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FOREWORD

APEGGA's objective in publishing this Guideline is to encourage consistent, fair, equitable, and ethical conduct in the professional member selection process. The Guideline reflects the intent of the Engineering, Geological and Geophysical Professions Act and its Code of Ethics.

Services provided by APEGGA members are delivered in many forms. This Guideline defines three general areas:

Part 1 - Professional Consulting Services

Part 2 - Engineering, Procurement, Construction or Construction Management Services

Part 3 - Partnering and "Build, Own, Operate, Transfer" Relationships.

See Section 1.3 for definition of the types of services typically provided in each Part of this Guideline.

Part 1, Professional Consulting Services, defines services that are primarily consultative in nature and where the APEGGA member does not typically provide financing, procurement of materials or services, construction, or project management beyond that required for the professional consulting service itself. In this context, the Client is generally looking for a professional member who has specialized knowledge. In some instances, the Client is not certain of the effort required to produce the desired end result. It is for these Clients that this Guideline should be of primary importance.

Definitions under Parts 2 and 3 are provided to assist users of the members' services that are not purely consultative in nature. Users contemplating a project under Parts 2 and 3 must familiarize themselves with the type of "team" that may have to be assembled to undertake the project. Part 2 and 3 projects generally require considerably more in-house expertise for them to be successful than a project done under Part 1. Under Part 1, the professional service provider often works with the end user of the services to define the work. Under parts 2 and 3, the user may be directly involved or may hire another professional services firm to help with the project definition and management.

This Guideline emphasizes Qualifications Based Selection. The concepts of Qualifications Based Selection are designed to optimize the benefits to the owners of projects for whom the professional consulting services are performed.

This Guideline is not a legal document and is not intended to supersede or replace contractual arrangements that are designed to satisfy specific situations. It conforms to the Code of Ethics and is complementary to the APEGGA Fee Guidelines and the APEGGA/AAA Recommended Conditions of Engagement and Schedule of Fees for Building Projects. It should be read in conjunction with those documents and interpreted in a manner that reflects the professional principles described therein.

SECTION I

INTRODUCTION

1.1 SUMMARY

This Guideline sets out the criteria for assessing the qualifications of a Consultant, discusses the selection process, and presents the merits of alternative fee arrangements. The Consultant selection procedures described here can be adapted to any type or scope of assignment as long as the procedures for selecting the Consultant do not violate the professional principles on which the Consultant selection procedures are based.

APEGGA's position on Consultant selection is based on three fundamental concepts:

1. Selection by qualifications and competence
2. Negotiation of fees as a separate and distinct procedure
3. Creation of a relationship that encourages mutual trust between Client and Consultant.

1.2 BACKGROUND

This guideline was prompted by concerns that Consultants are being asked to "bid" for work. A survey of Clients and members was conducted to determine if "bidding" for work was occurring and, if so, what the impact was on the quality of the work. The survey confirmed that price was a factor in selection and that price, in cases, negatively impacted the quality of the work.

There was a perception that some Clients and Consultants encourage "bidding" and, in cases, subsequent "price shopping". APEGGA is concerned that the perception of bidding or pressure to use price as a key selection criterion for consulting services could lead to Clients and professional members either:

- a) agreeing to inappropriate levels of service which could in turn lead to unacceptable risks and liability; or,
- b) creating an adversarial relationship between Client and Consultant that may again reduce the service to inappropriate levels.

Consultants frequently "negotiate" lump sum fees with Clients, which is quite different from "bidding" for work. APEGGA members provide a wide range of services from pure or

theoretical consulting to materials testing to providing design, construction, ownership and operation of systems. Work that is "price" based may involve services that non-member firms provide, which can lead to the incorrect perception of "bidding" for professional services.

All members are reminded that bidding for professional services or price shopping is considered to be against the Code of Ethics. The preamble to the Code of Ethics states: "Professional engineers, geologists and geophysicists will build their reputations on the basis of merit of services performed or offered and shall not compete unfairly with others or compete primarily on the basis of price without due consideration of other factors."

1.3 SERVICES

The services provided by APEGGA's members range from technical or specialist consulting, to full service consulting, to the design, procurement, construction, ownership and operation of facilities. APEGGA recognizes the differences in the type of business enterprises of the members from both a Client's and "provider's" perspective. The following tables demonstrate typical services provided by members of APEGGA. As with any service, there are any number of variations dependent upon the particular project needs.

Part 1 emphasizes a direct relationship between the professional Consultant and the Owner/Client. This is the typical relationship where the Owner/Client hires a professional Consultant to undertake a study, prepare a design, or provide services during tendering, construction, post construction and other ancillary services.

Today, projects are frequently delivered using a variety of methods. These methods may drastically alter the relationship between the design professional and the Owner/Client. For example in design-build, the professional Consultant may have little or no contact with the Owner. The professional Consultant's Client will be the prime contractor. The prime contractor may submit a bid to the Owner to carry out the project including financing, construction, operations and maintenance. Typically, however, the prime contractor will go through the same or similar process as described in this document to select his professional consulting team. The prime contractor takes the place of the Owner/Client in the more traditional projects described in Part 1. Methods of compensation and the scope of services provided by the professional Consultant are sometimes different under Parts 2 and 3 projects. The contractors and the professional Consultants may accept additional risk/reward compensation schemes including equity position in a project under Parts 2 and 3.

However, the method by which a professional Consultant is chosen by a prime contractor, partnering arrangement, or other service arrangement under Parts 2 and 3 described in the tables below does not change significantly from the methods used for services under Part 1.

