WIKI

CIVITAS Policy Note on Clean Buses - Supporting decisions for clean buses

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Teije GORRIS, CIVITAS & TNO

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From

research information

to

decision making information

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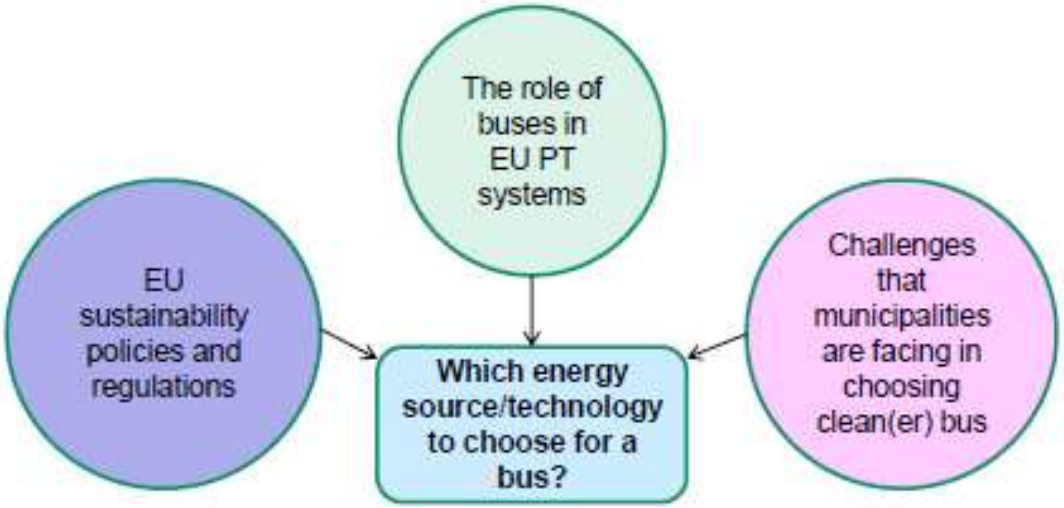
Why this policy note?

- It addresses the questions policy makers have: **What is the best bus for my city?**



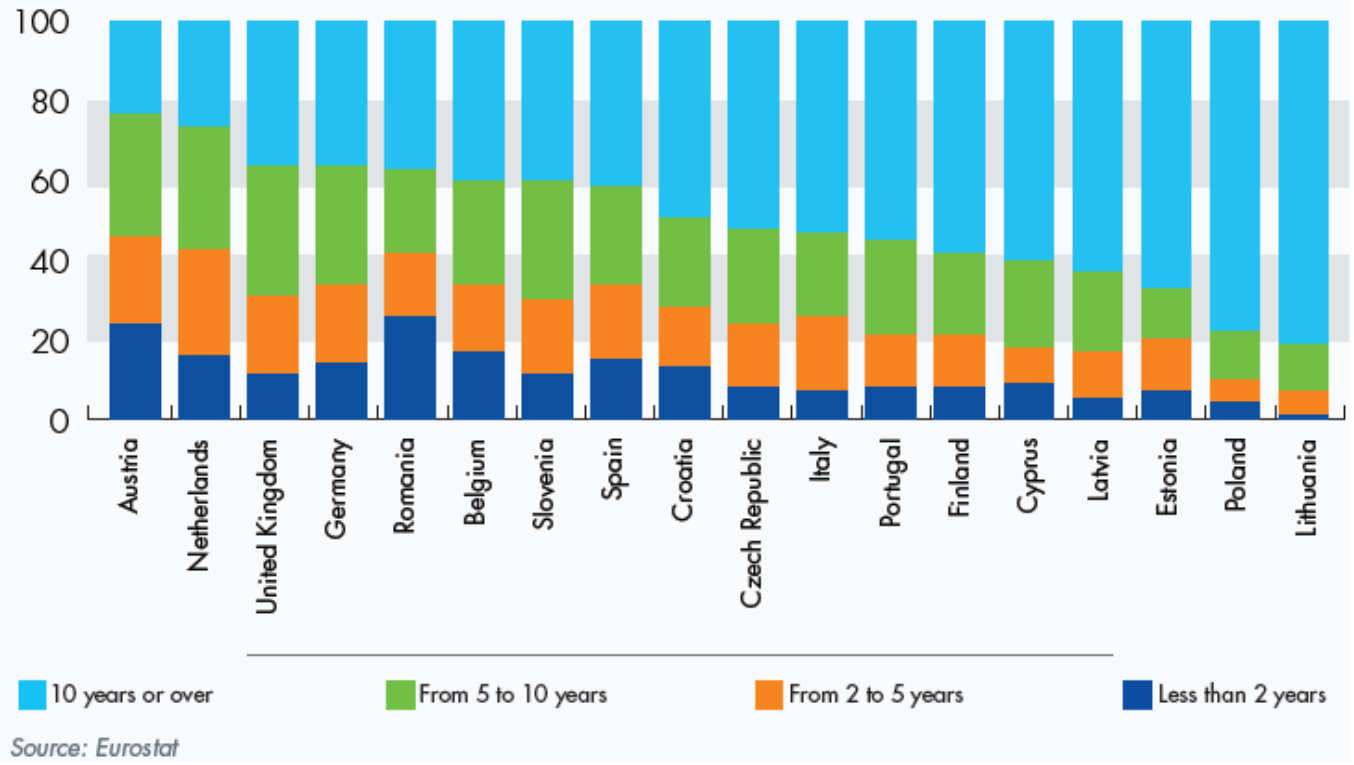
CIVITAS WIKI Policy Note "Clean Buses for your city"

