidance to Key Experts 7–10 on energy reviews, energy baselines, SEUs, EnPIs, and SECs, and ensure the application of sound methodologies and technical consistency across partner municipal organisations.
- Support the implementation of EnMS where specialised EE expertise is required, including the development of municipal energy baselines, identification of EE opportunities, techno-economic assessments, and the preparation of EE Action Plans.
- Lead the identification, assessment, prioritisation, and advisory support for EE measures and support municipal Energy Teams in their implementation.
- Provide technical leadership for assessments of pumping stations and water and sanitation infrastructure, including system optimisation, technology selection, performance analysis, and identification of energy-saving opportunities.
- Oversee the development and quality assurance of techno-economic feasibility assessments for selected EE interventions and support the preparation of bankable proposals and business cases in collaboration with Experts 7–10 and the Team Leader.
- Support Expert 3 in the development of technical knowledge products, training materials, and capacity development activities under WP 2.
- Deliver technical training sessions and practical learning activities under WP 2, including on-site assessments, demonstrations, and training on the application of Excel-based EnM and EE tools.
- Contribute technical inputs to the National Conference under WP 3 and support the development of policy recommendations and organisational EE incentive mechanisms under WP 4.

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- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of expert 2.

Education/training (section 2.2.1 of the assessment grid):	University degree (Master's or equivalent) in mechanical engineering, electrical engineering, or any engineering or related technical discipline
Language (section 2.2.2 of the assessment grid):	Knowledge of English, C1-level in the Common European Framework of Reference for Languages
General professional experience (section 2.2.3 of the assessment grid):	10 years of professional experience in EE projects
Specific professional experience (section 2.2.4 of the assessment grid):	5 years of experience in EnMS
Leadership/management experience (section 2.2.5 of the assessment grid):	3 years of management and leadership experience as a team leader or project manager
International professional experience outside the country/region of assignment (section 2.2.6 of the assessment grid):	3 years of professional experience in Asia, Latin America, Africa or any other developing country other than Pakistan
Professional experience in the country/ region of assignment (2.2.7 of the assessment grid):	2 years of experience in Asia
Experience in the field of development cooperation (section 2.2.8 of the assessment grid):	2 years of experience in development cooperation projects
Other (section 2.2.9 of the assessment grid):	- Not applicable -

Key Expert 3: EnM and EE Capacity Development Expert with international experience (section 2.3 of the assessment grid)

This position is a key expert. A statement of availability for this expert must be attached to the tender as an annex.

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Tasks of expert 3

- Lead the design, quality assurance, and delivery of all capacity development activities under the service contract, in close collaboration with the Team Leader and other experts, as required.
- Lead the development and implementation of the CDS and oversee the coordination of capacity development measures across all relevant work packages, ensuring coherence, technical quality, and alignment with project objectives.
- Lead the design and development of training curricula, training materials, knowledge products, and learning methodologies under the assignment, including training materials under WP 2, knowledge products for the National Conference under WP 3, the technical training curriculum under WP 5, and other materials as required.
- Ensure effective knowledge transfer on EnMS, EE, associated tools, and international good practices through the application of appropriate adult-learning and capacity development approaches.
- Oversee and ensure the integration and institutionalisation of the EnMS training module within the regular curricula of Al Jazari Academy and other relevant WASA training institutions, including the handover of training materials and supporting documentation.
- Design and deliver ToT activities for trainers of WASA training institutions to support the long-term sustainability and replication of EnMS training programmes.
- Provide technical guidance and quality assurance to Expert 5 and other experts contributing to capacity development activities under the assignment.
- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of expert 3.

Education/training (section 2.3.1 of the assessment grid):	University degree (Master’s or equivalent) in mechanical engineering, electrical engineering, energy engineering, Energy Management, or a related technical discipline
Language (section 2.3.2 of the assessment grid):	Knowledge of English, C1-level in the Common European Framework of Reference for Languages
General professional experience (section 2.3.3 of the assessment grid):	10 years of professional experience in energy
Specific professional experience (section 2.3.4 of the assessment grid):	5 years of experience designing EnMS or EE knowledge products, and delivering capacity-development sessions on the topic
Leadership/management experience (section 2.3.5 of the assessment grid):	2 years of management and leadership experience
International professional experience outside the country/region of assignment	3 years of professional experience in Asia, Latin America, Africa or any other developing country other than Pakistan

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(section 2.3.6 of the assessment grid):	
Professional experience in the country/ region of assignment (2.3.7 of the assessment grid):	2 years of professional experience in Asia
Experience in the field of development cooperation (section 2.3.8 of the assessment grid):	2 years of experience in development cooperation projects
Other (section 2.3.9 of the assessment grid):	- Not applicable -

Key Expert 4: Legal Expert with national experience (section 2.4 of the assessment grid)

This position is a key expert. A statement of availability for this expert must be attached to the tender as an annex.