Services under a Parts 2 or 3 arrangement may be offered through teaming of different companies including financial institutions, contractors, operators, professional Consultants,

and others. A company may have different divisions offering some of the above services. The professional Consultant portion is usually distinct and distinguishable from the other services. The use of Qualifications Based Selection has been found to be extremely important in the provision of Parts 2 and 3 type services because of the direct impact the professional services can have on the outcome of the project. Parts 2 and 3 projects require a close working relationship between the parties and a high level of trust. A fair, negotiated agreement between the parties facilitates the development of trust and a mutually beneficial relationship. The team thus formed, may "bid" for work giving the illusion to some that the professional Consultant is engaged in bidding. However, in most cases it is the prime contractor who is submitting a bid and taking the majority of the risk, as with conventional projects. The professional services provided to assist in the development of the bid are usually provided under a conventional arrangement with the prime contractor.

PART 1 - PROFESSIONAL CONSULTING SERVICES

SERVICE DESCRIPTION	PROFESSIONAL SERVICES OFFERED	EXPECTED Client INVOLVEMENT	TYPICAL FEE STRUCTURES
Technical or Specialist Consulting Services	Technical assessments, studies, recommendations by an engineering, geological or geophysical firm.	<ul style="list-style-type: none"> · Objectives · Review of draft report(s) and input to final reports - as required 	<ul style="list-style-type: none"> · Time basis · Fixed fee basis · Combination time and fixed fee basis
Full Service Consulting in engineering, geology or geophysics	A variety of services including conceptual development, feasibility studies, and pre-design. Services may continue into detailed design, procurement and construction management but may be terminated at any point along the way.	<ul style="list-style-type: none"> · Work scope & responsibility definition · Position and/or project objectives · Approvals 	<ul style="list-style-type: none"> · Time basis · Fixed fee basis · Combination time and fixed fee basis

PART 2 - ENGINEERING, PROCUREMENT, CONSTRUCTION OR CONSTRUCTION MANAGEMENT SERVICES

SERVICE DESCRIPTION	PROFESSIONAL SERVICES OFFERED	EXPECTED Client INVOLVEMENT	TYPICAL FEE STRUCTURES
Engineering Contractor	These services include engineering, procurement and construction management or some combination thereof. The services vary in size and complexity and usually involve a number of the engineering contractor's staff and/or "contract" personnel for specialized services & peak manpower needs.	· Varies from minimal to dedication of a number of Client staff for project needs to monitor progress & to provide feedback	· Time basis · Fixed fee plus reimbursable costs · Target EPCM price (sharing over/under) · Target project cost (sharing over/under) · Variable fee based on contractor's performance · Other incentive contracts
EPC Contractor	These services include the total package of engineering, procurement and construction. Contractor has own construction forces or subcontracts construction directly.	· Project scope, specifications and responsibility definition · Acceptance tests	· Lump sum contract · Target price contract · Unit price · Cost + fixed fee · Other incentive contracts
EPC Contractor with process	Same as EPC Contractor with additional capability to provide specialized process expertise to establish design basis.	· Varies from minimal involvement to providing significant process expertise	· Lump sum contract plus royalties from patented process or equipment use · Cost + fixed fee · Target price contract · Other incentive contracts

PART 3 - PARTNERING AND "BUILD, OWN, OPERATE, TRANSFER" RELATIONSHIPS

SERVICE DESCRIPTION	PROFESSIONAL SERVICES OFFERED	EXPECTED Client INVOLVEMENT	TYPICAL FEE STRUCTURES
Engineering Alliance	EPCM services for Client's on-going project needs. Typically includes dedicated long-term staffing consisting of both Client and engineering contractor's staff. Can include a number of personnel contracted from other firms or hired as "contract" employees	· Involvement by Client who may bring expertise and/or management to alliance team.	· Time basis · Time basis with shared costs · Cost of Service (Cost plus fee based on agreed factors) · Long-term incentives
Engineering Contractor/Operator	Engineering and operational service. May also include equity participation by engineering contractor.	· Product or service specifications defined (eg. quality, volume, term) · Standards of performance	· Operational revenue · Cost of Service · Return on capital + fixed fee
Partner - Build/Own/Transfer	Development & operational partner with the Client. Transfer of facilities could be to a 3rd party or to the Client.	· Similar to involvement with Alliance contractor plus equity involvement	· Operational revenue · Cost of service · Return on capital + fixed fee
Partner - Build/Own/Operate/Transfer	Development & operational partner with the Client. Transfer of facilities could be to a 3rd party or to the Client	· Similar to involvement with Alliance contractor plus equity involvement	· Operational revenue · Cost of service · Return on capital + fixed fee

APEGGA's concern over bidding relates primarily to Part 1, Professional Consulting Services. Consulting assignments frequently involve identifying unknowns, determining the full extent of the problems and finding ways to deal with them in order to achieve the Client's goals. For these types of assignments, it is often difficult to determine the exact scope of services and budget. Inadequate budgets and price competition in such cases lead to inadequate analysis and solutions. Price competition for consulting services based on a limited understanding of the scope of services is discouraged in order to protect the public from undue risk and liability.

On the other hand, design, procurement, construction and construction management projects frequently have price as a component. Most often, the basis for pricing is well understood and the designs and project requirements are sufficiently well documented to allow reasonable estimates to be produced. In these instances, "bidding" for work may be appropriate.

