GUIDANCE NOTE ON EVALUATION CRITERIA FOR THE PROCUREMENT OF GOODS, WORKS AND NON-CONSULTING SERVICES

December 2021

Prepared by The Caribbean Development Bank

COMMON ABBREVIATIONS AND DEFINED TERMS

Common abbreviations and defined terms that are used in this Guidance Note. Defined terms are written using capital letters.

Abbreviation / term	Full terminology / definition
Bid	An offer, by a Bidder, in response to a Request for Bids, to provide the required Goods, and/or Works and/or related services.
Bidder	A Firm that submits a Bid for the provision of Goods and/or Works and/or related Services.
CDB	Caribbean Development Bank
Consultant	A Consultant Firm or Individual Consultant that provides Consultant Services. A Consultant is independent of both the Recipient and CDB.
Consultant Service(s)	Consultant Services are those intellectual services delivered by a Consultant Firm or an Individual Consultant. Consultant Services are normally of a professional, expert, or advisory nature. Consultant Services are governed by these Guidelines.
Goods	A category of Procurement that includes, for example: consumables, equipment, machinery, vehicles commodities, raw materials, or industrial plant. The term may also include related services, such as: transportation, insurance, installation, commissioning, training, or initial maintenance.
ITB	Invitation to Bid
LCC	Life cycle costing
Member Country	CDB's Member Countries are those that are described in Annex II, as updated from time to time
Non-Consulting Services	Services which are not Consulting Services. Non-Consulting Services are normally Bid and contracted based on performance of measurable outputs, and for which performance standards can be clearly identified and consistently applied. Examples include drilling, aerial photography, satellite imagery, mapping, and similar operations.
NPV	Net Present Value
Policy	The Procurement Policy for Projects Financed by CDB, as amended from time to time.
Procedures	The Procurement Procedures for Projects Financed by CDB, as amended from time to time.
Procurement	The function of planning for, and sourcing Goods, Works, Non-Consulting Services, and/or Consulting Services to meet required objectives.
Procurement Framework	The Policy and the Procedures, as amended from time to time.

Abbreviation / term	Full terminology / definition
Procurement Strategy	The Recipient's Project-level Procurement Strategy document that describes how the procurement will deliver the intended development objectives and provide VfM through the application of CDB's Core Procurement Principles.
VfM	Value for Money
Works	A category of Procurement that refers to construction, repair, rehabilitation, demolition, restoration, maintenance of civil work structures, and related services such as transportation, insurance, installation, commissioning, and training.

CONTENTS

SECTION 1 – OVERVIEW

Further to CDB's Guidance Note on Bid Evaluation for goods, works and non-consulting services (June, 2021), which explains the general procedures for evaluating bids for Goods, Works and Non-Consulting Services, this Guidance Note explores some of the more complex issues in bid evaluation, in particular how to apply non-price criteria to bid evaluation for goods, works and non-consulting services and how to evaluate bids not just on the basis of the initial purchase price of the goods, but also on the whole cost of owning, operating and disposing of the goods.

This Guidance Note should be read in conjunction with CDB's Procurement Policy for Projects Financed by CDB, dated November 2019 ("The Policy") and Procurement Procedures for Projects Financed by CDB, dated January 2021 ("the Procedures")[1], with specific reference to Annex 5: Evaluation Criteria of the Procedures.

---

[1] The Policy and the Procedures can be viewed at: www.caribank.org/work-with-us/procurement/resources

SECTION 2 – PRICE vs. NON-PRICE CRITERIA

Given that economy is one of the Core Procurement Principles of the Policy[2], price will feature, to a greater or lesser extent, as an evaluation criterion in the great majority of bid evaluation processes.

This is especially true in the procurement of goods, civil works and non-consulting services. In these types of procurement, the outputs of the contract are primarily physical in nature and, therefore, lend themselves to being clearly described, specified and quantified in the Purchaser's definition of its procurement requirement, as contained in the bidding documents.

In such circumstances, price will always be an important – and, invariably, the primary - criterion in evaluation because, once the Purchaser has defined its requirement clearly, the principle of economy requires that the Purchaser should not pay more than the lowest evaluated cost to procure it, albeit with due consideration for other components of achieving Value for Money (VfM)[3].

As a general rule, therefore, the more clearly a Purchaser is able to define its procurement requirement in the bidding documents, the greater the role price will play in the evaluation of bids and, conversely, the less importance will be afforded to non-price criteria in evaluation. In all cases, the criteria used in bid evaluation should be appropriate to the nature and complexity of the procurement[4] and should, wherever possible, be quantified and expressed in monetary terms. Quantification of evaluation criteria in monetary terms improves the objectivity of the evaluation process by expressing all evaluators' considerations of each bid in a common unit of measure: money. This, in turn, makes the contract award decision easier to defend in cases such as where it is queried by a public official outside the evaluation committee or where it is challenged by a complaint from an unsuccessful bidder. With these considerations in mind, the design of the evaluation criteria should generally maximise the use of quantifiable criteria and minimise the application of unquantified criteria, such as merit points, limiting the use of such criteria to the maximum extent necessary to achieve VfM.

In exceptional cases, such as for highly technically complex contracts, for contracts that require a high degree of innovation or those that involve the application of new technologies, CDB may agree to an approach to bid evaluation that features a combination of price and non-price criteria. However, even in such cases, usually a maximum of 30% of the overall weighting of the evaluation criteria should be allocated to non-price technical features, with price accounting for at least 70%[5].