Tasks of expert 4

- Provide legal support for EnM-related checks on any policy, regulatory framework, or SOP recommendations developed under the project.
- Review compliance of such recommendations with applicable laws, regulations, and standards.
- Collaborate with the Team Leader on any legal review or related activities as required.
- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of expert 4

Education/training (section 2.4.1 of the assessment grid):	University degree (Master's or equivalent) in law, or a related technical discipline
Language (section 2.4.2 of the assessment grid):	Knowledge of English, C1-level in the Common European Framework of Reference for Languages (4 out of 10 points), and C1-level Proficiency/fluent in Urdu (6 out of 10 points)
General professional experience (section 2.4.3 of the assessment grid):	7 years of professional experience as a lawyer providing legal advisory / policy support in national and regional contexts
Specific professional experience (section 2.4.4 of the assessment grid):	3 years of experience in energy policy / frameworks

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Leadership/management experience (section 2.4.5 of the assessment grid):	- Not applicable -
International professional experience outside the country/region of assignment (section 2.4.6 of the assessment grid):	- Not applicable -
Professional experience in the country/ region of assignment (2.4.7 of the assessment grid):	- Not applicable -
Experience in the field of development cooperation (section 2.4.8 of the assessment grid):	- Not applicable -
Other (section 2.4.9 of the assessment grid):	- Not applicable -

Key Expert 5: EnMS Trainer with national experience (section 2.5 of the assessment grid)

This position is a key expert. A statement of availability for this expert must be attached to the tender as an annex.

Tasks of expert 5

- Support KE 3 in the planning, coordination, delivery, and documentation of all capacity development activities under WP 2.
- Contribute to the development and refinement of training curricula, training modules, presentations, case studies, practical exercises, and other learning materials required under WP 2 and WP 5.
- Deliver and facilitate technical training sessions, workshops, ToT activities, knowledge exchange events, and other capacity development activities under WP 2.
- Support engagement with training institutions and academies, including the integration of EnMS-related training modules into existing training curricula and programmes.
- Support the development, delivery, and quality assurance of the women engineering traineeship programme under WP 5 in collaboration with KE 3 and other relevant experts.
- Liaise and coordinate with the national intermediary organisation and participating municipal organisations to support the implementation of the traineeship programme, including logistical and administrative arrangements.
- Coordinate interactions between trainees, Experts 7–10, municipal Energy Teams, and relevant municipal staff to facilitate practical learning and hands-on experience throughout the trainee placements.
- Support the monitoring, evaluation, and documentation of capacity development activities, including training records, participant assessments, surveys, event reports, and other deliverables required under WP 2 and WP 5.

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- Prepare and submit reports, supporting documentation, and other outputs assigned under WP 2 and WP 5.
- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of expert 5

Education/training (section 2.5.1 of the assessment grid):	University degree (Master's or equivalent) in mechanical engineering, electrical engineering, or any other engineering or a related technical discipline
Language (section 2.5.2 of the assessment grid):	Knowledge of English, C1-level in the Common European Framework of Reference for Languages (4 out of 10 points) and C1-level Proficiency/fluent in Urdu (6 out of 10 points)
General professional experience (section 2.5.3 of the assessment grid):	7 years of professional experience in energy
Specific professional experience (section 2.5.4 of the assessment grid):	5 years of in delivering capacity development sessions
Leadership/management experience (section 2.5.5 of the assessment grid):	- Not applicable -
International professional experience outside the country/region of assignment (section 2.5.6 of the assessment grid):	- Not applicable -
Professional experience in the country/ region of assignment (2.5.7 of the assessment grid):	- Not applicable -
Experience in the field of development cooperation (section 2.5.8 of the assessment grid):	- Not applicable -
Other (section 2.5.9 of the assessment grid):	- Not applicable -

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Key Expert 6: Communication Expert with national experience (section 2.6 of the assessment grid)

This position is a key expert. A statement of availability for this expert must be attached to the tender as an annex.