However, in most Parts 2 and 3 relationships, it has been found that the users of professional

consulting services generally prefer Qualifications Based Selection to choose their professional partners. Because of the close working relationship required, and the levels of trust and expertise needed to form a strong team to prepare a competitive and innovative bid, the professional Consultants are usually chosen on their technical excellence, relationship with the Client and ability to meet other project and Client requirements.

1.4 SELECTION OF CONSULTING ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS

APEGGA believes that Qualifications Based Selection (QBS) is a prerequisite for all forms of services. For instance, employers will seek to hire employees with qualifications suited to the job, contractors will often be prequalified to bid for particular contracts, or a financier's qualifications will normally be checked carefully. Qualifications Based Selection is of utmost importance to those Clients who have projects that are not well-defined or with uncertainties. Qualifications Based Selection is also important to Clients who do not have in-house staff who can prepare detailed terms of reference and who can monitor and provide guidance throughout the course of the assignment.

Qualification Based Selection involves negotiating services appropriate to the task with a suitably qualified provider of services or, in the context of this guideline, a Consultant. Clients with sufficient resources, knowledge and understanding of their needs have grounds for putting a stronger emphasis on price than those without these resources.

When you pay too much, you lose a little money - that is all. When you pay too little, you sometimes lose everything, because the thing you bought is incapable of doing the thing it was bought to do.

John Ruskin (1819-1900)

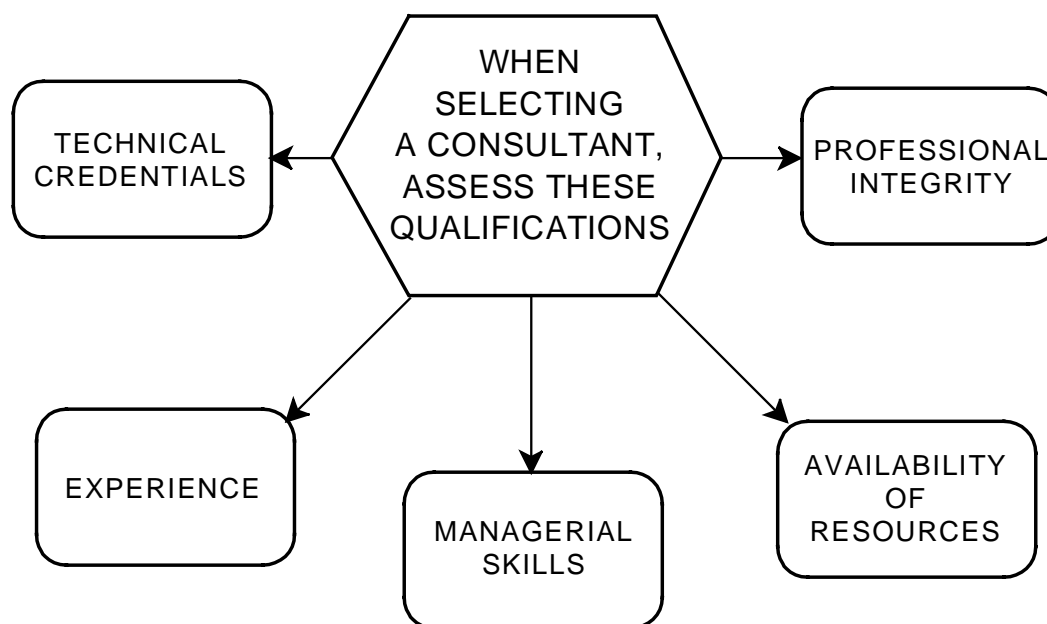
SECTION 2

CRITERIA FOR SELECTION

2.1 INTRODUCTION

Five principle points should be considered in assessing a Consultant's qualifications to provide professional services for a specific assignment:

- Technical Credentials
- Experience
- Managerial Skills
- Availability of Resources
- Professional Integrity



2.2 CREDENTIALS

Services of Consultants are provided by people. They should have the education, training, and expertise to carry out the project. To evaluate credentials, the Client should examine

- The firm's historical services (i.e. are they consistent with the type of service sought?)
- The qualifications of the staff:
 - Problem-solving ability
 - Demonstrated Creativity and Innovation
 - Technical background
- The relevant non-staff resources:
 - Reference information, data bases
 - Procedures
 - Relevant specifications
 - Equipment, systems
- Project Understanding:
 - Comprehension of scope
 - Awareness of Client needs
 - Familiarity with project.

2.3 EXPERIENCE

The Consultant's proposed approach to the project should be evaluated relative to

- company projects
- relevant staff experience
- varied challenges (demonstrating flexibility of technical & managerial approach)
- successful application of needed technology
- demonstrated continuous improvement (how will knowledge gained from past experience be applied to enhance the project).

2.4 MANAGERIAL SKILLS

A successful project requires that the Consultant have the level of managerial skills required for the project. The Consultant should demonstrate capability in the following areas:

- Project organization, coordination and management

- Communication skills, both written and verbal
- Procedures for controlling personnel-hours, schedule and project costs.

2.5 AVAILABILITY OF RESOURCES

The availability of a Consultant's resources will be affected by current and potential commitments. To determine the availability of resources, the Client should examine the Consultant's

- Deployment of technical and managerial resources
- Delegation of responsibility within the organization
- Other commitments during the project, and how staff will be deployed on them
- Financial capacity and insurance coverage or insurability
- Personnel in terms of capacity, knowledge, skill and experience.

