



A SUGGESTED PROCEDURE FOR THE EVALUATION OF BIDS FOR CONSULTANCY SERVICES

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INTRODUCTION

In the implementation of public water supply or sewerage schemes, the tendering and evaluation of bids has hitherto been recognised as a legitimate prerequisite of construction activity. However, with the recent advent of schemes funded by the International lending agencies especially in the developing countries, these tendering and bid evaluation functions have also to be extended to the area of consultancy services as well.

Consequently, the engineer, who is burdened with this relatively not hitherto familiar aspect of decision making finds himself in an unenviable situation for precisely two reasons namely (i) He has to evaluate certain personnel and firms of whom, at best he would have only heard of and (ii) His accustomed method of evaluating a construction bid seems to be inadequate to justifiably cover the basically different scope of a consultancy service bid.

The dilemma is accentuated by the nonavailability in our literature of suggested evaluation procedures for such bids and engineers normally tend to use the hitherto familiar definitive procedure wherein, the capacity and experience of a stated firm in handling certain specified engineering tasks are evaluated in some traditional detail whereas certain other and perhaps more vital considerations in the context of a useful consultancy service are left out. Written in this background, this paper presents a non-traditional procedure for evaluation of especially, consultancy service bids.

VITAL BASIC CONSIDERATIONS

For a meaningful evaluation of consultancy service bids vital considerations to be looked into would be, the Experience of Personnel, Experience of the firm, Adequacy of the consultancy offer and the approach of the firm towards evolving solutions for tasks stated in the terms of reference. These can be sub-divided into certain facets as in Table 1.

For the purpose of Evaluation, these facets have to be looked for in the bid submissions and scores depending on the extent of compliance have to be allotted for each facet. The description of what really each of these facets implies as well as a suggested scoring system are presented herein.

TABLE - 1

SUGGESTED CRITERIA AND FACETS FOR EVALUATION

PERSONNEL	Knowledge of Problem Sources of knowledge Needed knowledge Analysis
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EXPERIENCE	Orientation Problem Identification Opportunity Identification Reconnaissance Power Status & Locus
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ADEQUACY	Aspirations Results Analysis Evaluation Feedback Compliance
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APPROACH	Experimentation Programme Design Contract Setting Implementation
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Orientation

Forms the basis on which the firms' bids have emanated. Obviously, a firm which is directly oriented to community water supply and sewerage design and construction supervision is better suited than multi disciplinary firms. Scoring example: Direct Involvement - 100, Multi-Disciplinary - 75, Marriage of Convenience - 50.

Problem Identification

A clear amplification of the stated problem which further enhances the scope and identifies problems in greater detail than in the Terms of Reference is obviously the most welcome of the proposals. A repetition of the Terms of Reference in a clear manner, is the second of choice. Statements confusing and mis-representing the intentions as in the Terms of Reference only indicate a lack of Technical competency. Scoring example: Clearcut & Amplified - 100, Repetition of Terms of Reference - 50, Confusing of Terms of Reference (-)50.

Opportunity Identification

The ability of the firm to identify its opportunities in carrying out the works in the work region and explicitly spelling out their advantages has to be given the due credit. Consequently, such a firm can be expected to give out a set of good alterna-

tives as means to the end of the project. Mention of only modest alternatives is of course an indication of the run of the mill type. Absolute lack of mentioned alternatives is a source of lack of enterprise. Scoring Example: Good Alternatives - 100, Modest Alternatives - 50, No Alternatives (-) 50.

Knowledge of Problem

Spelt out knowledge of the problem as it exists now is a means of knowing the ability of the firm to understand the existing situation, and its needs and from out of all these, generate an adequate knowledge for the best efforts needed to be put in. Scoring Example: Adequately spelt out - 100, Inadequately spelt out - 50, No elaboration (-) 50, No mention (-) 100.

Reconnaissance

It is to be expected that, based on the field visits and discussions which the firms would have had prior to bidding, the firms have to come up with original considerations in the design and construction programmes. While this will eventually be attended to by whichever the firm is, there is no escaping from the fact that, a quick and alert eye even during bidding is an alert beginning. Scoring Example: Appreciable - 100, Agreeable - 70, Inadequate (-) 50, Totally Lacking (-) 100.

Sources of knowledge

Essentially, a matter of personnel in the service of the firm, as it is the personnel and their own knowledge that ultimately forms the basis and sources of the firm's knowledge. The Scoring system has to be for the qualifications, experience and known abilities of the personnel as reflected in their biodata which should find a place in the bid itself.