Tasks of expert 6

- Responsible for the design and creation of comms products visibility, materials, including standees, backdrops for events, and for designing all communication products in line with GIZ requirements.
- Design / format of reports and other knowledge materials.
- Responsible for photography and videography during events, trainings, and site activities, ensuring proper documentation and visibility of project outcomes.
- Any press releases, and support in writing social media posts.
- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of expert 6

Education/training (section 2.6.1 of the assessment grid):	University degree (Master's or equivalent) in mass communication, or a related technical discipline
Language (section 2.6.2 of the assessment grid):	Knowledge of English, C1-level in the Common European Framework of Reference for Languages (4 out of 10 points) and C1-level Proficiency/fluent in Urdu (6 out of 10 points)
General professional experience (section 2.6.3 of the assessment grid):	7 years of professional experience in communication
Specific professional experience (section 2.6.4 of the assessment grid):	- Not applicable -
Leadership/management experience (section 2.6.5 of the assessment grid):	- Not applicable -
International professional experience outside the country/region of assignment (section 2.6.6 of the assessment grid):	- Not applicable -
Professional experience in the country/ region of assignment (2.6.7 of the assessment grid):	- Not applicable -

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Experience in the field of development cooperation (section 2.6.8 of the assessment grid):	- Not applicable -
Other (section 2.6.9 of the assessment grid):	- Not applicable -

Expert 7-10: Pool 1 EnMS Implementation Experts with 4 experts with national experience (section 2.7 of the assessment grid)

A CV for each expert must be added to the tender.

The actual number of experts assigned from the pool may differ from the number of experts required in section 4 of the Terms of Reference. For experts not named in the tender, GIZ must confirm before the assignment that their qualifications are equivalent to those of the short-term experts proposed in the tender.

Tasks of the expert pool

- Support KE 1, KE 2, and KE 3 in the implementation of activities and delivery of outputs across all relevant WPs.
- Lead the day-to-day implementation of EnMS within partner municipal organisations under the guidance of KE 1 and KE 2, including support for the onboarding of additional municipalities, where applicable, and ensuring completion of the EnMS implementation requirements and key components defined under WP 1.
- Provide hands-on technical support to municipal Energy Teams and relevant staff throughout the EnMS implementation process, facilitating knowledge transfer, institutional capacity development, and the adoption of good practices.
- Conduct technical assessments, data collection, energy reviews, baseline development, SEU identification, EnPI development, and other activities required under WP 1.
- Support the development and implementation of EE recommendations, organisational EE incentive mechanisms, and bankable EE proposals and business cases in collaboration with KE 1 and KE 2.
- Support the monitoring, review, and evaluation of EnMS implementation and energy performance improvements in partner municipal organisations.
- Support KE 2 and KE 3 in the preparation and delivery of capacity development activities under WP 2, including practical exercises, demonstrations, field-based learning activities, and technical training sessions.
- Support the organisation and delivery of the National Conference on Municipal EnM and other stakeholder engagement activities, as required.
- Provide technical guidance and mentoring to trainees during practical assignments, field exercises, and workplace-based learning activities under WP 5 in coordination with Expert 5.
- Contribute to the preparation of reports, technical documentation, datasets, analyses, and other deliverables required under the assignment.

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- Perform any other related tasks and provide additional technical inputs reasonably required to support the successful implementation of the assignment and the timely delivery of the outputs, outcomes, and deliverables specified under this ToR.

Qualifications of the expert pool

Please note: The 4 expert CVs to be submitted will be assessed in accordance with the award criteria set out below.

The respective score is then divided by 4 and rounded up commercially to the nearest whole number. Example: CV 1 receives 10 points for criterion 2.7.1, CV 2 receives 8 points, CV 3 receives 10 points and CV 4 receives also 10 points = 38 points in total divided by 4 = 9.5 points, which is rounded up to 10 points. A score of 10 points is therefore used for this criterion.

If only one CV is submitted, the score is also divided by 4.

If more than 4 CVs are submitted, the 4 CVs are evaluated in alphabetical order by surname.