---

[2] See the Policy for Projects Financed by CDB (November 2019), paragraph 3.1(b).
[3] See the Policy, paragraph 3.1(a).
[4] See the Procedures, Annex 5, paragraph 2.
[5] In accordance with paragraph 13 of Annex 5 of the Procedures, in exceptional circumstances up to 50% of the overall weightings may be allocated to technical features, if justified in the context of the project and the contract to achieve VfM.

The purpose of this Guidance Note is to explain how price and non-price criteria may be combined in the evaluation of bids for goods, works and non-consulting services under the Policy and Procedures.

SECTION 3 – PRICE-ONLY EVALUATION

The evaluation of bids solely on the basis of the offered price, that is, the bid price as stipulated in the Form of Bid, with minor corrections, such as for arithmetical errors, but without notional adjustments for evaluation purposes[6], remains a valid approach under certain circumstances and, in some cases, is the most appropriate means of achieving VfM. Such cases may include:

(a)　where the Purchaser's procurement requirement is straightforward in nature;

(b)　where the procurement requirement can be fully and accurately defined in the bidding documents; or

(c)　where the initial purchase price of the goods heavily outweighs the cost of owning and operating the goods throughout their useful life cycle.

Price-only evaluation is the most transparent way of evaluating bids, as bids are evaluated primarily in objective, quantifiable, monetary terms. Some subjectivity may still be involved in the evaluation process, such as in in the evaluators' judgements regarding the commercial and technical responsiveness of the bids. However, among those bids that have been determined to be substantially responsive, the recommendation for the award of the contract is made on the basis of the lowest price, thus making the award decision substantively objective in nature.

Even where the Purchaser applies the Direct Selection procurement method[7], even though, in the absence of competition between bidders, price is not a factor in the selection of the supplier or contractor, the evaluation of price still plays an essential role in the Purchaser's decision whether or not to accept the sole supplier's or contractor's offer, given that the Core Procurement Principle of VfM should still be pursued.

Goods, works and non-consulting services that lend themselves to a price-only evaluation include:

(a)　readily-available, off-the-shelf goods which are simple in nature, such as consumables, office stationery, printer paper or photocopier paper or procurement of construction materials, when procured separately from a civil works contract;

(b)　civil works which are simple in nature, such as landscaping, placement of dolosse for reducing coastal erosion or of gabion baskets for fortifying retaining walls; and

(c)　non-consulting services which are physical in nature and may be easily quantified, such as administering survey questionnaires as inputs to a public survey.

---

[6] The relationship between the offered price and the evaluated price is explored more fully in CDB's Guidance Note on Bid Evaluation for Goods, Works and Non-Consulting Services, referred to in paragraph 1, above.
[7] See: the Procedures, paragraph 7.10.

In the case of surveys, however, the design of the survey instrument, that is, the questionnaire, and the interpretation of the survey results are consulting services involving a level of intellectual content, which would not be amendable to price-only evaluation.

SECTION 4 – NON-PRICE CRITERIA

As explained in Section 3 above, where price is the only criterion used in the evaluation of bids, the price at which the contract is awarded will generally be the same as the price stated on the Form of Bid, that is, the offered price, as submitted by the bidder in its bid. However, there may be minor changes made to the offered price, for example, to correct arithmetical errors made by the bidder in its bid.

In addition to and distinct from the offered price, a bid may also have an evaluated price, that is, the offered price plus or minus any notional adjustments that the Purchaser may make to the offered price to reflect the Purchaser's evaluation of non-price criteria, including those listed below.

Minor changes to the offered price, such as for the correction of arithmetical errors, are included in the price of the contract as signed; notional adjustments are not. Rather, they are made purely as part of the process of evaluation of non-price criteria to allow the Purchaser to compare one bid with another on a common basis but are discarded once this comparison has been made. Again, notional adjustments that the Purchaser makes to a bid's offered price to calculate its evaluated price are not included in the price of the contract as signed.

This distinction between offered bid price and evaluated bid price is explored more fully in the CDB's Guidance Note on Bid Evaluation for Goods, Works and Non-Consulting Services.

In evaluation of bids for goods, works or non-consulting services financed by CDB, the following non-price criteria may be evaluated, where provided for in the bidding documents.

4.1   Non-price criteria that may be evaluated in strictly monetary terms

(a)   **Delivery Time:** In defining a date by which the Purchaser requires goods to be delivered, it has the option to set either a definitive date - in which case, bids offering goods to be delivered later than that date shall be rejected - or an acceptable range of delivery dates. Where the Purchaser specifies an acceptable range of delivery dates, say, 12-18 weeks, it would evaluate a bid that offers delivery within 12 weeks at the bid's base price but notionally penalise a bid that offers later delivery within the acceptable range. Therefore, for example, a bid that offers delivery within 13 weeks might have 1% of its evaluated bid price added as a notional adjustment, while a bid offering delivery within 14 weeks would have 2% of its price notionally added and so on. The percentage or amount of the adjustment to be notionally added per week of delay within the acceptable range should be specified in the bidding documents and the Purchaser may apply such an evaluation methodology only if it is provided for in the bidding documents. Under this methodology, a bid offering delivery later than 18 weeks shall be rejected as

4

non-responsive. A further delivery-related deviation which may be evaluated in monetary terms is where a bidder proposes a lower ceiling for the maximum amount of liquidated damages than that stipulated by the Purchaser in the bidding documents.

(b) **Warranty Conditions:** Where a bidder offers superior warranty conditions than those stipulated by the Purchaser in the bidding documents - for example, an extended warranty period or a higher level of service while the goods are under warranty - the bid may be rewarded by the application of a notional adjustment in evaluation. Should that bidder be recommended for the award of contract, the contract that the Purchaser signs with the winning bid would include the superior warranty conditions offered in its bid but at the bid price as offered in the Form of Bid, excluding the notional adjustment.

