



LCC in the **green** public procurement in **Slovenia**

Discussion panel 2: Improving green public procurement performances with life cycle instruments

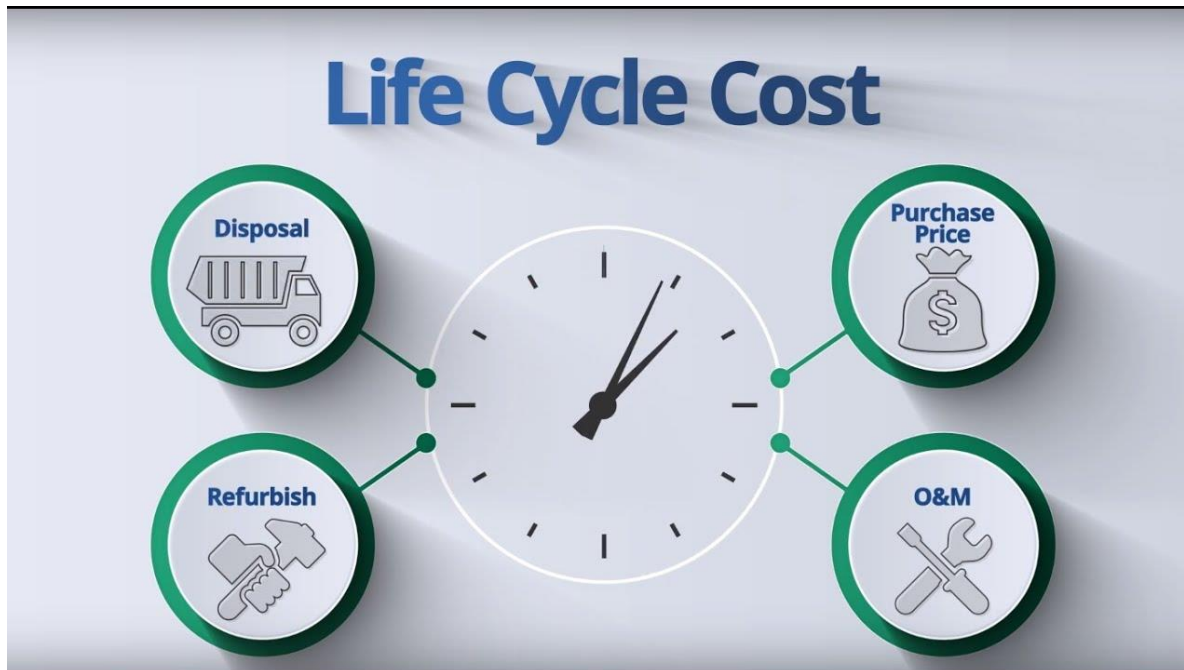
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Content:

- description of a decree on green public procurement in Slovenia and the use of the life cycle costing (LCC) methodology
- trends in the use of LCC in green public procurement in Slovenia



LCC in the **green** public procurement in **Slovenia**

On 8 December 2011, the Government of the Republic of Slovenia adopted a Decree on Green Public Procurement [1], which would aid all contracting entities when launching a contract award procedure. The Decree stipulated that for 11 products (as of 2011) and service groups, public buyers would have to consider minimum and extra environmental requirements, as well as award criteria.

The relevant area of green public procurement in Slovenia has undergone further development. Today's regulation on green public procurement covers 20 public procurement subjects, for which environmental considerations are mandatory [2].

