



## ENGINEERS REGISTRATION BOARD

### ENGINEERS SCALE OF FEES

#### 1 Introduction

The engineering profession has put in place a schedule of fees for engineering services offered to the industry. The schedule of fees consists of threshold rates to be used as a guiding basis for practitioners when pricing engineering services offered to the industry.

The main objective of establishing a scale of fees is to provide practitioners with a framework to fairly and reasonably offer their services to the industry, thus enable quality engineering services to be offered with satisfaction.

The development of the engineers schedule of fees will bring the engineering profession at par with other professions in the industry (e.g. architects, surveyors e.t.c.), thus enabling harmonious provision of services of multi-disciplinary nature in the industry.

This schedule of fees has been developed through a joint collaboration of Engineers Registration Board [ERB], Uganda Institution Of Professional Engineers [UIPE] and Uganda Association Of Consulting Engineers [UACE]

#### 2 Critical Issues

The engineers schedule of fees is intended to, among others, address the following critical issues in offering services in the industry:

- (i) Under-quoting for engineering services in the competition for jobs resulting in non-optimal performance.
- (ii) Underpayment for the professionals doing the work leading to poor moral and low capacity building.
- (iii) Unpredictable quotations for the clients, which can lead to corruption.

The establishment of the Engineers Scale of Fees will among others fulfil the following:

- (i) **Law** –The scale of fees therefore will be gazetted and hence become enforceable.

- (ii) **Harmonising with related professionals** – The scale of fees will enable harmony between the related professionals in the construction industry - architects, quantity surveyors, surveyors, and physical planners.

- (iii) **Intra-Harmony within the engineering profession** –the scale of fees will ensure a harmonised fielding between the professionals in the various engineering disciplines – civil, structural, electrical, mechanical, project managers, etc.

- (iv) **General conditions of contract [GCC] and special conditions of contract [SCC]** – the scale of fees will provide a firm basis to support submissions on remuneration and payments sections in the GCC & SCC of the PPDA standard documents.

- (v) **Procurement method** – It was agreed that the procurement of engineering consulting services will be based only on Quality Based Selection [QBS] only as the costs will be addressed by this scale of fees.

- (vi) **Reverse the hunt for green pastures** - reverse the trend for brain drain.

- (vii) **Corruption** – minimize corruption – make the engineers the most honest people – justice of peace.

- (viii) **Capacity building** – encourage engineers to stay in the profession and attract the young ones to love engineering – high school, secondary school and even primary

- (ix) **Engage elders and pull some from retirement** –to fill in the shortage

- (x) **Middle income by 2016** – ensure that engineers upgrade to the middle income category by 2016 in line with government program of making Uganda a middle income country.

**Scope of application** – This scale of fees shall be a basis for offering engineering services and suitably applies to assignment-related deployment of engineering professionals. It may not be readily applicable in circumstances of ordinary employment of professional staff.



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**3 FEES STRUCTURE FOR ENGINEERING SERVICES**

Table 1a: **Hourly Rates** for Engineering Services

**3.1 Introduction**

This schedule sets minimum fees to be paid for engineering services in Uganda. This schedule provides for four different methods of remuneration namely:

- I. Percentage fee based on the cost of works.
- II. Time based fees.
- III. Reimbursement Fees.
- IV. Reimbursable expenses.

| No | Category of Engineer | Level 1<br>0-4<br>Years | Level 2<br>4-8<br>Years | Level 3<br>8+<br>Years |
|----|----------------------|-------------------------|-------------------------|------------------------|
| 1  | Technical Assistant  | 15                      | 17.5                    | 20                     |
| 2  | Technician           | 20                      | 25                      | 30                     |
| 3  | Technologist         | 30                      | 37.5                    | 45                     |
| 4  | Engineer             | 45                      | 67.5                    | 90                     |
| 5  | Specialist/Principal | 0                       | 90                      | 160                    |

**3.2 SCALE OF FEES – TIME BASED RATES**

Schedule 1 indicates time based billing rates that shall apply to the five (5) levels of engineering for assignments. These are threshold rates. It is expected that the Engineering staff shall be paid at least 50% of Schedule 2 rates. Time based rates shall be based on the cost categories shown in Table 1.