2.6 PROFESSIONAL INTEGRITY

Members of APEGGA are required to conform to the Code of Ethics. They must enter into agreements with fairness and good faith and undertake only those assignments which they are competent to perform by virtue of their training and experience.

To determine professional integrity, Clients should examine the Consultants

- References from other Clients
- Registration with APEGGA
- Character and professional stature
- Business reputation
- Business associations or obligations that may affect professional independence and objectivity with respect to the proposed assignment
- Record of claims and lawsuits
- Record of construction cost, claims, and change orders
- Record for completing assignments in a timely and cost-effective manner.

SECTION 3

SELECTION PROCESS

3.1 INTRODUCTION

A good relationship between a Client and Consultant is essential for optimum benefit/cost to the ultimate owner of a project.

There are many ways to select a Consultant. The best methods involve Qualifications Based Selection (QBS). Qualifications Based Selection can range from sole-source selection of a known Consultant to a detailed proposal submission as outlined in this section.

3.2 RETAINING A KNOWN CONSULTANT

Retaining a known Consultant is suitable when the Client has an existing and successful relationship with one or more Consultants. This arrangement is appropriate for services in specific areas of professional practice where the Client's need for service continues or repeats itself from year to year. This practice is often referred to as "direct hire" or "sole-source" selection.

Some advantages of this selection method are:

1. The Consultant with knowledge of past projects and special Client requirements has the necessary background and information to save time without compromising quality.
2. The Client avoids the formal selection procedure and avoids having to re-establish the basis for an effective working relationship for each project.
3. A general understanding of an appropriate fee basis is established, so fees for each project can be agreed with a minimum of negotiation.

3.3 QUALIFICATIONS BASED SELECTION

Frequently a Client does not have an ongoing relationship with a Consultant. Sometimes Clients need services in an area of professional practice that is outside the competence or specialization of their usual Consultant(s). In such cases Qualifications Based Selection should be used.

Qualifications Based Selection can be varied to satisfy the specific needs of a Client or a particular project. It must, however, establish a basis on which the Client can objectively select the best qualified Consultant for a project. This may vary from telephone interviews and reference checks to fairly simple submittal of credentials or to fully documented proposals. A submittal of credentials to be used for selecting a short list of firms would include technical credentials and experience of the firm and its personnel.

Since preparing proposals can be costly and time consuming for both the Client and the Consultant, proposals should be used with discretion. The amount of detail in the proposal call should reflect the complexity of the work and the Client's requirements. The need for a proposal and the type of Qualifications Based Selection process should be evaluated for each project.

There are several variations of Qualifications Based Selection:

- Sole- source selection from a prequalified list
- Rotational selection from a prequalified list
- Selection based on a submission for credentials; reference checks and/or interviews
- Selection based on a proposal (which could vary from a simple letter to a multi-volume document with details of staffing, schedules, drawing lists, and various deliverables).

Clients should base their selection methods on their particular needs and the size and type of project. Different approaches should be considered for different projects to achieve efficiency and effectiveness.

QUALIFICATIONS-BASED SELECTION

3.3.1 Direct Hire (Sole-Source)

Depending on circumstances, it may be appropriate to hire Consultants directly based on their qualifications to do the work. For small projects the Client time to prepare and evaluate proposals is not warranted. The direct cost to the firms answering a proposal call can be more than the fee for the project. There may be few firms with the capability to do the work, or the Client may have a predisposition to hire one firm because of its capabilities. In such cases it is suitable to sole source the work from a preferred Consultant or to rotate the work amongst a list of preferred, prequalified Consultants.

3.3.2 Submission Of Qualifications And Selection From A Short List

Where a Client is not aware of which firms have the best expertise to handle a specific project requiring specialist expertise, it is appropriate to ask for credentials from a select group of Consultants. The Client should review the qualifications and develop a short list, do reference checks, and interview the Consultants if appropriate. Then the Client should negotiate with the highest ranked Consultant. The ranking system should be designed to obtain a Consultant who will provide the services and expertise most clearly matching the project requirements. The ranking system should include the information gathered about the Consultant. Consultants should be given the basis of the evaluation in the proposal call documents to ensure the Consultants put their emphasis in the areas where the Client wants it.

3.3.3 Proposal Submissions

Where it is not appropriate to select a qualified Consultant using 3.3.1 or 3.3.2., proposal submissions should be requested.

Clients should recognize that the larger and more complex the project, the more detailed the proposal terms of reference should be. For highly technical, long, or complex projects, it is sometimes advisable to hire a Consultant to write the proposal terms of reference and develop the proposal evaluation criteria. This can be a significant project in itself. The Client should have qualified employees prepare the proposal documents. Alternatively, the Client could hire a Consultant to prepare them. As with construction contract documents, well-detailed proposal documents will result in good proposals with similar services, work plan and scope. Ambiguities lead to proposals with a wide range of proposed services, work plans and scope.

When developing a proposal and a proposal evaluation plan, the Client needs to recognize all the steps required prior to calling proposals. It must also be recognized that the proposal development period for large projects can be substantial.

Proposals to perform engineering, geological and geophysical services for projects

should include information to allow the Client to judge additional criteria outlined in Section 2. This will include managerial skills, availability of resources and professional integrity. For complex projects Clients may request that Consultants include additional information in their proposals. This information should be adequate to allow the Client to assess details of the Consultant's intended approach, methodology, implementation schedule, design philosophy, cost control, quality control and safety program.