Education/training (section 2.7.1 of the assessment grid):	All experts with a university degree (e.g. 'master's or equivalent) in engineering, energy management, or a related technical discipline
Language (section 2.7.2 of the assessment grid):	All experts with knowledge of C1-level in the Common European Framework of Reference for Languages (4 out of 10 points) and C1-level Proficiency/fluent in Urdu (6 out of 10 points)
General professional experience (section 2.7.3 of the assessment grid):	All experts with 10 years of professional experience in the energy sector
Specific professional experience (section 2.7.4 of the assessment grid):	All experts with 3 years of professional experience in EnMS
Leadership/management experience (section 2.7.5 of the assessment grid):	- Not applicable -
International professional experience outside the country/region of assignment (section 2.7.6 of the assessment grid):	- Not applicable -
Professional experience in the country/ region of assignment (2.7.7 of the assessment grid):	- Not applicable -
Experience in the field of development cooperation (section 2.7.8 of the assessment grid):	- Not applicable -

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Other (section 2.7.9 of the assessment grid):	- Not applicable -
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UN DESA regions are defined as East Africa, Central Africa, North Africa, Southern Africa, West Africa, South America, the Caribbean, Central America, North America, Central Asia, East Asia, South Asia, Southeast Asia, West Asia/Middle East, Eastern Europe, Northern Europe, Southern Europe, Western Europe, Australia, Melanesia, Micronesia and Polynesia; refer to [USND methodology](#) for country assignment.

The tenderer must assign all the proposed experts to the required qualifications and clearly present them in a separate table preceding the CVs. The summary presentation must mention only qualifications that are actually indicated in the CVs. Professional experience must be evidenced by meaningful references in the CVs. It is advisable to make explicit reference to each example of professional experience.

Soft skills of team members

In addition to their specialist qualifications, all team members are also expected to have the following qualifications:

- Team skills
- Initiative
- Communication skills
- Sociocultural and intercultural skills
- Efficient partner- and client-oriented working methods
- Interdisciplinary thinking

Soft skills are not evaluated.

Staff presentation

(section 2.11 of the assessment grid)

– Not applicable –

5. Costing requirements

In your tender, please do not deviate from the specification of inputs required in these ToRs (the number of experts and expert days, the budget specified in the price schedule). This is part of the competitive tender and is used to ensure that the tenders can be compared objectively. Please note: only services that were commissioned by GIZ and rendered by the contractor will be remunerated. We would also like to point out that it may not be necessary to make use of the total number of proposed expert days.

5.1 Assignment of experts

The number of expert days corresponds to full working days.

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For any travel involving flights, prior clarification and approval by GIZ is required; redistribution of flight allocations among experts is permitted.

Expert	Expert days in the country of residence / remote	Availability of expert in the country of assignment * in expert days	Expert days in total	Consecutive stay > 3 months (see General Terms and Conditions, section 3.6.2)	Number of international return flights	Number of national return flights
Key Expert 1/TL: Team Leader/ EnMS Expert with international experience	40	120	160	No	6	1 national flights
Key Expert 2: Municipal EE Expert with international experience	50	100	150	No	6	1 national flights
Key Expert 3: EnM and EE Capacity Development Expert with international experience	50	100	150	No	6	1 national flights
Key Expert 4: Legal Expert with national experience	20 (remote)	/	20	/	/	/
Key Expert 5: EnMS Trainer with national experience	80 (remote)	180 (on-site days; accommodation and per diem allowance are given for these 180 days)	260	/	/	2 national flights
Key Expert 6: Communication Expert with national experience	60 (remote)	40 (on-site days)	100	/	/	/
Expert Pool 1: Pool 1 EnMS Implementation Experts with 4 experts with national experience		960 (out of which accommodation and per diem allowance are given	960	/	/	/

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		for 288 days)				
Backstopping	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

5.2 National administrative staff

1 admin assistant for approximately 15 months i.e., for the duration of the entire implementation period.

5.3 Travel expenses

5.3.1 Travel – sustainability considerations

GIZ would like to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, for example by selecting the lowest-emission booking class (economy) or using means of transport, airlines and flight routes that are more CO₂-efficient. For short distances, travel by train (second class) or e-mobility are the preferred options.

CO₂ emissions caused by air travel must be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance](#) has published a [list of standards](#) (only in German available). GIZ recommends using the standards specified there.