Table 1b: **Daily Rates** for Engineering Services

| No | Category of Engineer | Level 1<br>0-4<br>Years | Level 2<br>4-8<br>Years | Level 3<br>8+<br>Years |
|----|----------------------|-------------------------|-------------------------|------------------------|
| 1  | Technical Assistant  | 72                      | 84                      | 96                     |
| 2  | Technician           | 96                      | 120                     | 144                    |
| 3  | Technologist         | 144                     | 180                     | 216                    |
| 4  | Engineer             | 216                     | 324                     | 432                    |
| 5  | Specialist/Principal | 0                       | 432                     | 768                    |

Table 1c: **Monthly Rates** for Engineering Services

| No | Category of Engineer | Level 1<br>0-4<br>Years | Level 2<br>4-8<br>Years | Level 3<br>8+<br>Years |
|----|----------------------|-------------------------|-------------------------|------------------------|
| 1  | Technical Assistant  | 1,320                   | 1,540                   | 1,760                  |
| 2  | Technician           | 1,760                   | 2,200                   | 2,640                  |
| 3  | Technologist         | 2,640                   | 3,300                   | 3,960                  |
| 4  | Engineer             | 3,960                   | 7,128                   | 10,296                 |
| 5  | Specialist/Principal | 0                       | 10,296                  | 15,488                 |



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### 3.3 SCALE OF FEES – AS PERCENTAGE OF PROJECT COST

This schedule outlines a scale of fees [billing rates] as a percentage of project cost. Project cost shall be based on the cost categories shown in Table 2.

The payment for repetitive work shall be as follows:

- (a) There will be no reduction for repetition of floors
- (b) Where there are a number of identical blocks/units, at the same site or different sites, full fees will be charged on the first block and 50% of the full fee for each subsequent blocks/units for designs fees only and 100% for supervision fees.

## 4 LEVELS OF ENGINEERING SERVICES

This scale of fees provides for five levels for remuneration of engineering services.

### 4.1 Level 1: Technical Assistant

These are persons with craftsman certificate (I or II) in engineering trades from a recognized technical institution in Uganda. Three scales will be applicable in this category:

- 1.1 Craftsman certificate I or II with 0-4 years of experience
- 1.2 Craftsman certificate I or II with 4-8 years of experience
- 1.3 Craftsman certificate I or II with over 8 years of experience

### 4.2 Level 2: Technician

This is a person with an ordinary diploma in engineering from a recognized technical institution in Uganda and Technician Member of Uganda Institution of Professional Engineers. Three scales will be applicable in this category to cover 0-4 years, 4-8 years and over 8years.

### 4.3 Level 3: Technologist

This is a person with a higher diploma in engineering from a recognized technical institution in Uganda and Technologist Member of Uganda Institution of Professional Engineers. Three scales will be applicable in this category to cover 0-4 years, 4-8 years and over 8years.

### 4.4 Level 4: Engineer

This is a person with a Bachelor's degree in engineering from a recognized university/college. Three scales will be applicable in this category to cover 0-4 years, 4-8 years and over 8years.

### 4.5 Level 5: Specialists and Principals

This is a person with a Bachelor's degree in engineering from a recognized university/college with unique experience and business responsibilities. Two scales will be applicable in this category to cover 4-8 years and over 8years.

### 4.6 Extent of services

The scale of fees is based upon normal services which are defined in the condition of engagement. The fees exclude allowances for any additional services that may arise during the contract for which an extra fee may be charged.

### 4.7 Guide to Engineering Responsibility Levels

The engineering responsibility levels shall conform to the description in Table 3. Engineering responsibility levels are stated according to the ability of the engineer to make engineering decisions and leadership roles they can assume on projects and situations requiring decision-making on part of the engineer.