The process of selecting a Consultant based on qualifications comprises the following steps:

1. Establish Selection Committee

The size and composition of the selection committee should reflect the complexity of the project and the availability of Client representatives who are qualified to evaluate the proposals. It should comprise three or more persons representing a cross section of experience and judgment with respect to the selection criteria and the specific project. In circumstances where appropriate qualifications are not available in-house, the Client should engage the services of an outside advisor to help in the selection. In any case, the chair of the selection committee should be the official liaison with all Consultants who made submissions to ensure consistency in the selection process.

2. Describe the Assignment

A clearly stated description of the assignment and terms of reference should be prepared. This will provide a solid basis for both the Client's own understanding or requirements and the Consultant's preparation of a submission. Emphasis should be on describing the Client's objectives rather than specifying a particular methodology or technique, unless this relates to other components of the project.

The description of the assignment should include:

- A statement of the Client's objectives and needs
- The physical magnitude and resource requirements of the project, including specific services and expertise to be provided by the Consultant. Special or unusual factors or conditions affecting the assignment should be identified
- A statement of the input, information, expertise, and other support that the successful Consultant will receive from the Client. Special services provided by the Client to coordinate with members of the project team should be clearly noted
- A time schedule showing the Client's requirements for each major

- phase of the project including the Consultant selection process
- The basis of the evaluation in the proposal call documents. This will help focus the Consultant's emphasis in the areas where the Client wants it
- When deemed appropriate, an outline of the Client's budget for the assignment and/or project.

3. Identify Qualified Consultants

A list of Consultants who appear to be qualified for the assignment should be prepared. This may be accomplished in a variety of ways depending on the size and sophistication of the Client organization. Methods that can be used are as follows

- Contacting other Clients who have undertaken similar projects
- Obtaining names from publications on Alberta Consultants, such as the Alberta Consulting Engineering Directory, available from the Consulting Engineers of Alberta
- Soliciting expressions of interest outlining technical credentials and experience through local or regional advertising. Typically, this interest should be a three to five page letter submission
- Maintaining a computerized list of Consultants and the areas of professional practice in which they are qualified.

4. Request Proposals

The procedure used to develop a short list of qualified Consultants may vary between Clients according to their respective policies on the procurement of professional services. Clients should be aware that the preparation and evaluation of proposals involves a significant cost to both the Consultants and Clients. Therefore, it is in the public interest that requests for detailed proposals be limited. Normally proposals from between two to five Consultants is sufficient. The proposal call should indicate the firms from which proposals have been requested. This is in both the interests of the Client and the Consultants. The list of invitees gives an indication of the Client's expectations. If acceptable to the Client, some of the Consultants might combine to form a stronger team to serve the Client's needs by putting the best people from two or more organizations together.

A request for proposals should contain a clearly stated description of the assignment and the terms of reference the Consultant is to follow. It should describe the selection criteria and the ranking system that will be used to evaluate the proposals (see Appendix C). It should also invite comprehensive statements on the following

- a) The Consultant's understanding of project scope and objectives
- b) The names of the key technical staff to be involved in the assignment, along with information on the engineering, geological and geophysical disciplines in which they are trained, areas of specialty and details of their experience
- c) Other commitments of the project manager or other assigned staff and the availability of other technical support staff and facilities
- d) A list and brief description of recent similar projects undertaken by the Consultant and by the key staff including dates and references
- e) Company profile and confirmation of professional registration with APEGGA.

For larger or more complex projects, the Client may consider additional information in the evaluation of the Consultants invited to make proposals, including:

- f) A description of the methodology that will be used in the execution of the assignment
- g) A comprehensive description of the implementation schedule, design philosophies, cost and quality control
- h) Other factors such as hours committed by specialists, key staff and overall time commitments to the project as appropriate to the evaluation process of the Client.

5. Assess Proposals

The assessment of proposals should be based on the selection criteria and ranking systems included in the request for proposals. The assessment process should be appropriately formal and thorough. It should be seen by the Consultants who made proposals to be an equitable and complete evaluation of their qualifications for the project.

Depending on the scope of the project, the assessment process may include some or all of the following:

- a) Review Proposals

In preparation for a meeting of the selection committee, each member of the committee should receive a copy of each of the proposals. Each member should rank each proposal in accordance with the selection criteria and ranking system included in the request for proposals. During the meeting of the selection committee, the individual member rankings for each of the proposals should be discussed to give each member the benefit of other opinions; no attempt should be made to develop consensus at this stage.

b) Interview Consultants

Consultant interviews provide each Consultant the opportunity to address and emphasize important items in their proposals. The interview provides the selection committee the opportunity to meet the Consultant's key personnel and to discuss specific issues.

The interviews should be scheduled over a short time period to facilitate comparisons between proposals while details are fresh in the memory of selection committee members.

c) Finalize Consultant Ranking

Immediately following the Consultant interviews, the selection committee should meet to develop consensus on the ranking of each proposal. If there are major differences that cannot be resolved within the committee, the chair should seek resolution of the differences by contacting previous Clients or other references.

In this process, it may be necessary to seek clarification of some aspects of one or more Consultant proposals. Care should be taken to avoid giving one Consultant unfair advantage over the others if further questioning is necessary to complete the ranking.

d) Select Most Qualified Consultant

When the ranking has been finalized for all submissions, the chair informs the Consultant with the highest score of the selection for the assignment subject to the negotiation of a mutually acceptable fee arrangement. The selection is confirmed to all Consultants who made proposals.