Needed knowledge

In other words, drawbacks of the firm and wanting areas in its armoury for finding the solutions for the tasks now assigned as clearly relating to personnel and their limitations in their claimed disciplines. Should the firm land personnel who are inadequately equipped technically, the demand and draw on the user agency's reserve of engineers would eventually be more than anticipated. To that extent this criteria becomes significant both technically and financially. Scoring has to be again based on bio-data evaluation and a minus figure.

Power and Status Locus

The achievement of any firm in a chosen undertaking is directly a result of its desire to gain a status signal consequent on a satisfactory completion and also from out of a desire to sustain its past status.

The crucial connection in the chain leading to the successful accomplishment of this status signal is its power locus, location-wise. For, getting away with a bad job overseas would not affect the native status of a foreign firm in its country. Contrary to this, the doing of a bad job in the firm's native country is something no aspiring firm may afford to. The scoring system has to be with respect to nativity in relation to the work location.

Aspirations

Forms the live wire of all intentions for activity. This is borne out of the past experience accumulated by the firm and has to be clearly spelt out by the firm. For example, why they want to come over and do the job? Making profit is of course a common denominator to all the firms, but, more important from the user's view would be a firm who is known to be world wide with a desire to get a footing, here in the user country. Scoring Example: Spelt out clearly - 100, No mention (-) 50, Tendency to outwit the user agency (-) 100.

Analysis

Closely resembling reconnaissance, but, in reality, totally different in scope, this criteria evaluates the firm's capabilities to analyse its strengths, weaknesses and opportunities, thereby evolving its personnel, social and situational analysis. For example, a firm with a lot of personnel strength who have had a technical and social exposure to situations here, would not only save on the take off and acclimatisation time, but in all probability would be willing workers when they decide to come over. Scoring Example: Adequate Personnel Strength - 100 max, Adequate social strength - 100 max, Adequate Situation Strength - 100 max.

Experimentation

A trait of successful work accomplishment in original style in engineering projects is the willingness to question the adequacy of prescribed norms in a condusive manner and to go in for experimentation of other known norms before deciding on firm work bases. Scoring Example: Design Aspects - 100 max, Review Aspects - 100 max, Construction Aspects - 100 max.

Result Analysis

An offshoot of analysis and experimentation, this criteria represents the willingness of the firm to adequately pronounce and openly express the results analysis. Most often, miscalculated earlier versions are simply changed to later found versions without either mentioning the reasons or admitting earlier inadequacies. A firm which comes out with the result analysis and admits the findings is naturally to be preferred as it

is an indication of its own welcome admission levels of unintended mistakes. Scoring Example: Commitment on Design - 100 max, Commitment on Review - 100 max, Commitment on Construction - 100 max.

Programme Design

Otherwise called as work plan, this is a critical consideration in evaluating a firm's offer of consultancy. If the firm cannot even design a programme adequately, it can never conclude its assignment on any mentionable note. The user agency has perhaps the best knowledge of an adequate programme required for accomplishing the specified tasks. Scoring Example: Adequate - 100, Inadequate (-) 50, confusing (-) 100.

Contract setting

An area where, bidding agencies may not state clearly the real tenure and work responsibility of the personnel and activities. An explicit commitment in terms of specific personnel and their stated tenures and with respect to committed and identified tasks of the project would be ideal. Consequently, vague and camouflaged statements have to be discouraged. Scoring Example: Commitment by personnel, activity and tenure - 100, Activity and Tenure only - 70, Designation and tenure only - 50.

Implementation

The clear cut commitment to a stated length of time and the optimisation of the activity time intervals into a PERT format is the least that any firm can be expected to prepare and furnish. Consequently, a mere bar chart of activities is inconsequential. Further, the past records of the firms in having kept their claims in regard to time intervals has also to be considered. Scoring Example: Adequate - 100, Inadequate (-) 50, Confusing (-) 100.

Evaluation Feedback

In long term contractual obligations, particularly with firms who claim to have an international experience, a logical post contract service to be legitimately expected is the evaluation feedback of its works from time to time as improved upon in other locations. So much so, the expectation, needs to be backed up by a convincing commitment on the part of the firms. Scoring Example: Committed - 100, Noncommitted (-) 50.

Compliance

The most significant though not the most important of all criteria is the compliance of the firms for certain details which were explicitly spelt out in the Terms of Reference. Complete compliance has to be encouraged fully. Lack of mention being the mid-line and the demand of contrary details is to be discouraged. Scoring Example could be

from the aspects of Arrangement of Work Plan, Duties of user agency staff, Experience on Specific works, Accomodation and Transport Commitments, Taxation Commitments and turning over of all basic records to the user agency on completion of the project. The scoring could be a minus figure in certain cases.