(c) **Payment Terms:** While the Purchaser specifies its offered payment terms in the bidding documents, it may require bidders to offer their goods only on the basis of those payment terms or it may permit bidders to offer alternative payment terms in their bids; again, the Purchaser must specify its chosen approach in the bidding documents. For example, in the supply of goods, where the Purchaser stipulates the typical payment terms of 10% of the contract price paid as an advance payment upon the award of the contract, 80% upon shipment of the goods and a final 10% upon delivery and acceptance of the goods by the Purchaser, a bidder may request alternative, more favourable payment terms - for example, a 20% advance payment. In such a case, the Purchaser would calculate the financial cost it would incur by paying the additional 10% advance payment earlier than it had planned and add that amount as a notional adjustment – that is, as a penalty – to the bidder's evaluated bid price. If the bid, after such notional adjustment, is still the recommended bid for award, based on the application of the evaluation methodology, the Purchaser would sign the contract with that bidder on the basis of the alternative payment terms requested by the bidder in its bid, minus the notional adjustment to the evaluated bid price.

4.2 Non-price criteria that may be evaluated in monetary or non-monetary terms

(a) **Quality and Performance:** An evaluation methodology may be used that determines the extent to which a bid offers goods, works or non-consulting services that meet or exceed the Purchaser's minimum specified level of quality or performance, as defined in the bidding documents. Where a bid exceeds the required minimum level of quality or performance, it may be awarded an additional benefit in evaluation; such a benefit may be assigned a monetary value or it may be assigned additional points in an evaluation methodology that is based on scoring. Bids offering comparatively higher levels of quality or performance may be accorded a higher score, based on a methodology stipulated by the Purchaser in the bidding documents. For example, in the evaluation of bids for the design, supply and installation of solar photovoltaic (PV) modules, an evaluation methodology may be applied which assigns a monetary value to higher levels of efficiency of the offered PV modules, such that every 1% increase over and above the minimum required kilovolt (Kv) output would result in a corresponding notional discount of 1% in the evaluated bid price.

(b)   **Risk Mitigation:** Non-price evaluation criteria may include the extent to which a bid offers a technical solution which mitigates different types of risk which may be associated with the implementation of the contract. Such risks may include procurement, technical, operational or environmental risks. In evaluating a bidder's ability to mitigate such risks, the Purchaser should prioritise those risks which have been identified in any Procurement Strategy for the project, with particular emphasis being placed on the mitigation of those risks which have been rated as high in the Risk Categorisation Table of the project Procurement Strategy.[8] In addition, risks that have been identified in project-related studies or assessments, such as social, environmental or engineering studies undertaken for the preparation or implementation of the project, may also be included among those risks which bidders are requested to mitigate through the technical solution that they offer in their bids.

(c)   **Sustainability:** Under some projects, where agreed with CDB during the preparation phase[9], a Purchaser may wish to promote certain of its "horizontal" policies through the award of public contracts. Horizontal policies are those which are not necessarily connected with the procurement's primary functional objective, but which lend themselves to being promoted or implemented through public contracts awarded by government; the promotion of such policies through project procurement goes beyond and is additional to such requirements as may be defined in CDB's Environmental and Social Review Procedures. Such criteria may include various aspects of sustainability, including social, environmental or economic sustainability. In such cases, a bid may be awarded an advantage in evaluation where it demonstrates that it offers a higher level of sustainability, as measured either against a minimum level defined by the Purchaser in the bidding documents or by comparison with that offered by other bidders' bids. Under a National Competitive Bidding[10] procedure, where agreed with CDB, where the Borrowing Member Country has in place a legally binding policy on sustainable procurement, as in the case of Grenada[11], CDB may agree to the inclusion in the bidding documents of evaluation criteria that reward bids that offer goods that exceed minimum environmental requirements, such as energy efficiency standards or the participation of Micro, Small and Medium-Sized Enterprises in public procurement.

(d)   **Innovation:** In rapidly-changing, high-technology sectors such as information and communications technology (ICT) or renewable energy technologies, non-price criteria may also include the degree of innovation that a bid offers, in either the design or the implementation of the technical solution it proposes or in the extent

---

[8] See the Policy, paragraph 6.1 and Guidance Note on Procurement Planning and Strategy Development (March 2021), Annex III: Risk Categorisation Table.
[9] See the Procedures, paragraph 6.04.
[10] See the Procedures, paragraphs 7.04 – 7.07.
[11] See Cabinet Conclusion: Implementation of Sustainable Public Procurement Policy by the Government of Grenada (July 22, 2019).

to which it exceeds the Purchaser's stated minimum requirements and/or offers an alternative technical solution that may deliver higher levels of VfM. For example, where the Purchaser's requirement is to design, supply and install solar panels to power a facility, an innovative design might propose not just the installation of the solar panels to harness the energy of the sun to power the facility, but also the dual purpose of providing shade for a kitchen garden or for a car park on the facility, in which case, such an innovative technical solution may be awarded an additional benefit in evaluation.

SECTION 5 – EVALUATING THE BID vs. ASSESSING THE BIDDER

Whether conducted before the bidding process as prequalification or as one of the final steps in the evaluation process as post-qualification, the Procedures require that, "the Recipient shall determine whether Bidders have the capability and resources to effectively carry out the contract as offered in the Bid".[12]

In the majority of cases, the assessment of the bidder's qualifications is done as a separate step from the evaluation of the bidder's bid. In order to be awarded a CDB-financed contract, a bidder has to both submit the bid that is ranked highest as determined in accordance with the evaluation criteria specified in the bidding documents and be assessed as qualified to perform the contract successfully. Where a bidder submits a bid that may be recommended for award in accordance with the evaluation criteria defined in the bidding documents, it will still be denied the award of the contract if the Purchaser determines that the bidder fails to meet the qualification requirements to perform the contract.