6. Debrief Consultants

In the interests of helping the industry to submit proposals suitable to the needs of their Clients, it is recommended that debriefing sessions be held with both the successful and unsuccessful proponents. By explaining to the proponents what was liked about their proposals, and where the strengths and weaknesses of their proposals were, Clients should get better proposals in the future that are tailored to their needs.

SECTION 4

COMPENSATION FOR SERVICES

4.1 INTRODUCTION

Having selected the best qualified Consultant, the Client must take care to arrange compensation package that is equitable for both the Client and Consultant and that is complementary to the quality of professional services required for the project. The cost of professional services is typically a small percentage of the full-life capital and operating cost of a proposed facility; however, the influence of professional services on the quality and long-range benefit of a project is generally very high.

The fee basis selected for an assignment should not compromise objectivity. It should permit the Consultant to commit qualified persons and resources for a sufficient period of time to allow creativity and good quality service throughout the scope of the assignment.

4.2 FEE BASIS

APEGGA publishes fee guidelines from time to time for use by Consultants and their Clients. These guidelines are intended to form a basis on which appropriate fees can be negotiated to create an optimum mutual benefit and working relationship.

Fees for professional services are commonly based on the following three concepts

- Time Basis
- Fixed Fee Basis
- Combination of Time Basis and Fixed Fee Basis.

Each has distinct applications, and frequently combinations of these are applied to different stages of a project.

4.2.1. Time Basis

This fee basis is applicable in circumstances where the scope of the assignment is not well defined or where the Consultant does not have control over time and disbursements required on specific stages of a project.

The total cost of professional services when the Consultant fee is on a Time Basis is determined by multiplying the number of hours each member of the Consultant's staff expends on the project by their respective hourly billing rates and adding

disbursements marked up by an appropriate disbursement factor. (See Consultant Fee Guidelines published by APEGGA for details on the determination of hourly billing rates.)

All categories of service can be supplemented with a budget or maximum fee when circumstances warrant, such as to place restrictions on time or fees available. The incorporation of such an arrangement should not, however, be allowed to negatively influence the quality of service. The budget or maximum fee should be enough to complete the work under normal conditions, and provision should be made for circumstances not anticipated. Regular reporting and communication between the Consultant and Client as the assignment progresses will permit both parties to evaluate the need for adjustments to the project, the scope of services, or the budget.

A Client/Consultant Agreement should describe all terms and conditions that relate to the assignment including the frequency of reporting, the procedure for planning and controlling services during the course of the assignment, and the arrangements for management of project costs and fee authorizations.

4.2.2 Fixed Fee Basis

This fee basis is applicable only to projects or components of projects where the scope of the work is clearly defined and the input parameters are accurately predictable in advance of starting the work. The Fixed Fee for such assignments should be established using a negotiating process. The key assumptions made in developing the estimate must be identified and confirmed in the negotiating process.

There are many variations of "Fixed Fee". They may take the form of a lump sum or a percentage of the cost of construction. They may also take the form of hourly rates that roughly break even with a fixed fee on top for profit or profit and overhead. Some people also consider "Upset Limit" proposals or contracts where there is a maximum limit on the number of hours or dollars to be expended to be "Fixed Fee". Upset limit contracts should be used with care.

With a well-defined scope of work, a "Fixed Fee" may be used. The terms must be well defined in the proposal or contract. If not, a time and materials based compensation with negotiated rates is more appropriate.

Clients should be made aware that deviations from the scope and deliverables schedule will result in increased billings. Using "Fixed Fee" for ill-defined, poorly scoped, or too open-ended services is ill advised.

An agreement that describes in detail the services to be provided and all categories of cost included in the Fixed Fee is essential. The agreement should include provision for changes in schedule, time limits, inflation and other identifiable items that influence cost. Changes in the scope of work after the Fixed Fee has been

established should be compensated for on a Time Basis or by a negotiated Fixed Fee adjustment for each change.

4.2.3 Combination of Time Basis and Fixed Fee Basis

Projects frequently require several categories of service: some which can be accurately quantified at the commencement of the project and others which will vary with schedule and conditions that cannot be predicted. In these circumstances, the services that can be accurately described and quantified can be appropriately covered by a Fixed Fee, and those that are unpredictable should be covered on a Time Basis.

A judicious combination of the Time Basis and Fixed Fee Basis for different phases of a project permits a variety of innovative fee arrangements that encourage execution and cost efficiencies without sacrificing quality of service. These concepts include targets, upset limits, bonuses, cost plus fixed fee, and other variations.

4.3 FEE NEGOTIATION

The Consultant Fee Guidelines published by APEGGA include a comprehensive description of the basis on which hourly billing rates are calculated. That information, in combination with the criteria described in articles 4.1 and 4.2 above for selecting a fee basis, should be used as the framework for the fee negotiation process. The Client and most qualified Consultant should review the scope of services, approach and methods to reconfirm the extent of services to be provided.

Fee negotiations should proceed with the most qualified Consultant immediately following selection. The negotiations should proceed without any discussion of the proposals submitted by other Consultants. Proposals may contain proprietary and confidential information and should not be used for any purpose without the Consultant's permission along with adequate compensation.

If the Client and the most qualified Consultant are unable to reach an agreement on fees, the negotiations should be terminated. The Client should then invite the second most qualified Consultant to enter into fee negotiations. This action precludes any further discussion or negotiation with the first Consultant.