THE NET SCORING SYSTEM

Depending on the nature and scope of the works for which the consultancy bids have been invited, the relative importance of each of the afore discussed criteria would vary. Thus for example, if the consultancy is for a socio-economic pre-investment survey, criteria nos.3 & 5, i.e. opportunity identification and reconnaissance may be more important. They however would be the least important in a consultancy for construction supervision. Hence relative weightages have to be awarded for each criteria and is a matter of decision for the user agency. An illustrative weightage for an hypothetical water supply consultancy project for design and construction supervision is illustrated in Table 2. It is however important that the scoring system for allotting scores to each of the facets and the relative weightages of the facets have to be finalised by the user agency before receipt of the bids. Similarly, wherever minimum qualifying scores are contemplated, the requisites to meet these minimum scores must be adequately spelt out in the Terms of Reference itself.

T A B L E - 2

SUGGESTED WEIGHTAGES IN ORDER OF PRIORITIES

Criteria	Weightage
Orientation	2
Problem Identification	3
Opportunity Identification	2
Knowledge of problem	5
Reconnaissance	1
Sources of Knowledge	2
Needed knowledge	2
Power status & Locus	1
Aspirations	1
Analysis	1
Experimentation	1
Results Analysis	1
Programme Design	6
Contract setting	3
Implementation	4
Evaluation Feedback	1
Compliance	4

CHOICE OF THE SUCCESSFUL BID

The stage now gets set for deciding the successful bid. Certain alternatives in this regard are discussed herein.

In one alternative, the successful bid would

T A B L E - 3
ILLUSTRATIVE EVALUATION USING THE SUGGESTED PROCEDURE (1)

Facets for Evaluation	No.	Scores		Scores Awarded				
		Max.	Min.	Bid 1	Bid 2	Bid 3	Bid 4	Bid 5
Scores on Technical Bid	1	100	40	63	50	47	40	40
Cost of Offer, Rs.Lakhs(10^5)	2	-	-	5.14	4.56	3.49	3.32	1.99
Scoring to Cost Ratio	3	-	-	12.26	10.96	13.47	12.05	40.20
% of Ratios in item 3	4	50	-	15	14	16	15	50
Originality	5	15	10	10	10	10	6	0
Compliance	6	15	15	15	15	15	0	0
Orientation	7	20	15	15	15	15	20	8
Total of items 4 to 7		100		55	54	56	(2)	(2)

- N.B.: (1) Scope of Bidding for design and construction of a pressure filter recirculation system for a hitherto fill and draw type of swimming pool.
 (2) Bids 4 & 5 not totalled and rejected as minimum scores have not been obtained in respect of items (5), (6) & (7).
 (3) Choice can be either Bids (1) or (2) or (3) depending on investment capability as all three bids represent commensurate levels of return on respective investments.

be that bid which has met the stated minimum scores in each facet and has obtained the highest net weighted score. The bidder has to be called in, his cost bid opened and the price level negotiated with respect to a prior estimated value.

In another alternative, for all the firms who have met the minimum qualifying scores for each of the facet, their cost bids could be opened and the scores to cost ratio computed. The successful bidder would be one whose bid obtains the maximum ratio of scores to cost. It may be noticed here that, the question of price negotiation with any or all of the bidders does not arise in this alternative, as, should it be done, the bidders would be encouraged to offer price reductions knowing fully well the needed margins for obtaining the maximum score to cost ratios.

A third alternative would be to restrict the scoring to cost ratio to only the scores in respect of certain work items and thereafter convert these ratios into a prorata percentage score. To this are added scores obtained in respect of the remaining facets and the resulting highest score indicates the successful bidder.

Each of these alternatives have their own areas of importance in actual use. For example the first alternative is better suited for consultancy service biddings for socio economic studies which are mostly a routine type of data collection and documentation efforts of a short duration. The second alternative is better suited for consultancy bids for detailed engineering design. The third alternative is better suited for bids where emphasis is more on construction of a project than its design

and detailed engineering.

An example of the usefulness of this evaluation procedure using the third alternative is presented in Table 3 which reproduces the evaluation sheet used by the author in rating bids for design and construction for a pressure filter recirculation system.

POSSIBLE ADVANTAGES

The suggested procedure has certain advantages as follows.

It is easier to build up this suggested procedure into a standard programme which could be subjected to a sensitivity analysis when biddings have to be evaluated in an uncertain investment climate with associated doubts in regard to the time factor.

Further, the engineer who evaluates, simply assigns a score which he feels justifiable & there need be no elaborate arguments on record which are so often difficult to draft to concisely present the intended statements and have a tendency to warrant criticism and comments depending upon the reviewer's understanding of such written records.

Moreover, it is easier to quantify one's judgements for posterity than writing and piling up huge volumes of qualitative write ups which are both cumbersome and voluminous. This is all the more significant with the availability of computer facilities in many locations.