## 5. SCOPE OF SERVICES

Schedule 4 describes the scope of services the Engineer is likely to be involved in at various stages of project development for which the services may be sought from the Client including deliverables that



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shall be submitted as proof of completion. It includes planning, studies, investigations and assessments, inception, preliminary design, detail design, tender documentation and procurement, contract administration and inspection, project completion and handover, engineering management services and other services.

### 5.1 Planning, Studies, Investigations and Assessments

The works involved in this stage include preparation of reports related to preliminary proposals, feasibility studies, preparation of cost and time for consideration by the Client, including any of the following;

- 1) Consultation with the Client or the Client's representative.
- 2) Inspection of the site of the project.
- 3) Preliminary investigation, route location, planning and a level design appropriate to allow project decisions to be made, where any of these are required to determine the level of feasibility.
- 4) Consultation with authorities having rights or powers of sanction as well as consultation with the public and stakeholder groups.
- 5) Advice to the Client as to regulatory and statutory requirements, including environmental management and the need for surveys, analyses, tests on site and other investigations, as well as approvals, where such are required for the completion of the report and arranging for these to be carried out at the Client's expense.
- 6) Searching for, obtaining, investigation and collation of available data, drawings and plans relating to the works.
- 7) Investigation of financial and economic implication relating to the proposals or feasibility studies.
- 8) Clause (7) does not apply in respect of civil and structural services pertaining to building projects, except as far as the interpretation of cost figures for civil and structural works are concerned.

**Deliverables:** collation of information, reports on technical and financial feasibility and related

implications, list of consents and approvals, and schedule of required surveys, tests, analyses and other investigations.

### 5.2 Inception

This involves establishment of the client requirements and preferences, assessment of user needs and options, appointment of the necessary consultants, establishment of the project brief including project objectives, priorities, constraints, assumptions, aspirations and strategies. It encompasses the following activities;

- 1) Assistance in developing a clear project brief.
- 2) Attending project initiation meetings.
- 3) Advising on procurement policy for the project.
- 4) Advising on the rights, constraints, consents and approvals.
- 5) Defining the scope of services and works required.
- 6) Concluding the terms of the agreement with the client.
- 7) Inspecting the site and advising on the necessary surveys, analyses, tests and site other investigations where such information will be required for availability and location of infrastructure and services.
- 8) Determining the availability of data, drawings and plans relating to the project.
- 9) Advising on the criteria that could influence the project life cycle cost significantly.
- 10) Providing necessary information within the agreed scope of the project to other consultants involved.

**Deliverables:** agreed scope of services and scope of work, signed agreement, report on project, site and functional requirements, schedule of required surveys, tests, analyses, site and other investigations, and schedule of consents and approvals.

### 5.3 Preliminary Design

This stage involves preparation and finalizing the project concept according to the brief, including project scope, scale, character, form and function, preliminary program and viability of the project. It includes the following activities;



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- 1) Agreeing on documentation program with principal consultant and other consultants involved.
  - 2) Attending design and consultants meetings
  - 3) Establishing the concept design criteria.
  - 4) Preparing initial concept design and related documentation.
  - 5) Advising the client regarding further surveys, analyses, tests and investigations which may be required.
  - 6) Establishing regulatory authorities' requirements and incorporate into the design.
  - 7) Refining and assessing the concept design to ensure conformity with all regulatory requirements and consents.
  - 8) Establishing access, utilities, services and connections required for the design.
  - 9) Coordinating design interfaces with other design consultants involved.
  - 10) Preparing process designs, preliminary designs and related documentation for approval by authorities and client and suitable for costing.
  - 11) Providing project cost and life cycle cost as required.
  - 12) Liaising, cooperating and providing the necessary information to the client, principal consult and other consultants involved.
- 4) Incorporating other consultant's designs and requirements into the design.
  - 5) Preparing design development drawings including draft technical details and specifications.
  - 6) Reviewing and evaluating design and outline specifications and exercising cost control.
  - 7) Preparing detailed estimates of construction cost.
  - 8) Liaising, co-operating and providing necessary information to the principal consultant and other consultants involved.
  - 9) Submitting the necessary design documentation to local and other authorities for approval.