There are times when owners or Clients have a strong working knowledge of the member firms doing work for them. In certain cases they solicit "prices" from prequalified firms for specific works for various reasons. Members are cautioned that they should adhere to the principles of negotiation, must not "bid" or "price shop", and must be prepared to defend their professional reputation if it could appear that bidding or price shopping took place. Further, all members are expected to negotiate adequate fees to do complete and professional work. Lack of fees will not be considered an excuse in any reviews of professional conduct. This will apply to members from both the provider and user side of the service.

If a member is asked to provide a price to be used as the primary basis for the selection of the successful Consultant, the member is "bidding". Any owner or Client member participating in the development of terms of reference or on a selection committee where low price is to be the primary basis in the selection process is considered to be participating in the bidding process.

Price shopping clearly implies "selection primarily on the basis of fees". Negotiating with more than one party at a time may lead to the appearance of price shopping. Where, for whatever reason, simultaneous negotiations are being carried out between the Client and two or more proponents, extra care must be exercised to ensure that the contents of one proponent's proposal are not revealed to the other proponents. Similarly no proponent should ask about the contents of the other proposals. Anyone who suspects that "price shopping" is occurring should notify the Association and consider withdrawing from participation in the project.

This is not meant to prevent proper negotiation of fees between parties. If the recommended Qualifications Based Selection process is followed, it is expected that negotiations on fees will take place until the parties are satisfied with the outcome.

All participants in a process that may involve or appear to involve selection with an inappropriate price component or procedure should be sure they have documented the negotiation process they have followed in order to protect themselves in the event of a complaint.

Following the successful completion of negotiations, an appropriate Client/Consultant agreement should be drawn up and executed.

DEFINITIONS

1. OWNER

The person, company, or other entity who controls the property under consideration and has the authority of ownership.

2. Client

The Owner or Agent of the Owner who establishes the needs that are to be met by the Consultant or Firm in the preparation of reports, drawings, specifications or other documents.

3. CONSULTANT

The Engineer, Geologist, or Geophysicist, as a Permit Holder or Professional member, acting on behalf of the Client, under whose direction and control reports, drawings, specifications or other documents are prepared and stamped.

4. CONTRACTOR

The person, company or other entity who contracts to carry out the intent of the construction drawings and documents for a project.

5. ENGINEERING, GEOLOGICAL AND GEOPHYSICAL FIRMS

Joint firm, licensee, member of the association, permit holder, professional member or restricted practitioner which holds a certificate of registration or is a permit holder in accordance with "The Engineering, Geological, and Geophysical Professions Act".

6. FIXED FEE

A proposal or contract to provide professional services for a fixed amount of money, percentage, or profit component is a "Fixed Fee".

7. BIDDING

"Bidding" is offering of a price for professional services which will be used as the primary basis for Consultant selection or differentiation amongst the "bidders" without due consideration of other factors.

8. PRICE SHOPPING

Price shopping occurs when the Client discusses the proposals and/or pricing with other proponents in the hope of getting one or more of the Consultants to reduce their price.

ADVANTAGES OF QUALIFICATIONS BASED SELECTION

The primary objective of selecting Professional Consulting Services is to retain the right Consultant to provide the right services for the right reasons for the right budget. To achieve these objectives, Clients need to use the right selection method: Qualifications Based Selection. Experience has shown that when Clients use the Qualifications Based Selection process, their needs are satisfied and a successful project results. In some instances, a new working relationship is established based on trust and respect for each other's needs and capabilities. When this happens, a long-term win-win relationship is developed and nurtured.

Qualifications Based Selection emphasizes

- Technical Credentials
- Professional Integrity
- Experience
- Availability of Resources
- Managerial Skills
- Innovation and Value.

The Qualifications Based Selection process has many inherent qualities that are advantageous to Clients. Some of the advantages are

- Value-for-money designs that are economical to construct and maintain
- Vigorous and open competition based on qualifications
- Better control of the hiring process, greater potential for project savings and a non-adversarial professional relationship
- Greater creativity, innovation and flexibility while minimizing the potential for dispute and litigation
- A professional relationship where the Client and Consultant work together in a collaborative spirit to maximize the quality, value, cost effectiveness and usefulness of the final product.

Selection based primarily on price has many disadvantages for both the professional member and Client. A list of comments from various agencies on the disadvantages of using price for the selection of professional services follows

- Selecting professionals on the basis of the lowest bid places a premium on incompetence and is the most likely procedure for selecting the least able or qualified and the most incompetent practitioner for performance of services vitally affecting health, welfare, and safety of the public¹
- Where price is a factor of competition it always takes a principal role²
- Price competition promotes adversarial relationships between Clients and Consultants because of subsequent disagreements on the work to be done for the fee "bid"²
- Ideas, innovation and alternatives are what are required first. For this, one needs the best technical people. Will these people be put forward in an atmosphere of price competition? Their work cannot be priced until decisions are made and a detailed scope of work prepared. This is why one cannot sensibly compare several proposals on the basis of price²
- Less knowledge and skill are apparently required to evaluate price than to weigh the other pivotal, qualitative factors on which sound choices should really be based. Purchasing officials find it very hard to select any but the lowest cost proposal particularly if they have no other yardsticks by which they can judge. Thus price predominates, even if this was not intended³
- Competitive bidding for engineering and architectural services is not in the best public interest because it may lead to employment of the least qualified rather than the best qualified as should be the objective⁴.