Sources:

[1] https://www.uradni-list.si/_pdf/2011/Ur/u2011102.pdf

[2] Uredba o zelenem javnem naročanju (Uradni list RS, št. 51/17 z dne 19. 9. 2017)



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Subjects of green public procurement:

1. electricity
2. food and catering services
3. textile products
4. stationery and hygiene paper products
5. electronic office equipment
6. TVs
7. refrigerators, freezers and combinations thereof, washing machines, dishwashers, tumble driers, vacuum cleaners and air-conditioners
8. furniture
9. water heaters, room heaters and combinations thereof and hot water storage tanks
10. sanitary fittings
11. flushing toilet fittings and urinal fittings
12. wall panels
13. designing or executing the construction of buildings
14. designing or executing road construction
15. road vehicles
16. tires
17. electric lamps and lamps and indoor lighting
18. road lighting and traffic signaling
19. cleaners, cleaning services and laundry services
20. gardening services, agricultural and other products and gardening equipment and machinery



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Total savings of implemented green public procurement in 2018-2020:

Considering the basic requirements of the Decree on Green Public Procurement, the contracting authorities:

- saved a total of 301,480 MWh of energy
- released 101,506 t less CO₂ into the atmosphere
- reduced water consumption by 10,455 thousand m³
- saved 61 million €

The total electricity saving is approximately **2.43 %** of the total electricity consumption in Slovenia

Total reduction of the carbon footprint by **0.5 %** of the total CO₂ footprint in Slovenia

In total, we save water for approximately **179,000** people

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The relevant green public procurement regulation also allows the use of life cycle methodologies (e.g. life cycle costing - LCC) in tenders.

According to the regulation on green public procurement, the application of the LCC methodology **was mandatory** for the procurement of road vehicles in 2017-2021. From 2021, it is proposed to use the LCC methodology in tenders for the purchase of road vehicles.

The use of the LCC methodology in other subjects of green public procurement is not mandatory, so we also did not detect that it would occur in public procurement tenders.

According to the reviewed public procurement, LCC methodology has been used in approximately **50%** of procedures.



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Operational lifetime costs were calculated applying the following formula:

[Expected lifetime mileage (=200 000 km) x [(Energy needed per km in MJ x price of Energy per MJ) + (emissions of CO₂ kg/km x 0.03 EUR/kg) + (emissions of NO₂ g/km x 0.0044 EUR/g) + (particulate matter g/km x 0.087 g/km)]

The energy content of fuels, in accordance with the Clean Vehicles Directive (2009/33/EC):

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0033>

was taken as 36 MJ/litre for diesel and 32 MJ/litre for petrol.

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Here we provide a few examples of tenders in the period of 2018-2021, in which the LCC methodology has been applied. Slovenian tenderers use the LCC methodology in quite different ways and with different weights in terms of award criteria:

- 1) 2018: Purchase of electric hybrid buses for urban passenger transport (LCC represents **65** % of award criteria)
- 2) 2019: Purchase and supply of light trucks and lorries (LCC represents **100** % of award criteria)
- 3) 2019: Business rental of company vehicles, taking into account environmental aspects (LCC represents **100** % of award criteria)
- 4) 2020: Buying a low-emission van (LCC represents **70** % of award criteria)
- 5) 2021: Operational lease of less polluting civilian passenger cars and off-road vehicles and special vehicles with police and other equipment, tires with better fuel efficiency and better wet grip, appropriate for the season (LCC represents **95** % of award criteria)
- 6) 2021: Supply of environmentally less polluting vehicles with an associated spare set of winter tires (M + S) with better fuel efficiency and better wet grip, motorcycles and trailers for transporting horses (LCC represents **35** % of award criteria)



LCC in the green public procurement in Slovenia

The LCC methodology in public procurement of road vehicles in Slovenia is regularly used in accordance with the Decree on Green Public Procurement. We present trends in this area for the period 2017-2020:

<u>2017 [3]:</u> Number of tenders: 1860 Value: 157 million EUR	<u>2018 [4]:</u> Number of tenders: 2270 Value: 148 million EUR
<u>2019 [5]:</u> Number of tenders: 2168 Value: 182 million EUR	<u>2020 [6]:</u> Number of tenders: 1670 Value: 205 million EUR

Sources:

[3] Statistično poročilo o javnih naročilih, oddanih v letu 2017. Ministrstvo za javno upravo Republike Slovenije, Direktorat za javno naročanje.

[4] Statistično poročilo o javnih naročilih, oddanih v letu 2018. Ministrstvo za javno upravo Republike Slovenije, Direktorat za javno naročanje.