- What are the options available and which energy source/technology to choose for a bus?
- What are the advantages/disadvantages of different options?
- What are the costs of these options?
- Which fuels require installation of additional infrastructure and what are associated to it costs?

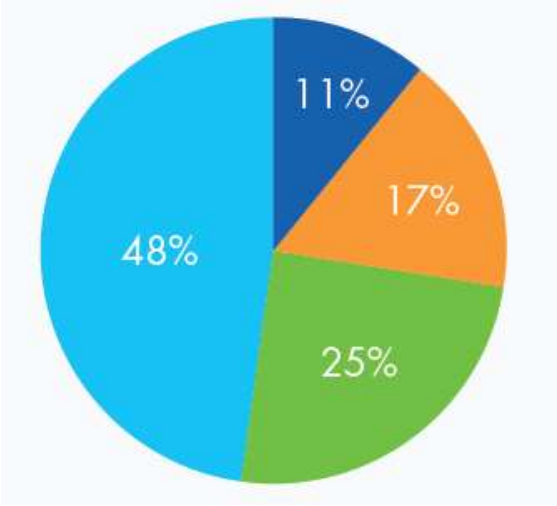
The role of buses in EU public transport system

Backbone of many EU public transport systems, providing 7,8% of EU mobility in 2011

Figure 2. Distribution of age of buses in EU-28, per country, in percentages, 2011



Source: Eurostat



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What are the clean(er) bus options?

Short term targets (2020)

Municipality perspective:

- Euro VI,VI diesel buses, diesel hybrid/electric buses and buses running on biofuels

EU perspective:

EU 2020 targets: 10% biofuels content, 6% GHG reduction of conventional fuels, 20% GHG emission reduction

- High blends of first or second generation biodiesel - to increase the renewable energy share above the blending limit
- Biogas (in CNG buses) - to increase the renewable share (up to 100%)
- Hybrid drivelines with diesel or gas engines - to further reduce GHG emissions by about 20%.

Long term targets (2050)

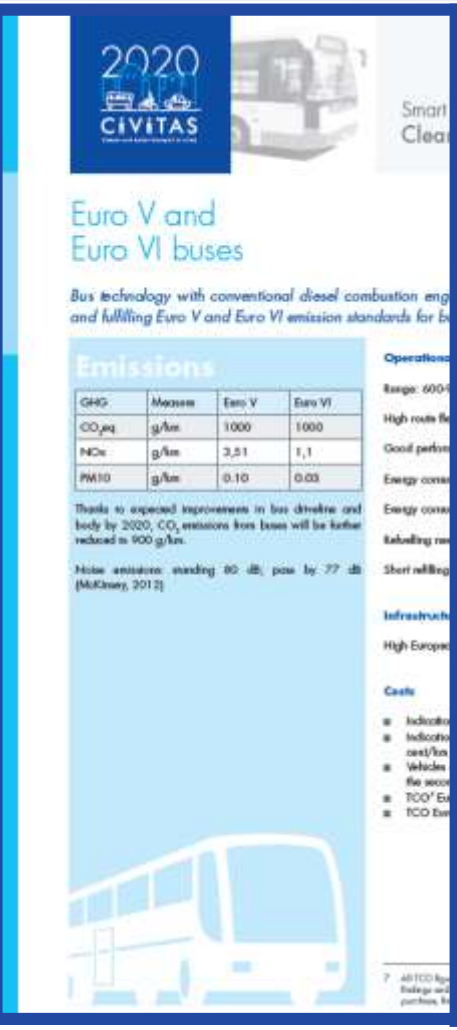
Municipality perspective:

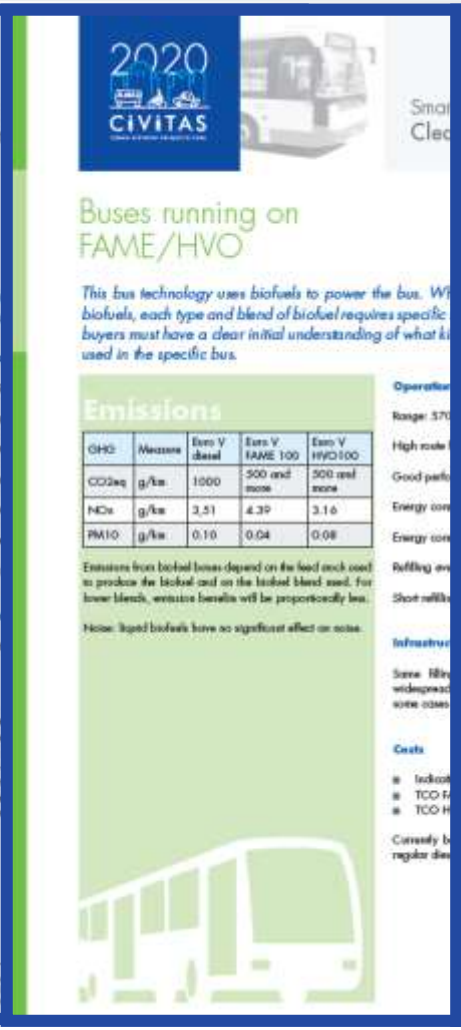
- Technologies with lowest (well to wheel) energy consumption and good possibilities for using renewable fuels (e.g. electric buses, trolleybuses, hydrogen fuel cell buses)

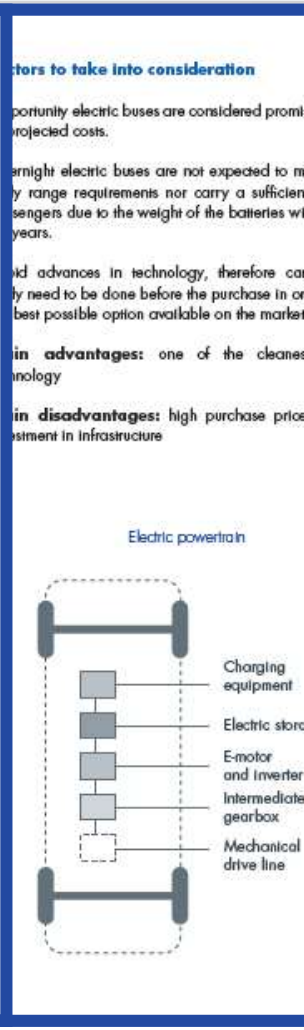
EU perspective:

- EU 2050 targets: 60% reduction of GHG emissions from transport
- Full electric buses – with clean(er) electricity supply and cheaper bus battery
- Hydrogen buses – with production of hydrogen in a renewable way with solar and wind energy