1 State of Texas "Professional Services Procurement Act"

2 Association of Consulting Engineers of Canada, "Retaining the Services of a Consulting Engineer: The Only Approach"

3 The International Federation of Consulting Engineers

4 Selection and Use of Engineering and Architectural Consultants "Guidelines for Public Agencies:, Institute for Municipal Engineering a Division of the American Public Works Association"

QUALIFICATIONS ASSESSMENT FORMATS

The content and complexity of any Qualifications Based Selection assessment format must complement the project to which it is to be applied. Three example formats are illustrated on the following pages. These examples relate to the project types described and may be used as guidelines in the preparation of an overall Qualifications Based Selection assessment system for a specific project.

The Qualifications criteria should accompany the request for proposal. The person or persons selected to do the evaluations should select the items to be scored and the weight to be applied to each item.

QUALIFICATIONS ASSESSMENT FORMAT

Example I

This Qualifications Assessment Format is designed for a relatively simple project involving several disciplines and functions.

Assessment Criteria	Weight %	Consultant Score (1 to 5)	Weight × Score
Technical Credentials			
Personnel Credentials	_____	_____	_____
Key Personnel	_____	_____	_____
Experience			
Corporate Project Experience	_____	_____	_____
Managerial Skills			
Project Manager Experience	_____	_____	_____
Organization & Cost Control	_____	_____	_____
Availability of Resources			
Key Personnel	_____	_____	_____
Support Staff & Services	_____	_____	_____
Financial Capacity	_____	_____	_____
Professional Integrity			
Professional Independence	_____	_____	_____
Business References	_____	_____	_____
Other			
Innovation	_____	_____	_____
Value	_____	_____	_____
Total Score			_____

Note: Items under **Other** should be selected to reflect the special needs associated with a specific project. Items such as innovation, value etc. can be included. The weight percentage should be established after the items to be evaluated are established.

QUALIFICATIONS ASSESSMENT FORMAT

Example II

This Qualifications Assessment Format is designed for a project which has two or more areas requiring specialized expertise that will significantly influence the success of the project. This format can also include the assessment of a presentation interview.

Assessment Criteria	Weight %	Consultant Score (1 to 5)	Weight × Score
Firm/Staff Technical Credentials			
Personnel			
Area A	_____	_____	_____
Area B	_____	_____	_____
Experience			
Corporate Project Experience			
Area A	_____	_____	_____
Area B	_____	_____	_____
Managerial Experience			
Experience			
Area A	_____	_____	_____
Area B	_____	_____	_____
Organization & Cost Control	_____	_____	_____
Availability of Resources			
Key Personnel			
Project Manager	_____	_____	_____
Technical Leader Area A	_____	_____	_____
Technical Leader Area B	_____	_____	_____
Support Staff & Services	_____	_____	_____
Financial Capacity	_____	_____	_____
Professional Integrity			
Professional Independence	_____	_____	_____
References	_____	_____	_____
Other	_____	_____	_____

Assessment Criteria	Weight %	Consultant Score (1 to 5)	Weight × Score
Technical Proposal			
Understanding of the Project	_____	_____	_____
Proposal Evaluation Logical	_____	_____	_____
Technical	_____	_____	_____
Comprehensive	_____	_____	_____
Creative	_____	_____	_____
Timeline	_____	_____	_____
Other	_____	_____	_____
General Considerations			
Objectivity	_____	_____	_____
Present Workload	_____	_____	_____
Communications	_____	_____	_____
Other	_____	_____	_____
Presentation Interview			
Presentation	_____	_____	_____
Personality & Maturity	_____	_____	_____
Directness of Presentation	_____	_____	_____
Responses to Questions	_____	_____	_____
Ability to instill Confidence	_____	_____	_____
Compatibility	_____	_____	_____
Other			
Innovation	_____	_____	_____
Value	_____	_____	_____
Total Score			_____

Note: Items under Other should be selected to reflect the special needs associated with a specific project. Items such as innovation, value etc. can be included. The weight percentage should be established after the items to be evaluated are established.

QUALIFICATIONS ASSESSMENT FORMAT

Example III

This Qualifications Assessment Format is designed for flexibility for a wide range of project specific qualifications. The "assessment criteria" can be combined from a variety of formats to meet the project needs.

Assessment Criteria	Weight %	Consultant Score (1 to 5)	Weight × Score
Project Understanding			
Comprehension of scope	_____	_____	_____
Awareness of Client needs	_____	_____	_____
Familiarity with project	_____	_____	_____
Project Team			
Problem-solving ability	_____	_____	_____
Creativity	_____	_____	_____
Technical Background	_____	_____	_____
Experience			
Relevant technical experience	_____	_____	_____
Relevant projects completed	_____	_____	_____
Budget & Schedules			
Cost Control Techniques	_____	_____	_____
Ontime/within budget limits	_____	_____	_____
Scheduling techniques	_____	_____	_____
Project Approach			
Management Plan	_____	_____	_____
Project Phasing	_____	_____	_____
Project Organization	_____	_____	_____
Capabilities			
Staff & Facilities	_____	_____	_____
Technology applications	_____	_____	_____

Assessment Criteria	Weight %	Consultant Score (1 to 5)	Weight X Score
Local Sensitivity			
Governmental & regulatory agency familiarity	_____	_____	_____
Knowledge of site	_____	_____	_____
Reputation			
Past Clients/repeat business	_____	_____	_____
Service from concept through completion	_____	_____	_____
Client Relationship	_____	_____	_____
Other			
Innovation	_____	_____	_____
Value	_____	_____	_____
Total Score			_____

Note: Items under Other should be selected to reflect the special needs associated with a specific project. Items such as innovation, value etc. can be included. The weight percentage should be established after the items to be evaluated are established.