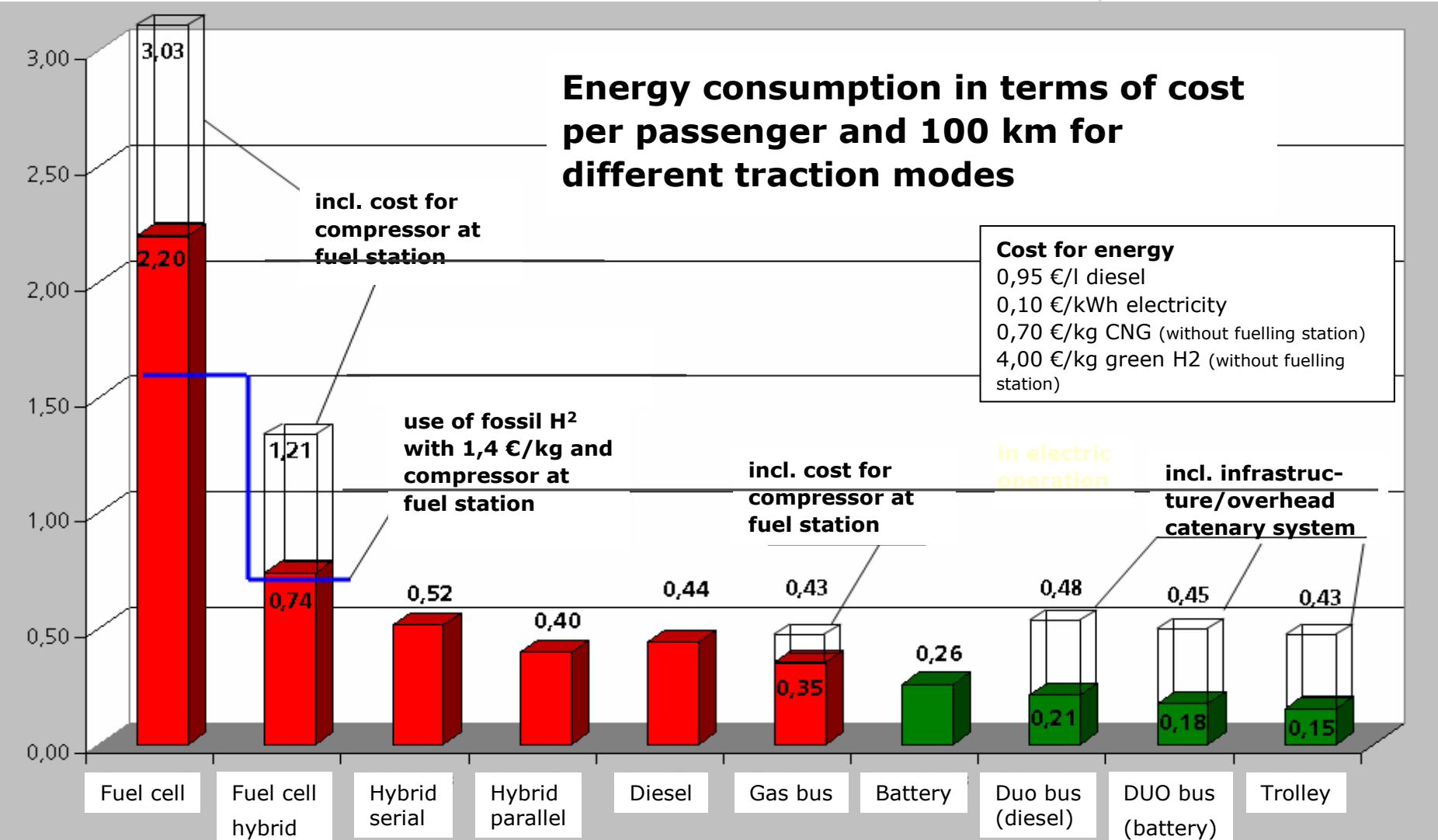


Cost per passenger for traction energy



Trolley-bus is often in competition with diesel-bus, even if it is closer in effect to tramways