[5] Statistično poročilo o javnih naročilih, oddanih v letu 2019. Ministrstvo za javno upravo Republike Slovenije, Direktorat za javno naročanje.

[6] Statistično poročilo o javnih naročilih, oddanih v letu 2020. Ministrstvo za javno upravo Republike Slovenije, Direktorat za javno naročanje.

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When administering contracts, it's necessary to foster competitiveness among contractors to deliver good economic and environmental performance. High priority should be given to surveying the market and ensuring that the procurer has up-to-date information in order to set and achieve appropriate standards.

When implementing the LCC methodology in public procurement procedures, it is necessary to ensure that contracting authorities provide tenderers with as much relevant data as possible for the correct LCC calculation. Providers may not yet be skilled in using the LCC methodology, so it makes sense to conduct regular trainings (workshops) in this area.

2. Sklop: 150.000,00 EUR/letno z DDV 3. Sklop: 60.000,00 EUR/letno z DDV 4. Sklop: 20.000,00 EUR/letno z DDV.	Istovrsten posel pomeni tista dela iz specifikacije naročila, ki jih gospodarski subjekt prevzema v ponudbi. Naročnik si pridržuje pravico, da navedbe preveri ter zahteva dokazila (na primer: pogodbo z investitorjem, potrdilo o izplačilu, ...) o izvedbi navedenega referenčnega dela, oziroma navedbe preveri neposredno pri investitorju. Reference morajo izkazovati ponudnikovo kvalitetno in pravočasno izpolnitev pogodbenih obveznosti.
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IV. MERILO

Merilo za izbiro najugodnejše ponudbe po posameznih sklopih je **ekonomsko najugodnejša ponudba**, ki se določi na podlagi »ocena stroškov v življenjski dobi vozila«.

Pri ocenjevanju ponudb bo naročnik upošteval samo ponudbe, ki izpolnjujejo vse pogoje.

Kot najugodnejši bo za posamezen sklop izbran ponudnik, ki bo dosegel največje skupno število točk po spodaj opredeljenem merilu in katerega ponudba bo dopustna.

Največje možno število prejetih točk je 100.

Stroški v življenjski dobi vozila - LCCT

Pri izračunu ocene stroškov v življenjski dobi vozila so upoštewane temeljne okoljske zahteve iz Uredbe o zelenem javnem naročanju (Ur. l. RS št. 51/2017 z dne 19.9.2017) in sicer:

- upoštevajo se ponujena cena poslovnega najema vozil za 5 let, vključno z davkom na dodano vrednost, stroški energentov v življenjski dobi vozila in zunanji okoljski stroški v življenjski dobi vozila. Za zmanjše okoljske stroške v življenjski dobi vozila se štejejo stroški emisij ogljikovega dioksida v življenjski dobi vozila, stroški emisij dušikovih oksidov v življenjski dobi vozila, stroški emisij nemetanskih ogljikovodikov v življenjski dobi vozila in stroški emisij trdnih delcev v življenjski dobi vozila.

Za izračun ocene stroškov v življenjski dobi vozila se uporabi formula:

$$LCC = N_c + (LC_{km} \times [(poraba_E \times P_E + C_{Emin} / P_{Emin}) + (CO_2em \times C_{CO2}) + (NO_xem \times C_{NOx}) + (NMHCem \times C_{NMHC}) + (P_{Mem} \times C_{PM})])$$

Oznake v formuli imajo naslednji pomen:

- LCC - ocena stroškov v življenjski dobi vozila,
- N_c - cena poslovnega najema vozil za 5 let z vključenim DDV,
- LC_{km} - kilometrina v življenjski dobi vozila,
- $poraba_E$ - poraba energenta v l/km^3 ,
- P_E - vsebnost energije v energentu,
- P_{Emin} - vsebnost energije v najcenejšem energentu,
- C_{Emin} - cena najcenejšega energenta,
- CO_2em - emisije ogljikovega dioksida¹,
- C_{CO2} - cena za emisije ogljikovega dioksida,

- NO_xem - emisije dušikovih oksidov,
- C_{NOx} - cena za emisije dušikovih oksidov,
- $NMHCem$ - emisije nemetanskih ogljikovodikov,
- C_{NMHC} - cena za emisije nemetanskih ogljikovodikov,
- P_{Mem} - emisije trdnih delcev,
- C_{PM} - cena za emisije trdnih delcev.