In this respect, the evaluation of the bid and the assessment of the bidder's qualifications are discrete steps; a bidder must pass both tests in order to win the award of the contract.

Prequalification is usually done on the basis of pass/fail criteria, that is, the Purchaser defines a set of minimum required qualification criteria and all bidders that meet or exceed them are considered qualified to perform the contract successfully. Such minimum criteria may be defined, for example, as a minimum of 3 similar contracts successfully performed in the past 5 years, an average annual turnover over the past 3 years of, say, US$5.0m or available cashflow dedicated to the contract of US$1.0m. The levels at which the various criteria are set are driven by the requirements of the contract. Under post-qualification, the same set of minimum qualification requirements are applied but only to the bidder that submits the recommended bid, in order to ensure that the bidder is fully qualified before the Purchaser awards the contract to that bidder.

It is perhaps a limitation of the pass/fail approach to the assessment of bidders' qualifications that all bidders meeting the minimum criteria are considered qualified to perform the contract. This approach does not distinguish between different levels of qualification of the participating bidders; put another way, it does not take cognisance of the relative levels of qualification of different bidders, nor does it acknowledge the reality that some bidders may

---

[12] See the Procedures, paragraph 7.14.

be better-qualified than others and that, among a given field of bidders, one may be the best-qualified of all of them.

VfM considerations introduced into the Policy open up the opportunity for BMCs, in rare and specific situations, to avail of a different approach to the assessment of bidders' qualifications; one where the qualifications of each bidder may be rated as part of the evaluation of its bid and where the relative levels of qualification of bidders are taken into account, such that better-qualified bidders are afforded an advantage through the bid evaluation criteria. While the Procedures provide that qualifying criterion "are…normally evaluated on a pass/fail basis"[13], CDB may otherwise agree[14] that the Purchaser may limit the number of prequalified bidders to those that are best-qualified, an approach which may be appropriate, for example, in the case of a high-value, complex design-build contract.

SECTION 6 – LIFE CYCLE COSTING

Life Cycle Costing (LCC) is an approach to calculating all the costs associated with not just procuring a given asset but also of owning, operating and disposing of the asset at the end of its useful life; it involves factoring each of those cost elements into the process of bid evaluation at the point of deciding which bid should be awarded the contact. By applying LCC to the evaluation of bids, the Purchaser selects the winning bid on the basis of all the costs it will incur by procuring, owning, operating and, finally, disposing of the goods, rather than just the initial purchase price. In that respect, amalgamating LCC into bid evaluation offers the Purchaser a more comprehensive view of whether or not it is achieving VfM in the award decision.

From a procurement standpoint, the cost elements that the Purchaser takes into account when factoring LCC into the evaluation of bids may include the following as further depicted in the diagram below.

---

[13] See: the Procedures, Annex 5, paragraph 5.
[14] See: the Procedures, paragraph 7.13.
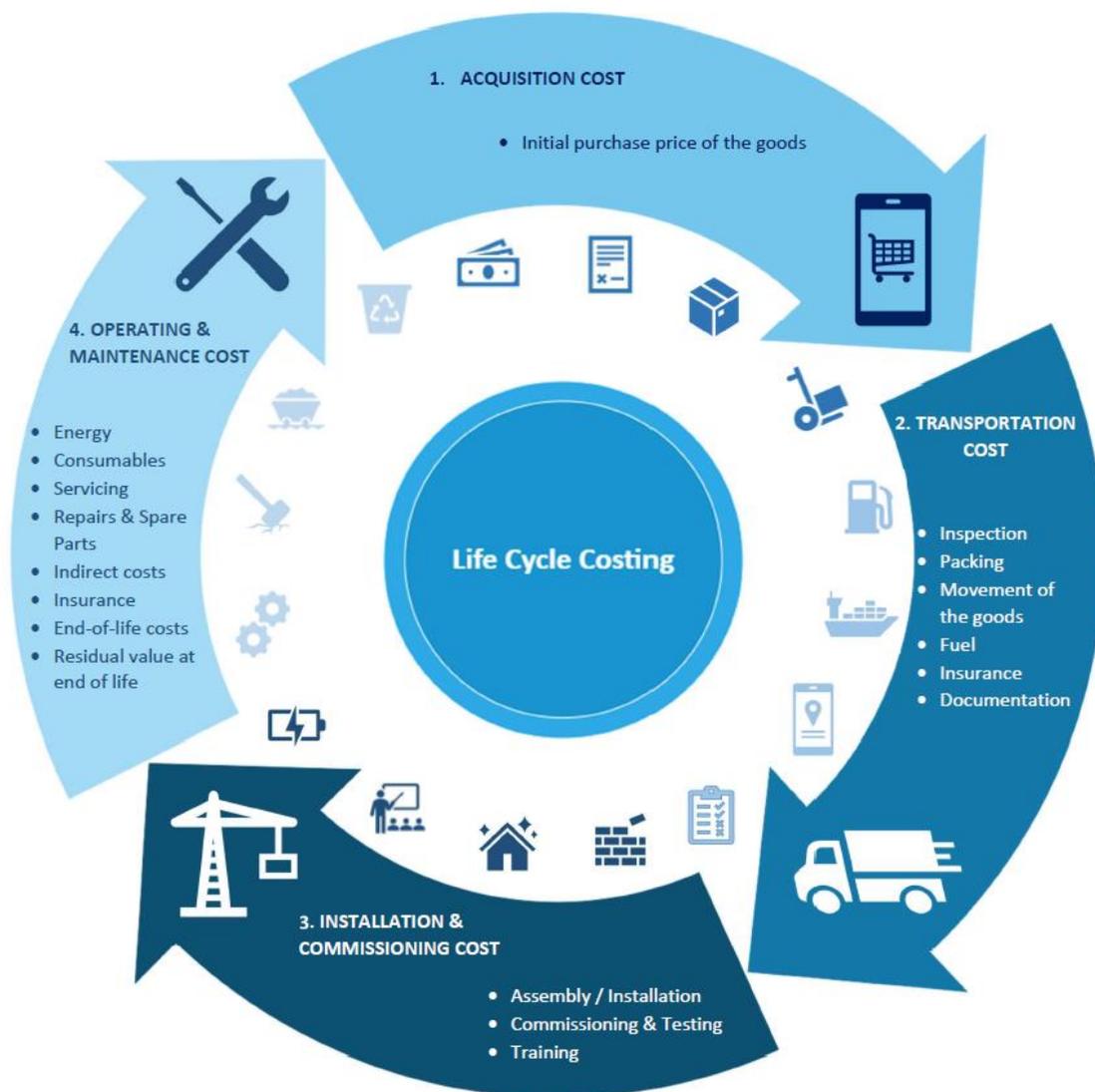
Diagram of Life Cycle Costing