System comparison

- Engine, electronics and infrastructure are derived from tramways
- Lifetime of traction components are similar, accordingly

➔ Trolley-bus = "rubber-tram"

time	tram	trolley	investment	tram	trolley
planning	5-10 y	1-2 y	infra constr.	1.000	100
infra constr.	5-10 y	1-2 y	rolling stock	300	100
total	10-20 y	2-4 y	total	1.300	200

↑
↑

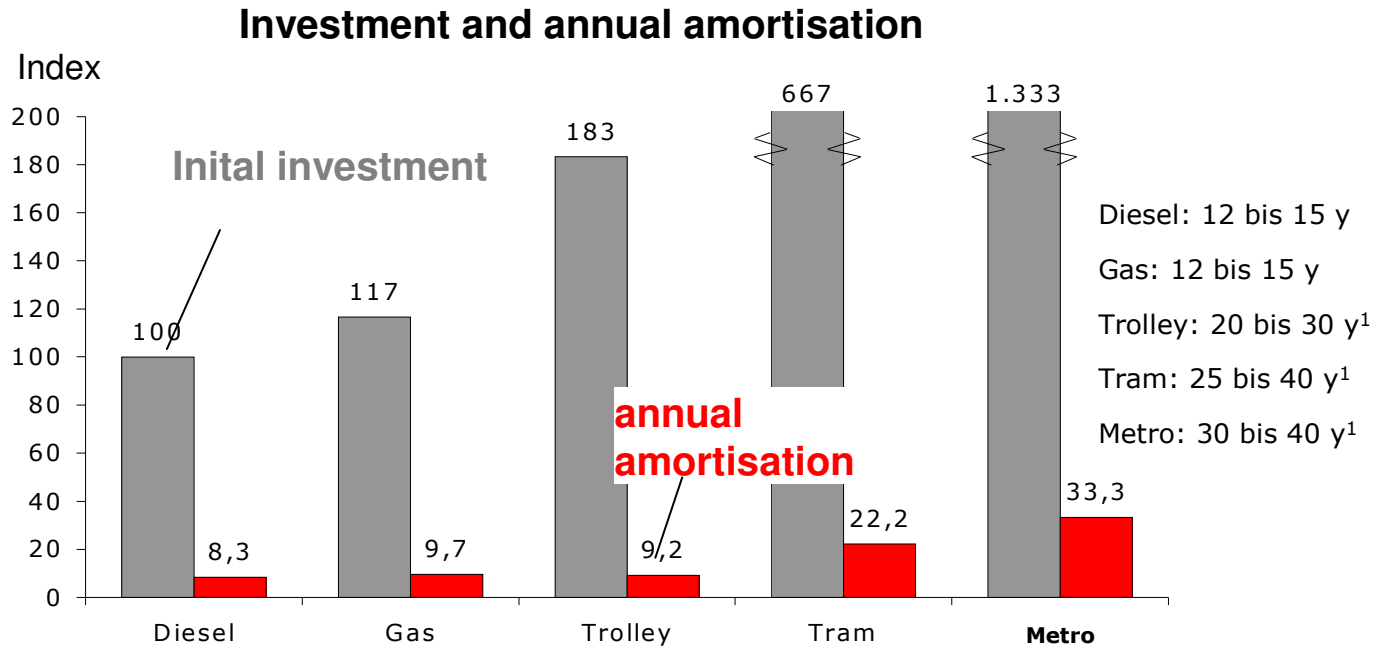
times 5
times 6

➔ Trolley-bus is often the "better" investment to a tram (time to market, investment volume)

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Lifetime, investment and annual amortisation of PT systems



System comparison

- ➔ Diesel and gas show higher wear and tear due to vibrations and more parts with mechanical move
- ➔ Relation of investment and lifetime is much better for trolley than for tram

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¹ for trolley, tram and metro intermediate modernisation of interior and electronics is calculated