

# Application of **Life Cycle Costing (LCC)** and **Cost-Utility Analysis (CUA)** in Sustainable Public Procurement

How to use Life Cycle Costing and Cost Utility Analysis in daily business of Sustainable Public Procurement?

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# Overview

- 1 Application of LCC Tools in SPP
- 2 Basics on Cost Utility Analysis (CUA)
- 3 Transparency of tender evaluation
- 4 Application of CUA Tools and alternative methods

# Application of LCC Tools in SPP

## SMART SPP Tool

- ▶ A practical tool for the calculation of LCC
- ▶ Also provides integrated calculations about CO<sub>2</sub>e balances
- ▶ Country specific adaptations possible [currency, interest rates, discount rates etc.]



Source: <http://www.smart-spp.eu/>

# List of tools available for calculating LCC

- ▶ A tool for assessing both LCC and CO2 emissions in procurement, developed within the SMART-SPP project: <http://www.smart-spp.eu>
- ▶ An LCC tool developed within the BUY SMART project: <http://www.buy-smart.info>
- ▶ An LCC tool produced by the Swedish Environmental Management Council (SEMCo): [http://www.msr.se/en/green\\_procurement/LCC/](http://www.msr.se/en/green_procurement/LCC/)
- ▶ The European Commission's calculator for LCC for vehicle procurement <http://www.cleanvehicle.eu>
- ▶ The European Commission's common method for LCC in construction: [http://ec.europa.eu/enterprise/sectors/construction/files/compet/life\\_cycle\\_costing/final\\_report\\_en.pdf](http://ec.europa.eu/enterprise/sectors/construction/files/compet/life_cycle_costing/final_report_en.pdf)

# Basics on Cost Utility Analysis (CUA)

Cost Utility Analysis (CUA) is a practical method to

1. weigh quantitative and qualitative award criteria and
2. to compare different offers.

Typically award points are assigned to the award criteria.

1. The points sum up to 100.
2. The more a criterion shall be weighed the more points are assigned.

# Transparency of tender evaluation (1)

It is indispensable that the method for the tender evaluation is well explained in the tender documents.

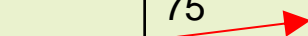
Cost-utility analysis can therefore be used to clearly show...

- ▶ the award criteria that will be used for evaluation (such as LCC, Energy efficiency class, CO<sub>2</sub>-emissions, etc.)
- ▶ how award criteria are translated into points
- ▶ how award criteria will be weighted
- ▶ how many points are given per award criterion
- ▶ How points are summed up resulting in one winning bid.

# Basics on Cost Utility Analysis (CUA)

## Example: Televisions

Award Criterion	Calculation Formula	Weight	Conditions of the bid		Compliance with the criteria (%)		Partial utility (points)	
			Offer 1	Offer 2	Offer 1	Offer 2	Offer 1	Offer 2
Offer price	Min. value x 100 / bid value	60 %	12,000 THB	16,000 THB	100 %	75 %	60	45
Energy efficiency Class	A: full points B: -25% C: - 50%	20%	B	A	75 %	100 %	15	20
Information on the proper disposal of the product and on the take-back policy	Yes: full points No: no points	20 %	No	Yes	0%	100%	0	20
<b>Sum of points</b>							75	85

offer 2 wins the tender 

# Basics on Cost Utility Analysis (CUA)

## Integration of *qualitative* criteria

### Example: Degree of technical innovation

- 0 points: “is not the case”
- 30 points: „poor“
- 50 points: „sufficient“
- 80 points: „good“
- 100 points „very good“

Rule: Several persons shall participate in the evaluation process.



# Basics on Cost Utility Analysis (CUA) including a qualitative criterion

## Example: Televisions

Award Criterion	Calculation Formula	Weight	Conditions of the bid		Compliance with the criteria (%)		Partial utility (points)	
			Offer 1	Offer 2	Offer 1	Offer 2	Offer 1	Offer 2
Offer price	Min. value x 100 / bid value	60 %	12,000 THB	16,000 THB	100 %	75 %	60	45
Energy efficiency Class	A: full points B: -25% C: - 50%	20%	B	A	75 %	100 %	15	20
Ergonomics	See slide above	20 %	Very good	Good	100%	80%	100	80
<b>Sum of points</b>							175	145

offer 1 wins the tender



## Transparency of tender evaluation (2)

Alternatively, transparency can be provided by a clearly defined and communicated point system:

- ▶ all award criteria must be provided
- ▶ also the weights must be defined
- ▶ accordingly, for each criterion a maximum score is set and
- ▶ for each criterion a mandatory minimum level of score is defined (e.g. min. 60% of the maximum score)
- ▶ finally, points are summed up
- ▶ The bid with the highest score wins :-)

# Cost-utility Analysis

## Alternative Approach

	Criterion	Weighting	Maximum Score	Minimum Required
(A)	Quality and Performance	15%	1500	900
(B)	Delivery, Maintenance and Disposal	15%	1500	900
(C)	Environmental Features	15%	1500	900
(D)	Warranty Length & Inclusiveness	5%	500	300
(E)	Life-cycle Cost	50%	5000	N/A

Source: [www.topten.eu/professionalhtml/](http://www.topten.eu/professionalhtml/)

- ▶ In relation to minimum score required - tenderers should note that they must achieve a minimum rating of 60% for each of the individual qualitative criteria (A) - (D) in order to avoid elimination from the competition.

Thank you for your attention!

Do you have any questions?



# Contact

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