5.3.2 Travel expense requirements

The travel expenses must be costed as follows by the contractor:

Travel expenses item	Quantity or budget
Total number of international return flights (economy class)	18, reimbursed against evidence
Total number of regional / national return flights (economy class)	5, reimbursed against evidence
CO ₂ offsets for flights	EUR 2,300 An unalterable budget for CO ₂

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	offsets for settlement against evidence is specified
Transport costs (rail travel, car travel, public transport)	EUR 41,655 budget, reimbursement will be against evidence
Per-diem allowances	828
Accommodation allowances	828
Other travel expenses (e.g. visa, airport transfers, project-related travel expenses outside the place of business etc.)	EUR 3,000, budget, reimbursement will be against evidence

Per-diem allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (download at <https://www.bundesfinanzministerium.de>).

In addition, for the following items, reasonable costs can be settled against evidence up to the proposed amount.

- Flight costs
- Transport costs
- Other travel expenses

For Pakistan, tenderers may offer accommodation allowances up to EUR 199. This is the maximum amount permissible under tax law as per the German Ministry of Finance (BMF) circular on travel expense reimbursement (as valid per January 2026).

- If the contractor offers accommodation allowances at up to 75% (EUR 149,25) of the maximum amounts permissible under tax law as per the BMF circular on travel expense reimbursement, the expenses will be reimbursed **on a lump-sum basis** in the contractually agreed amount.
- If the contractor offers accommodation allowances at between 75% and 100% (EUR 149,26 – EUR 199) of the maximum amounts permissible under tax law as per the BMF circular on travel expense reimbursement, the corresponding **evidenced expenses** will be reimbursed up to the contractually agreed amount.

All travel activities must be agreed in advance with the project manager. Travel expenses must be kept as low as possible.

5.4 Materials and equipment

Budget for materials and equipment: EUR 45,000

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The fixed, unalterable budget above is earmarked for the procurement of the materials and equipment described in the table below (payment against evidence).

Technical equipment / measuring instruments: A total of 6 similar sets of technical equipment / measuring instruments, including instruments to measure electrical parameters, flow and pressure in water systems, electrical diagnostics, and groundwater levels will be procured to support EnMS implementation. The equipment set will be used within partner municipal organisations to support a variety of technical and analytical activities, including, but not limited to, the development of municipal energy baselines, technical assessment of pumping stations, energy performance evaluations, and other activities aimed at improving EnM and EE in municipal operations. The final equipment specifications will be identified and agreed upon in consultation with GIZ. Procurement will be undertaken following approval by GIZ, with reimbursement settled against evidence.

Made available free of charge by the project executing agency (local project partner) for the duration of the contract.	Made available free of charge by GIZ for the duration of the contract.	Materials and equipment to be procured by the contractor in the financial bid.
		Technical equipment / measuring instruments (6 similar sets with a total budget of €45,000), to be procured for EnMS implementation in partner municipal organisations, in line with approved specifications by GIZ. Equipment / instruments will be reimbursed against evidence.

5.5 Operating costs in the country of assignment

No office space or vehicles will be provided by GIZ. Armoured vehicles may be provided only in fragile or conflict settings, subject to prior discussion and confirmation by the GIZ project head.

5.6 Workshops, education and training

The contractor runs the workshops / knowledge exchange visits / training courses mentioned under the WPs.

Workshop budget: EUR 120,000

The fixed, unalterable budget above is earmarked for workshops and entered in the price schedule. The budget includes the following costs relating to the planning and running of workshops:

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- Room hire
- Technical systems
- Moderation services by experts
- Translation/interpreting services
- Catering
- Workshop materials
- Travel expenses for partner experts (subsistence, accommodation, travel costs)
- Other costs relating to the workshops as requested by project team

The budget does not include the fees and travel expenses for the contractor's experts incurred in connection with the planning and running of the workshops. These are covered by the corresponding number of expert days and travel expenses (see sections 5.1 and 5.3 above).

5.7 Local contributions

– Not applicable –

5.8 Other costs

– Not applicable –

5.9 Flexible remuneration item

Budget for flexible remuneration: EUR 120,000

The fixed, unalterable budget above is earmarked in the price schedule for flexible remuneration. Flexible remuneration is intended to facilitate the flexible management of the contract by the commission manager at GIZ. The contractor can make use of the funds in accordance with section 3.6.5.7 of the General Terms and Conditions.

