1. Weighted Criteria
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What is it?

Weighted criteria is a two-part type of best value procurement in which bidding firms submit a technical component and price component to the STA. The STA scores the technical component using pre-determined criteria that are weighted according to pre-determined importance. Then, the price component is analyzed. The lowest bid is assigned the highest price score and remaining bids are assigned a score proportional to the lowest bid score. The proposal with the highest combination score of technical and price is awarded the project (*1, 2*).

Why use it?

Using the weighted-criteria best value procurement process allows for STAs to encourage innovation and to obtain the proper specific experience that is needed to for the desired outcome. If an STA is attempting to gain innovative design solutions, the weight for those items can be larger than other factors (*3*).

What does it do?

The weighted criteria approach to best value procurement provides a generalized process for using best value procurement in a way that emphasizes the more critical areas of a project over the less important aspects.

How to use it?

Molenaar et al (*3*) summarized a weighted criteria algorithm for design-build best-value procurement using the following steps:

1. Develop qualifications, technical, schedule, and cost evaluation criteria as appropriate for project goals. For each evaluation criteria, the owner must develop a measurable standard against which responsiveness will be measured. Typically a direct point scoring system is be devised around the measurable standards.
2. Publish the design-build request for qualifications (RFQ). The solicitation should contain the following items as a minimum:
3. Scope of work, plans, and specifications.
4. Bid form.
5. Contract completion date or days.
6. Best-Value evaluation plan listing the qualifications evaluation criteria with corresponding standards.
7. Design-build proposal evaluation plan listing the technical, schedule, and cost evaluation criteria with corresponding standards.
8. Description of what constitutes a non-responsive proposal.
9. Receive Statements of Qualification (SOQ).
10. Evaluate SOQ’s against published standards and determine which proposals are fully responsive in meeting the qualifications criteria.
11. Announce the competitive range made up of all fully responsive SOQ’s.
12. Publish the design-build request for proposals (RFP). The solicitation will contain the following items as a minimum:
13. Scope of work, plans, and specifications.
14. Bid form.
15. Contract completion date or days.
16. Method to carry forward Step 1 qualifications ranking/scores into final evaluation.
17. Design-build proposal evaluation plan listing the technical, schedule, and cost evaluation criteria with corresponding standards.
18. Description of what constitutes a non-responsive proposal.
19. Evaluate design-build proposals against published technical, schedule, and cost standards and determine which proposals are fully responsive in meeting the qualifications criteria.
20. Eliminate any non-responsive proposals from the competitive range. Roll-up evaluation results and determine the final point score for each responsive proposal. The score is determined using the following weighted criteria formula:

$$TS=W\_{1}S\_{1}+W\_{2}S\_{2}+…W\_{i}S\_{i}+W\_{i+1}PS$$

$$TS = Total score; award project to highest total score proposal$$

$$W\_{i}=Weight of factor i$$

$$S\_{i}=Score of factor i$$

$$PS=Price proposal score$$

1. Compute the final scores using the weighted criteria formula to identify the best proposal. STA awards the project to the highest final score within the competitive range.

When to use it?

The weighted criteria best value approach is useful when a fast track schedule is required. It is also useful for projects when constructability is inherent to the successful execution of the project (*2*). Further, any project that has one or a couple highly important technical aspects is ideal for weighted criteria in that those highly important aspects can be weighted higher than other technical aspects.

Limitations?

The STA must clearly define the scoring system in the RFP so that potential bidders understand the areas that are more critical than others *(1).* If any discrepancies exist in the RFP that are interpreted differently by different proposing firms, the scoring procedure will be incorrect. This can lead to protests by unsuccessful firms. Defining the outcomes and scoring system in the RFP is critical in using any of the best value procurement options such as weighted criteria.

Who uses it?

Alaska, Delaware, Idaho, Massachusetts, Nevada, Oregon, Utah, Virginia, City of Reno (Nevada), Ft. Lauderdale County (Florida)

Example

The Alaska Department of Transportation used a weighted criteria best value approach for the Glenn-Parks Interchange project (*1*). Located 40 miles north of Anchorage, the Glenn-Parks Interchange project provides two lanes of continuous flow in each direction for the Glenn Highway from Eklutna to Parks Highway. The project included the construction of overpasses over the Alaska Railroad.

Short-listed firms prepared and submitted technical and price proposals. The price proposals were submitted following the evaluation of the technical proposals. The technical evaluation criteria included project approach plan, technical solutions, environmental work plan, project staffing plan, and enhancements to minimize life-cycle costs. All items were scored using a direct point scoring system that totaled 100 points. Then, all technical scores were normalized using the following formula:

$$Normalized Technical Proposal Score (NTPS) =\frac{(Proposer^{'}s Technical Proposal Score)}{(Highest Technical Proposal Score)}$$

All fixed price was normalized using the following formula:

$$Normalized Fixed Price (NFPS) =\frac{(Lowest Fixed Price)}{(Proposer^{'}s Fixed Price)}$$

A final score was then determined using the following formula:

$$Final Score = [(0.25×NTPS) + (0.75×NFPS)]×100$$

The proposing firm with the highest score was awarded the contract.

References

1. Scott, Sidney, Keith R. Molenaar, Douglas Gransberg, and Nancy C. Smith. *NCHRP Report 561:* *Best-Value Procurement Methods for Highway Construction Projects*. National Cooperative Highway Research Program, Transportation Research Board, Washington DC, 2006.
2. Beard, Jeffrey L, Michael Loulakis, and Edward C. Wundram. *Design-Build: Planning Through Development*. McGraw-Hill, New York, 2001.
3. Molenaar, K., D. Gransberg, S. Scott, D. Downs, and R. Ellis.  *Project No. 20-7/Task 172: Recommended AASHTO Design-Build Procurement Guide – Final Report*. National Cooperative Highway Research Program, Transportation Research Board, Washington, DC, Aug. 2005.