**Deliverables:** design development drawings, outline specifications, local and other authority submission drawings and reports, and detailed estimates of construction costs.

### 5.5 Tender Documentation and Procurement

This stage involves preparing procurement and construction documentation, confirming and implementing procurement strategies and procedures for effective procurement of the necessary resources for execution of the project. Tasks include;

**Deliverables:** concept design, schedule of required surveys, tests, and other investigations and related reports, process design, preliminary design and cost estimates as required.

#### 5.4 Detail Design

This stage involves developing the approved concept to finalize the design, outline specifications, cost plan, financial viability and program for the project. The main activities include;

- 1) Reviewing documentation program with principal consultant and other consultants involved.
- 2) Attending design and consultants' meetings.
- 3) Incorporating client's and authorities' detailed requirements into the design.
- 1) Attending design and consultants' meetings.
- 2) Preparing specifications and preambles for the works.
- 3) Accommodating services design.
- 4) Checking cost estimates and adjusting designs and documents if necessary to remain within budget.
- 5) Formulating the procurement strategy for contractors or assisting the principal consultant where necessary.
- 6) Preparing documentation for contractor procurement.
- 7) Reviewing designs, drawings, and schedules for compliance with approved budget.
- 8) Assisting in calling for tenders and/or negotiation of prices and/or assisting the principal consultant where relevant.



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- 9) Liaising, cooperating and providing necessary information to the principal consultant and the other consultants as required.
- 10) Assisting in the evaluation of tenders.
- 11) Assisting with the preparation of contract documentation for signature.
- 12) Assessing samples and products for compliance and design intent.

**Deliverables:** specifications, services co-ordination, working drawings, budget construction cost, tender documentation, tender evaluation report, tender recommendations and priced contract documentation.

### 5.6 Contract Administration and Inspection

This stage includes managing, monitoring and administering construction contracts and processes including preparing and coordinating procedures and documentation to facilitate practical completion of the works. Tasks include;

- 1) Attending site handover.
- 2) Issuing construction documentation in accordance with the documentation schedule including, in the case of structural engineering, reinforcing bending schedules, detailing and specifications of structural steel sections and connections.
- 3) Carrying out contract administration procedures in terms of the contract.
- 4) Preparing schedules of predicted cash flows.
- 5) Preparing pro-active estimates of proposed variations for client decision-making.
- 6) Attending regular site, technical and progress meetings.
- 7) Inspecting works for conformity to contract documentation.
- 8) Adjudicating and resolving financial claims by contractor(s).
- 9) Assisting in the resolution of contractual claims by the contractor.
- 10) Establishing and maintaining a financial control system.
- 11) Clarifying details and descriptions during construction as required.

- 12) Preparing valuations for payment certificates to be issued by the principal agent.
- 13) Witnessing and reviewing all tests and mock ups carried out both on and off site.
- 14) Checking and approving contractor drawings for design intent.
- 15) Updating and issuing drawings register.
- 16) Issuing contract instructions as and when required.
- 17) Reviewing and commenting on operation and maintenance manuals, guarantee certificates, and warranties.
- 18) Inspecting the works and issuing practical completion and defects lists.
- 19) Arranging for the delivery of all test certificates, including the electrical certificate of compliance, statutory and other approvals, as built drawings and operating manuals.

**Deliverables:** schedules of predicted cash flow, construction documentation, drawing register, estimates for proposed variations, contract instructions, financial control reports, valuations for payment certificates, progressive and draft final accounts, practical completion and defects lists and electrical certificate of compliance.

### 5.7 Project Completion and Handover

This stage involves fulfilling and completing the project including necessary documentation to facilitate effective completion, handover and operation of the project. Tasks include;

- 1) Inspecting and verifying the rectification of defects.
- 2) Receiving, commenting and approving relevant payment valuations and completion certificates.
- 3) Preparing and/or procuring operations and maintenance manuals, guarantees and warranties.
- 4) Preparing and/or procuring as-built drawings and documentation.
- 5) Concluding the final accounts where relevant.