1. Acquisition cost, that is the initial purchase price of the goods;

2. Transportation cost, if these have not already been included in the bid price;

3. Installation and commissioning costs, which may constitute a significant cost for heating or lighting systems or for large ICT systems, for example;

4. Operating and maintenance costs, which may include:
    (a) the cost of energy (electricity, petroleum, diesel) required for the operation of the goods;
    (b) the cost of consumables (e.g. paper, toner cartridges for printers) used in the operation of the asset over its intended useful life;

(c)   maintenance and servicing costs, such as the cost of periodic servicing of a car or bus, which are normally calculated in accordance with the manufacturer's recommended servicing schedule over the planned life of the asset. For a vehicle, this may be 5 – 7 years or 75,000 - 100,00 miles but may vary between vehicles, thus making the task of comparing life-cycle costs of one vehicle with those of another in bid evaluation more complex;

(d)   repair costs, including the cost of spare parts and labour costs of repair technicians;

(e)   indirect costs, such as environmental costs, including the cost of the emission of greenhouse gases or other pollutant emissions that occur during the operation of the asset and the cost to the Purchaser of making its ownership of the asset carbon-neutral, for example, by purchasing relevant, verified carbon offsets;

(f)   the cost of insurance premiums during the life of the goods, if they are to be insured;

(g)   end-of-life costs, including decommissioning and disposal costs, the cost of collection or removal and the cost of any government-imposed recycling or disposal fees for the disposal of hazardous chemicals, such as acids used in some car batteries, hazardous metals used in mobile phones, or oils and solvents resulting from construction works; and

(h)   residual value, which is the revenue the owner expects to collect from the sale of the asset at the end of its period of intended use, which, for evaluation purposes, would be applied as a reduction in the calculated life-cycle cost of the asset.

When the Purchaser intends to take like cycle costs into account in the evaluation of bids, it should indicate in the bidding documents which cost elements it will evaluate, the cost data that bidders are required to submit as part of their bids to inform this calculation and the method the Purchaser will apply to determine the evaluated cost of each cost element. Such costs are normally expressed by the bidder in the currency of its bid and factored into its evaluated bid price for comparison purposes.

Given that, in a competitive bidding situation, bidders have a commercial incentive to understate the life cycle costs of the goods they offer for sale, thought should be given to how such costs can be verified, such as by the collection of data on historical costs incurred by other purchasers in their continuous use of the same goods or through verification by an independent authority, such as a testing laboratory.

In order to protect the Purchaser's interests during its ownership of the goods, where LCC has been applied in evaluation, the contract should normally contain relevant functional guarantees from the supplier or manufacturer that the goods, plant or equipment will operate at the levels indicated by the bidder in its bid and that the Purchaser will incur life cycle costs consistent with those indicated in the bid. If, during the defined useful life of the goods, the Purchaser incurs higher costs from the use of the goods than those indicated by the bidder in its bid, the supplier would be liable to pay a penalty to the Purchaser, the level of which would be defined in the terms and conditions of the contract.

The application of LCC in bid evaluation is appropriate in all cases where the goods or plant are of a type that the cost of owning and operating them is so significant that it may cost almost as much as or perhaps even exceed the original acquisition cost. Therefore, it is certainly appropriate in the procurement of vehicles (passenger cars, trucks, buses, ambulances, fire engines), computers and monitors, lighting, imaging equipment (photocopiers, scanners), medical equipment and is imperative in the case of complex plant (power generation plants, water treatment plants).

LCC is unlikely to be applicable in the procurement of consumables (paper, office stationery) or goods that, by their nature, have a low cost of ownership (office furniture).

Table 1, below, presents an example of the calculation of life-cycle costs in the procurement of a fleet of 90 passenger cars, comparing the relevant life-cycle costs of procuring hybrid vehicles with the cost of procuring petrol vehicles.