6. Requirements on the format of the tender

The structure of the tender must correspond with the structure of the ToRs. It must be legible (for example Arial, font size 11 or larger) and clearly formulated. The technical tender must be written in English.

The technical-methodological concept of the tender (section 3 of the ToRs) must not exceed 15 pages (not including the cover page, list of abbreviations, table of contents, brief introduction and CV for the backstopper). Additional annexes not requested will not be assessed. External content (e. g. links to websites) will also be disregarded.

The CVs of the staff proposed in accordance with section 4 of the ToRs must be in the EU format and not more than 4 pages in length. The CVs can also be submitted in English.

The CVs must clearly and unequivocally show what position the proposed person held, which tasks they performed and how long they worked during which period in the specified

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references. **The references contained in the CVs must therefore include the following information:**

- Name of the company / organisation / reference project in which the expert worked
- Position held and task(s) performed by the expert in the company / organisation / reference project
- Work outcomes or products produced by the expert, or expert's contribution to the completion of these outcomes and projects (if relevant)
- Duration of the expert's assignment in the company/organisation/reference project per calendar year in full-time expert days, weeks or months (for example: 2019: 2 months, 2020: 10 months, 2021: 1 month)
- Leadership experience / management: clear information on the reference projects or fixed positions within the company/organisation in which the requirements specified in section 4 were fulfilled (for example, period, number of persons for whom the expert had disciplinary responsibility, project budget) (if relevant)
- International professional experience / professional experience in the country of assignment: clear information on the reference projects or fixed positions in the company/organisation in which the requirements specified in section 4 were fulfilled (for example, actual duration of assignment on the ground in full-time expert days, weeks or months) (if relevant)

In order to facilitate the assessment, we request that you number the references sequentially and provide only references that are clearly related to the object of this tender.

7. Options or follow-on contract

7.1 Option to expand the service content/extend the contract term pursuant to section 132 (2) no. 1 German Act against Restraints of Competition (GWB)

GIZ can exercise the following options if it wishes to expand the tendered services. This is described in detail below.

Nature and scope:

While retaining the overall character of the contract, there is a possibility of GIZ continuing to obtain the services specified in section 2 of these Terms of Reference and/or of expanding the contract to include further services of the same kind. The overall contract term must not exceed three times the original contract term, and the overall contract value must not exceed twice the original contract value.

Precondition:

GIZ's commissioning party extends and / or provides additional funding for the current project or commissions a follow-on project and / or an agreement is concluded to provide cofinancing for the measure. Approval must be given by the commission manager and the Procurement and Contracting Division.

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7.2 Option to procure materials and equipment pursuant to section 132 (2) no. 1 German Act against Restraints of Competition (GWB)

Nature and scope:

GIZ may increase the total budget of the contract for the procurement of materials and equipment. After the exact needs and technical specifications for the equipment have been defined with GIZ, it is possible to add an additional budget for the procurement of the following goods: similar sets of technical equipment / measuring instruments, including instruments to measure electrical parameters, flow and pressure in water systems, electrical diagnostics, and groundwater levels (compare to chapter 5.4). The materials and equipment are needed in order to fully equip municipal organisations.

Maximum budget for the procurement of these materials and equipment: EUR 15,000.

Preconditions:

Additional equipment and tools may be procured where deemed necessary to support the implementation of project activities and the achievement of project objectives. Approval must be given by the commission manager and the Procurement and Contracting Division.

7.3 Follow-on contract pursuant to Section 14 (4) no. 9 German Ordinance on the Award of Public Contracts (VgV)

Pursuant to Section 14 (4) no. 9 VgV, GIZ reserves the right to award a follow-on contract to the contractor in order to procure similar services.

Scope of possible services:

The term of the follow-on contract must not exceed twice that of the original contract, and the value of the follow-on contract must not exceed twice that of the original contract.

Condition: The above option is subject to GIZ receiving a commission from the commissioning party or the conclusion of an agreement for cofinancing of the measure. Any follow-on contract must be awarded within three years of the award date of the original contract.

A follow-on contract under 7.3 can be considered only as an alternative to the option in 7.1.

8. Annexes

– Not applicable –