**Deliverables:** valuations for payment certificates, works and final completion lists, operation and maintenance manuals, guarantees and warranties,



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and as-built drawings and documentation, and final accounts.

### 5.8 Project Management Services

Should the client require the Engineer to undertake duties of an engineering management nature on behalf of the client, the services shall include;

1. Leadership of the professional team.
2. Being responsible for the overall administration of the project including the coordination of the work of the team, the programming of the execution of designs and the overall financial control of the project.
3. Instructing the other members of the team, on behalf of the client, in writing as to the client's total requirements in connection with the project, including the services required from each of the other members and make available to them all relevant information or data pertaining to the project which is required by them. The other members of the team shall be entitled to rely upon the accuracy and completeness of such information and data furnished by the Engineer.
4. Convening and presiding over regular meetings of the team and the client for purposes of planning the project including preparing and distributing agendas and minutes to all concerned.
5. Coordinating the preparation of a budget for the client, together with assistance from other members of the team and update it at regular intervals as agreed with the client.
6. Preparing a construction and procurement plan and policy according to the client's requirements with regard to types of contracts to be adopted, general and commercial conditions and the grouping of items and elements into various contracts.
7. With assistance of the other members of the team, determine and recommend to the client a policy for calling for tenders and/or negotiating contracts.
8. Coordinating reports and recommendations on tenders received, either directly or by other members of the

team, and make recommendations to the client for the award of the contract.

9. arrange for the preparation and signing of the contract documents with assistance of the other members of the team.
10. Issuing all instruments to contractors, either directly or by delegation to the other members of the team.
11. Convening and presiding over regular meetings on site with contractors, members of the team and the client for the purpose of administering the contract including the preparation and distribution of agendas and minutes to all concerned.
12. Processing and certifying all payment and valuation certificates and issue payment certificates for settlement.

### 5.9 Other Services

Other services include; occupational health and safety, quality assurance services such as technical and financial audits of completed projects and dispute resolution.

#### 5.9.1 Occupation Health and Safety

The client may require services of a Engineer for occupational health and safety based on Occupation Health and Safety Act and the construction regulations. Such services include;

1. The Engineer must arrange, formally and in writing, for the contractor to provide documentary evidence of compliance with all the requirements of Occupational Health and Safety Act and Construction Regulations.
2. The Engineer must execute the duties of the client, as his appointed agent, as contemplated in the Construction Regulations to the Occupational Health and Safety Act.

#### 5.9.2 Quality Management Services

Where the client requires that a quality management system or quality assurance services, over and above construction supervision services, be applied to the project, these are in addition to normal services provided by the Engineer and to be



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specifically defined and separately agreed in writing prior to commencement.

### 5.9.3 Dispute Resolution

Where the client requires the Engineer to, on his behalf, perform the services listed hereunder or similar work, the extent thereof and remuneration therefore is subject to agreement between the client and the Engineer.

1. Dealing with matters of law, obtaining parliamentary or statutory approval, licenses or permits.
2. Assisting with or participating in contemplated or actual mediation, arbitration or litigation proceedings.
3. Officiating at or attending courts or commissions of enquiry, select committees and similar bodies convened by statute, regulation or decree.

## 6. DISBURSEMENT OF FEES

This Schedule provides the manner in which fees shall be disbursed to the Engineer during and after completion of the assignment. It includes disbursements for hourly rate, percentage of project cost, reimbursable, payments due when rendered, retainers and the Engineer's right to stop rendering services.

### 6.1 Percentage Project Cost Fees

The Engineer's invoices for all work, including reimbursable expenses, should normally be rendered on a monthly basis, and should be prorated based on the amount of design work completed against agreed-upon estimated construction costs.

For projects where full services are provided, 70 percent of the total fee should be billed throughout the preparation of the final drawings, specifications and other contract documents, 5 percent at the tender period; the remaining 25 percent should be prorated throughout the construction period until the fee is paid full. For projects where only design services are provided, the total fee for the design should be billed by the time the design is completed.