Fact sheets







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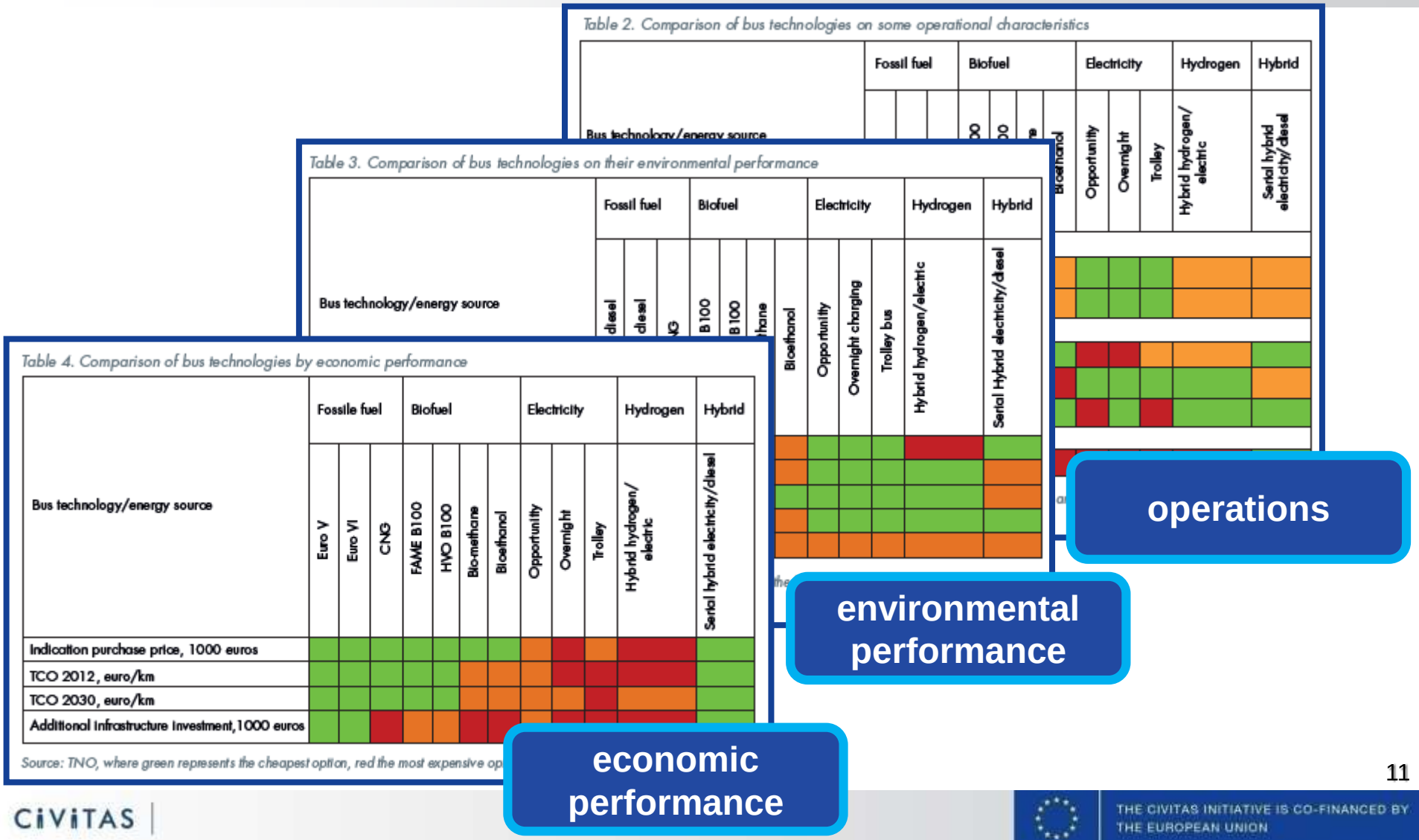
What energy carrier to choose?



Conclusion

If financial resources allow

municipalities and public transport operators should aim for the zero-emissions or closest to it options.

Otherwise,

especially within current conditions of economic and financial crises conventional diesel buses (Euro VI) and their hybrid configurations represent a very good environmentally friendly option as well.

Want to learn more? Join us!

1. **Go to “www.civitas.eu”**

2. **Go to “working groups”**

3. **Select one of the CIVITAS Thematic groups**
   - Clean vehicles and fuels (moderated by Ivo Crè - ICre@polisnetwork.eu)
   - Collective passenger transport (moderated by Cosimo Chiffi - chiffi@trt.it)

4. **Register yourself as user**

5. **Post your question // engage in discussions**

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Thank you!

Teije Gorris

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