Table 1: <u>Life Cycle Costing of a Fleet of Passenger Cars</u>[15]

Quantity	Unit		90
Number of years of usage		year	5
Discount rate		%	4
Product		Hybrid Car	Petrol Car
Acquisition Cost Per Vehicle	Euros	€22,000	€18,000
Fuel Consumption Per Vehicle	litre/kilometre	€0.04	€0.09
Annual Usage Per Vehicle	kilometre/year	20,000	20,000
Fuel Price	€/litre	€1.2	€1.2
Operating Cost per Unit (NPV)	Euros	€4,274	€9,616
Maintenance	€/vehicle/year	€800	€800
Maintenance per Unit (NPV)		€3,561	€3,561
Tax	€/vehicle/year	0	€200
Insurance Premium	€/vehicle/year	€300	€300
Total Costs Per Unit (NPV)	Euros	€1,336	€2,226
less Resale Value	€/vehicle	€11,000	€8,000
Total LCC Cost Per Unit		€22,130	€26,828
Total LCC Cost		**€1,991,660**	**€2,414,510**

SECTION 7 – USE OF NET PRESENT VALUE IN BID EVALUATION

The concept of Net Present Value (NPV) is related to that of LCC because, in evaluating future life-cycle costs at the time of bid evaluation, the Purchaser must calculate the present-day value of such costs that it expects to incur in the future by discounting or reducing them to

---

[15] Source: Swedish Environmental Management Council.

their present-day "net" value and include the discounted costs of each cost element in the evaluated price of each bidder's bid for comparison purposes.

NPV calculations draw on the core financial principle of the time value of money, that is, the concept that $1 today is worth more than $1 at some future date, say, in a year's time, because of the earnings potential of $1 invested today to increase in value over the course of the year. Also, $1 received in a year's time is likely to be less valuable than $1 in hand today because inflation will reduce its value over the course of the intervening year. Using the same logic, $1 received in five years' time is likely to be worth less than $1 received in one year's time, given the greater lost opportunity to earn investment income over the additional four years and the increased effect of inflation over the same extended period.

Therefore, operating costs that are contracted today but that will be incurred in five years' time must be more heavily discounted than operating costs to be incurred in one year's time to bring them back to their present-day net value.

To "net" expected future operating costs back to their current value, the Purchaser must apply a discount rate. Usually expressed as a percentage, the discount rate applied is specific to each situation and may be determined by factors such as the nature of the goods to be procured and the expected rate of inflation over the period during which costs are expected to be incurred.

See Annex A for a worked example of the application to NPV to bid evaluation and guidance on how the calculate NPV in Microsoft Excel.

SECTION 8 – USE OF RATED EVALUATION CRITERIA

In exceptional circumstances in which evaluation criteria cannot be expressed in monetary terms, the Purchaser may use rated evaluation criteria to assesses the extent to which a bid is able to meet or exceed the performance requirements of the contract. In this context, rated evaluation criteria may include, but are not limited to, the following features of the bid:

(a)   how well the performance, capacity or functionality features of the bidder's offer meet or exceed the levels specified in the performance or functional requirements stated in the bidding documents or influence the life-cycle cost;

(b)   the quality of the technical solution offered by the bid, in terms of such aspects as its method statement, level of innovation, use of new technologies, key personnel, access to key equipment, site organization, environmental, health, social and health and safety considerations, quality assurance, mobilisation schedule, implementation schedule and any other activities as specified by the Purchaser; or

(c)   the bidder's ability to meet or exceed any sustainable procurement requirements, if such are specified in the bidding documents.

In principle, any of the non-price criteria listed under Section 4, above, may be applied as rated criteria. In practice, however, it is advisable for the Purchaser to keep the number of

criteria to a minimum, prioritise those criteria which the Purchaser considers the most crucial to ensuring the success of the contract or to the realisation of the outcomes that the project is designed to achieve. Once the Purchaser has decided on the prioritisation of criteria, it should distribute the available scores to each criterion according to those priorities.

Having decided which technical features of the bids to evaluate, the Purchaser may assign a range of scores that it intends to use in evaluating bids against each criterion. The following is one possible approach:

0   the feature is absent;
1   the feature is present but shows deficiencies against the requirement;
2   the feature fully meets the requirement;
3   the feature marginally exceeds the requirement;
4   the feature significantly exceeds the requirement.

Once the Purchaser has agreed on the score to be allocated to each criterion, the scores awarded to each bid against each criterion are multiplied by the weighting accorded to that criterion, then the scores are totalled to calculate the overall technical score of each bid. Table 2 shows an example.

Table 2: <u>Example of Allocation of Weighting to Technical Criteria</u>

Criterion	Weighting Assigned
Overall quality of technical solution	50
Efficiency of technical methodology	25
Innovativeness of solution, use of new technologies	15
Sustainability of technical solution	<u>10</u>
Total:	**100**

The Purchaser would then assign a score from 0 to 4 (according to the scale above) to each bid against each criterion, then multiply the awarded score for each criterion by the weighting to arrive at a total weighted technical score for each bid, as shown in Tables 3 and 4[16].

---

[16] A variation on this approach would be to insert a weighting to the technical score, which might be expressed as a percentage of the maximum available score.