**Table 4: Payment of Engineering Services**

| Item | Stage of work                         | Fees payable |
|------|---------------------------------------|--------------|
| 1    | Preliminary stage                     | 10%          |
| 2    | Design stage (i)<br>Design stage (ii) | 20%<br>40%   |
| 3    | Tender stage                          | 5%           |
| 4    | Construction stage                    | 25%          |

### 6.2 Reimbursable expenses

Apart from the fees shown above, the Engineer is entitled to the reimbursable expenses properly incurred. Compensation for reimbursable expenses may be based on billings for individual items of expense, an agreed, fixed lump-sum fee, or a percentage of the total fee. These items may include, but are not limited to:

- Printing reproduction and purchase of all documents, drawings, maps records and photographs.
- Communication (fax, telephone calls, e-mails, etc.).
- Postage and similar delivery charges.
- Travelling, hotel expenses and other similar disbursements.
- Advertising for tenders and site staff.
- Any other expenses paid by engineers on clients' behalf and not covered by the agreed fee.





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**Table 3 Guide to Engineering Responsibility Levels**

| Category                             | Decisions and Commitments   | Leadership Authority and Supervision Exercised  |
|--------------------------------------|---|---|
| Level 1:<br>Technical Assistant      | Skilled and trade specialist who is able to use hand and power tools including automated machinery in their daily work  | May work as professional trade specialist, taking and executing instructions with supervision from Technicians  |
| Level 2:<br>Technician               | Technician on projects of simple nature, interprets drawings, and follows instructions and standards. No major decisions expected and made.   | May work as professional technician, taking and executing instructions with supervision from Technologist.  |
| Level 3:<br>Technologist             | Drafts and interprets engineering drawings of large size and simple projects, with known course of action, methods and specifications. Makes reports and material testing. Actions subject to checks. | Works on projects as clerk of works, inspector of works or equivalent in absence of senior technologists, responsible for technicians at lower level.   |
| Level 4:<br>Engineer                 | Makes responsible decisions not usually subject to technical review. Takes courses of action necessary to expedite the successful accomplishment of assigned projects.                                | Outlines more difficult problems and methods of approach. Coordinates work programs and directs use of equipment and materials. Generally makes recommendations as to the selection, training, discipline and remuneration of staff. Can work as Resident Engineer and/or equivalent on projects.                         |
| Level 5:<br>Principal/<br>Specialist | Makes responsible decisions as a specialists on advanced, non-managerial technical duties; or project manager leading the most complex projects   | Performs professional engineering work of considerable difficulty requiring multi-disciplined technical engineering capabilities in the planning and design and is capable of handling complex engineering projects by independently completing assignments which involve multi-disciplined technical engineering duties. |



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**Table 2: Scale of Fees as a Percentage of Project Costs**

**Table 2a: % CHARGE ON COST OF PROJECT**

| SERVICE    | % CHARGE ON COST OF PROJECT |
|------------|-----------------------------|
| CIVIL      | 0.5 - 1.0                   |
| STRUCTURAL | 3.0 - 4.5                   |
| ELECTRICAL | 0.8 - 1.2                   |
| MECHANICAL | 0.8 - 1.2                   |
| Others*    | 0.2 - 0.3                   |

*\*Information systems, Communication specialists etc.*

**Table 2b: FEE AS % OF COST OF WORKS**

| Cost of works in USD    | Fee as % of cost of works |
|-------------------------|---------------------------|
| Up to 1,000,000         | 6.25                      |
| 1,000,001 – 2,500,000   | 5.95                      |
| 2,500,001 – 5,000,000   | 5.78                      |
| 5,000,001 – 8,000,000   | 5.61                      |
| 8,000,001 – 10,000,000  | 5.46                      |
| 10,000,001 – 15,000,000 | 5.31                      |
| 15,000,001 – 20,000,000 | 5.17                      |
| Over 20,000,000         | 5.04                      |