Pri izračunu ocene stroškov v življenjski dobi vozila bo naročnik uporabil vrednosti, ki jih v svoji ponudbi navede ponudnik, in vrednosti, ki jih je naročnik sam opredelil v tabeli spodaj.

Opis parametra	Oznaka	Vrednost
kilometrina v življenjski dobi vozila M_1	LC_{km}	200.000 km
kilometrina v življenjski dobi vozila N_1	LC_{km}	250.000 km
vsebnost energije v dizelskem gorivu	P_E	36 MJ/l
vsebnost energije v bencinu	P_E	32 MJ/l
vsebnost energije v zemeljskem plinu ali bioplumu	P_E	38 MJ/Nm ³
vsebnost energije v utekočinjenem naftnem plinu	P_E	24 MJ/l
vsebnost energije v etanolu	P_E	21 MJ/l
vsebnost energije v biodizlu	P_E	33 MJ/l
vsebnost energije v emulzijskem gorivu	P_E	32 MJ/l
vsebnost energije v vodiku	P_E	11 MJ/Nm
vsebnost energije v električni energiji	P_E	3,6 MJ/kWh
cena za emisije ogljikovega dioksida	C_{CO2}	0,04 EUR/kg
cena za emisije dušikovih oksidov	C_{NOx}	0,0044 EUR/g
cena za emisije nemetanskih ogljikovodikov	C_{NMHC}	0,001 EUR/g
cena za emisije trdnih delcev	C_{PM}	0,087 EUR/g
cena najcenejšega energenta brez davka na dodano vrednost	C_{Emin}	EUR/l ali EUR/Nm ali EUR/kWh
vsebnost energije v najcenejšem energentu	P_{Emin}	MJ/l ali MJ/Nm ali MJ/kWh

Vrednosti, ki jih v ponudbi navede ponudnik, so:

- Cena poslovnega najema vozil za 5 let, ki vključuje davek na dodano vrednost in je izražena v EUR,
- poraba energenta, izražena v l/km ali kWh/km ,
- emisije ogljikovega dioksida (CO_2em), izražene v kg/km ,
- emisije dušikovih oksidov (NO_xem), izražene v g/km ,
- emisije nemetanskih ogljikovodikov ($NMHCem$), izražene v g/km ,
- emisije trdnih delcev (P_{Mem}), izražene v g/km .

Pri izračunu ocene stroškov v življenjski dobi vozila, ki kot energent uporablja bencin ali dizelsko gorivo, bo naročnik kot vrednost cene najcenejšega energenta (C_{Emin}) uporabil veljavno ceno bencina ali dizelskega goriva, pri čemer bo upošteval ceno brez davkov (cena goriva vsebuje prodajno ceno goriva brez dajatev, takso CO_2 , dodatek za zagotavljanje prilivov energije in prispevek za zagotavljanje podpor proizvodnji el. energije, ne vsebuje pa trošarin in DDV) in sicer tistega energenta, ki je na dan, ko poteče rok za oddajo ponudb, cenejši. Upošteva se cena, objavljena na spletni strani: http://www.mgrt.gov.si/si/delovna_podrocja/notranji_trg/nadzor_cen_naftnih_derivatov/cene_naftni_h_derivatov/.

¹ Energetska vrednost za zemeljski plin v Sloveniji je izračunana med 36 – 40 MJ, zato je za potrebe tega izračuna upoštevana povprečna vrednost 38 MJ.

The efficient use of LCC represents the legally regulated area of green public procurement in Slovenia, which we believe can be successfully transferred to other regions and countries.

Thank you!



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