Table 3: <u>Example of Weighted Technical Scoring – Bidder A</u>

Criterion	Bidder A		
	Score	Weighting	Weighted Tech Score
Overall quality of technical solution	3	50	150
Efficiency of technical methodology	2	25	50
Innovativeness of solution, use of new technologies	2	15	30
Sustainability of technical solution	1	10	10
		Total:	**240**

Table 4: <u>Example of Weighted Technical Scoring – Bidder B</u>

Criterion	Bidder B		
	Score	Weighting	Weighted Tech Score
Overall quality of technical solution	2	50	100
Efficiency of technical methodology	2	25	50
Innovativeness of solution, use of new technologies	2	15	30
Sustainability of technical solution	1	10	10
		Total:	**190**

In this case, the bidders' prices are as follows:

    Bidder A: $5,380,000
    Bidder B: $4,875,625

And the weightings assigned to technical and financial aspects of the bids are as follows:

    Technical: 30%
    Financial: 70%

Given these technical scores and the weighting between technical (non-price) and financial (price) criteria, the combined technical and financial scores would be calculated as follows:

Table 5: <u>First Example of Combined Technical and Financial Scoring</u>

Technical Weighting		30%	
Financial Weighting		70%	

Criteria		Bidder A	Bidder B
Tech Score		240	190
Weighted Tech Score		30	23.75
Price		$ 5,380,000	$ 4,875,625
Weighted Fin Score		63.44	70
Combined Weighted Tech/Fin Score		**93.44**	**93.75**

In the example provided, Bidder B is the higher-ranked of the two bids and should, therefore, be recommended for award of contract. Although Bidder B received a significantly lower technical score than Bidder A, it has achieved a higher combined weighted technical/financial score on account of securing the maximum available financial score, given its lower price. This example illustrates the sensitivity of the weighting of financial (price) and technical (non-price) criteria: a slightly different weighting of, say, 25/75 would have produced a different winning bidder.

In the above methodology, the bid which is assigned the highest technical score is awarded the maximum available points in respect of technical evaluation.

An alternative approach to combining the evaluation of the technical and price aspects of the bids may involve weightings being given to the Technical (T) and Financial (P) aspects of the bids in proportion, such as T = 30% and P = 70%. Bids would be ranked according to their combined technical score (St) and financial score (Sf) using the assigned weights for T and P as follows:

$$S = St \times T\% + Sf \times P\%.$$

Under this evaluation methodology, technical weights totalling 100 are distributed among the four technical criteria, then each bid is evaluated and scored against each technical criterion. A minimum required technical score may be applied, such that a bid that scores low on technical quality may be rejected as technically non-responsive. The assigned technical scores of each bid are then totalled and weighted, in accordance with the same 70/30 price/technical weighting as in the previous example. Financial scores are then calculated in inverse proportion to the price of the lowest-priced bid, as in the first example above. Using this methodology affords the Purchaser a more nuanced approach to the technical evaluation, as each bid is awarded a score against each criterion within a pre-determined range. Under the first example, by contrast, the bid that secures the highest technical score is awarded 100% of the available weighted technical score.

Table 6: <u>Second Example of Combined Technical and Financial Scoring</u>

Criterion	Available Points	Bidder A Points Awarded	Bidder B Points Awarded
Overall quality of technical solution	40	36.80	35.00
Efficiency of technical methodology	30	27.50	26.00
Innovativeness of solution, use of new technologies	20	16.90	16.50
Sustainability of technical solution	10	9.25	7.25
Technical Score	**100**	**90.45**	**84.75**

	Bidder A	Bidder B
Minimum Technical Score = 75	Pass	Pass
Weighted Technical Score @ 30%	27.14	25.43
Price	$ 5,380,000	$ 4,875,625
Financial Score	90.63	100.00
Weighted Financial Score @ 70%	63.44	70.00
Total Combined Technical/Financial Score	**90.58**	**95.43**

ANNEX I – NPV EXAMPLE

Calculating Net Present Value (NPV) in Microsoft Excel[17]

Microsoft Excel contains a Net Present Value (**NPV) Formula** that simplifies the process of calculating discounted NPV costs from a series of nominal values of future costs, which typically will be provided by the bidders in their bids.

In this case study, we are comparing the NPV of operating costs of three different car models (Models A, B and C) over five years.

In the specific worked example below, we are calculating the NPV of the annual costs of car insurance for car Model A over five years from Year 1 to Year 5, entered in cell D3 through cell H3 in our example. The steps for calculating the NPV of the other cost elements are the same, albeit that the cell addresses will, of course, change.

Here are the instructions for using the NPV formula in Excel.

1. Enter the nominal values of the future costs over the expected operating life of each model, preferably in contiguous cells in a row or column. Entering the cost data in contiguous cells makes the calculation easier (see Steps 8-9).
2. Click in the destination cell where you want the result of the calculation to appear. In our example, this is cell C3.
3. Click on the down arrow next to the **Autosum** function[18], which is represented in Excel by the Σ (sigma) symbol. This opens a dropdown menu.
4. From the dropdown menu, select **More Functions**. The **Formula Builder** dialogue box appears on the right of the screen[19].
5. Scroll down and select **NPV**.
6. Click on **Insert Function**.
7. Inside the **Formula Builder** dialogue box, click inside the **Rate** box and enter the discount rate that applies to the NPV calculation. For example, if the discount rate is 3%, enter it as 0.03, as used in our example.
8. In the **Value1** box, enter the cell address of the first cost to be discounted; typically, this will be the cost for the first time period in a series of costs to be discounted. In our example, the cost of insurance for Year 1 is located in cell D3.
9. In the **Value2** box, enter the cell address of the last cost to be discounted; in our example, this is the cost of insurance in Year 5, the cost for which is located in cell H3.

---

[17] These instructions are based on Microsoft Excel V16.54. It should be noted that, as reflected in these footnotes, there are some differences between versions of Excel that run on Windows and those that run on Apple MacOS.

[18] This function may also be found in the Editing section of the Microsoft Excel toolbar, at the top of the screen.

[19] Depending on the version of Microsoft Excel, it may be necessary, when selecting Autosum function, to search for "NPV" under "Search for a function".

