

Case:

Tender of light sources in Jysk
Fællesindkøb autumn 2015



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|  Jysk Fællesindkøb |  Indkøbsfællesskab Nordsjælland - IN |  Sydjysk Kommuneindkøb |
|  Fællesindkøb Fyn |  Aalborg-modellen |  Spar 5 |
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TCO means common sense

- **Total Cost of Ownership**
- When calculating the price of the product you include all costs connected to the use of the product in its lifetime.
- TCO is a rational economic mindset, where it is possible at the same time to benefit the budget and the environment.
- TCO calculations can show if a low priced product in fact is more expensive than the highest priced product – because the low priced product cost more in use.
- In order to use TCO-calculations you need a thorough knowledge of which factors to include in the calculation, and how the products is used.

Total cost of ownership

The danish Environmental Protection Agency has made a tool that takes into account:

- Purchase price
- Energy consumption
- The products lifetime

Prerequisites in the model

Period of time of the TCO calculation	year	15
Electricity price	kr./kWh	1,5
Discount rate	%	4
Energy price increase	%	2,12

Number of light sources	pcs	1
Number of use hours per day	hours	9
Number of use days per year	days	220
Price of wages at replacing per light source	Kr/shift	100

Challenges using the model

The product are still defined by how many watts they use – the energy consumption

But that is the object of competition 😞
Watt is not, what is defining the product.

What did the evaluation show?

- The suppliers could easily use the tool
- The tool showed very clearly that you must stop buying halogen and low-energy lightbulbs – it is way to expensive in the long run!

Exampel; a standard light bulb with E27 socket

Type of light bulb	Price	TCO over 15 years
Halogenbulb 405 lumen	8 kr.	2354 kr.
Low-energy bulb 432 lumen	19,6 kr.	581 kr.
LED, 470 lumen (Light Emitting Diode)	29,2 kr.	361 kr.


Miljøministeriet
Information about the produkt - data from the supplier

		Eks.:Halogen standard bulb E27, 405 lumen	Eks.: LED standard bulb E27, 470 lumen	Eks.: Lowenergy standard bulb E27, 432 lumen
Cost of investment				
Purchase price incl. delivery	kr./light bulb	8	29,2	19,6
Costs of use:				
The effect (watt)	Watt	30	6	8
Time of life (hours)	timer	2000	25000	10000
Assumptions of use				
Number of lighth sources	pcs.	1	1	1
Number of use hours per day	hours	9	9	9
Number of use days per year	days	220	220	220
Price of wages at replacing per lightsource	Kr/shift	100	100	100
Backgrounddata: to be fixed by the procurement office				
Period of time of the TCO calculation	year	15	15	15
Electricity price	kr./kWh	1,5	1,5	1,5
Discount rate	%	4	4	4
Energy price increase	%	2,12	2,12	2,12
Result				
Price of purchase (for the entire period of time)	Kr	119	35	58
Price of use	Kr	2235	326	523
Total TCO	Kr	2354	361	581

Challenges implementing the contract

How do you know which light source to buy, when you have a big assortment to choose from?

- Products with the same specifications, but from different suppliers, can vary in price.
- Products are continuously developed as to use as little energy as possible.
- Use the tool and be a "responsible purchaser". Here you can enter data regarding the different products, and see which one will give you the more value in the long run.
- But is it realistic for this to happen?

The tool

<http://csr-indkob.dk/related/tco-vaerktoj-belysning/>

Read more here (in danish 😊):

<http://www.ansvarligeindkob.dk/cases/tco-beregninger-giver-store-besparelser-paa-belysning-syddjurs-kommune/>