As you can see from Screenshot 1, the **Formula Builder** writes the formula in the destination cell (C3 in our example) as you enter the desired values in the **Rate**, **Value1** and **Value2** boxes in the **Function Builder** dialogue box.

10. Click on **Done**[20].
11. In the destination cell (C3 in our example), Excel enters the calculated NPV amount for the series of costs selected to be included in the calculation (see Screenshot 2).
12. Repeat this calculation for the other cost elements (in our example, Tyres, Fuel, Routine Maintenance etc.) to be discounted. These calculations can be entered manually by repeating Steps 2 through 10 for each cost element or they can be completed more quickly by copying the formula from the cell that contains the result of the first NPV calculation (cell C3 in our example) and pasting it to the other destination cells (cells C4 through C7 in our example).

Alternatively, NPV can be calculated using the formula:

$$NPV = \sum_{t=0}^{n} \frac{R_t}{(1+i)^t}$$

where:

    R_t = the cost during a single period (the cost of insurance in a year in our example);

    i = the discount rate (3% in our example);

    t = the number of time periods (5 time periods in our example).

To calculate the total cost of ownership of the car, add the sum of the NPV values of all cost elements to the initial offered price and subtract the NPV value of the expected resale value of the car at the end of its expected life, which it 5 years in our calculation. The NPV value of the expected resale value of the car at the end of Year 5 is subtracted because the proceeds of the sale constitute an income, which therefore reduces the total cost of ownership of the car.

The initial purchase price does not have to be discounted because it is already a present-day cost.

In our example, Model A has the lowest offered price. However, when 5 years of operating costs are factored into the evaluation and discounted back to their Net Present Value at a discount rate of 3% and the discounted proceeds from the sale of the car after 5 years is deducted from the total cost, Model B turns out to have the lowest total cost of ownership over 5 years, as summarised in the table below.

---

[20] This message may alternatively appear as "Okay", depending on the Microsoft Excel version used.

	Model A	Model B	Model C
Initial Offered Price	$ 34,750.00	$ 35,525.00	$ 39,999.00
Total Cost of Ownership (inc. NPV of operating costs over 5 years)	$ 31,392.38	$ 30,540.32	$ 43,366.85

As can be seen from the detailed cost calculations in the screenshots of spreadsheets provided below and in the below embedded spreadsheet, this is mainly on account of its superior fuel efficiency by comparison with Model A.

NPV Example

Screenshot 1:

Screenshot 2:

Calculation and Comparison of Total Cost of Ownership of 3 Cars: Model A

		Discounted	Life Cycle Costs by Year (Nominal)				
Model A Initial Purchase Price:	$34,750.00	NPV Costs	Year 1	Year 2	Year 3	Year 4	Year 5
Insurance		$1,956.36	$850.00	$ 900.00	$975.00	$1,050.00	$1,200.00
Tyres		$754.08	$ -	$ -	$800.00	$ -	$ -
Fuel		$6,690.55	$2,600.00	$2,860.00	$3,380.00	$3,900.00	$4,420.00
Routine Maintenance (inc. Labour)		$1,357.34	$ 500.00	$ 625.00	$750.00	$ 875.00	$ 925.00
Oil, Filters, Wiper blades, Fluids etc.		$623.90	$230.00	$ 325.00	$375.00	$ 400.00	$ 425.00
Total NPV of Operating Costs		$11,382.22					
(Resale Value)		$14,739.84	$ -	$ -	$ -	$ -	$15,637.50
Total Cost of Ownership:	**$31,392.38**						

Calculation and Comparison of Total Cost of Ownership of 3 Cars: Model B

		Discounted	Life Cycle Costs by Year (Nominal)				
Model B Initial Purchase Price:	$35,525.00	*NPV Costs*	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Insurance		*$1,078.80*	$650.00	$625.00	$600.00	$550.00	$475.00
Tyres		*$612.69*	$ -	$ -	$650.00		
Fuel		*$2,732.59*	$1,300.00	$1,404.00	$1,456.00	$1,508.00	$1,560.00
Routine Maintenance (inc. Labour)		*$1,548.69*	$600.00	$630.00	$775.00	$900.00	$1,025.00
Oil, Filters, Wiper blades, Fluids etc.		*$762.56*	$300.00	$350.00	$400.00	$450.00	$500.00
Total NPV of Operating Costs		*$6,735.32*					
(Resale Value)		*$11,720.00*	0	0	0	0	$12,433.75
Total Cost of Ownership:	**$30,540.32**						

Calculation and Comparison of Total Cost of Ownership of 3 Cars: Model C

		Discounted	**Life Cycle Costs by Year (Nominal)**				
Model C Initial Purchase Price:	$39,999.00	*NPV Costs*	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Insurance		*$4,157.16*	$925.00	$925.00	$910.00	$900.00	$875.00
Tyres		*$659.82*	$ -	$ -	$700.00		
Fuel		*$10,449.25*	$1,820.00	$2,184.00	$2,340.00	$2,470.00	$2,652.00
Routine Maintenance (inc. Labour)		*$3,694.01*	$700.00	$750.00	$800.00	$875.00	$925.00
Oil, Filters, Wiper blades, Fluids etc.		*$1,373.91*	$300.00	$300.00	$300.00	$300.00	$300.00
Total NPV of Operating Costs		*$20,334.15*					
(Resale Value)		*$16,966.30*	$ -	$ -	$ -	$ -	$17,999.55
Total Cost of Ownership:	**$43,366.85**						

CARIBBEAN DEVELOPMENT BANK

P.O. Box 408, Wildey, St. Michael

Barbados BB 11000

246-539-1600

www.caribank.org