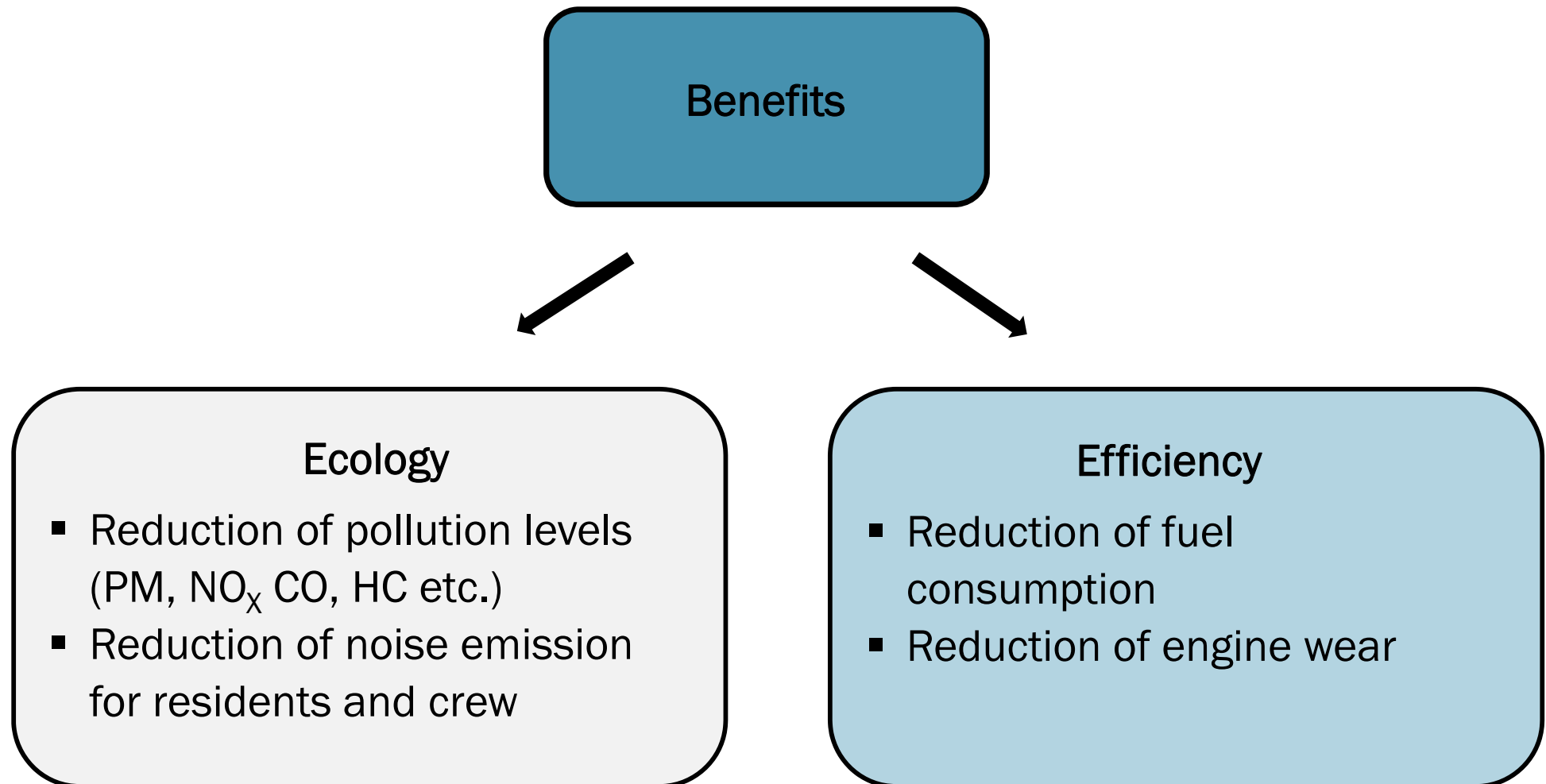


Shore Side Electricity - Guideline planning for the Austrian Danube

Danube Ports Day 2020

Simon Hartl, viadonau
17 November 2020

Why shore side electricity?



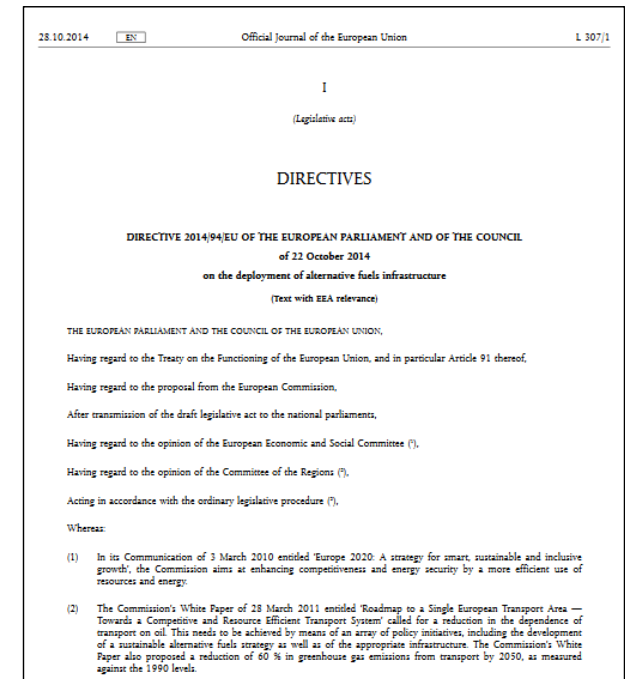
Why shore side electricity?

Political framework

- European Union level:

Directive 2014/94/EU of the European Parliament and the Council of 22 October 2014 on the deployment of alternative fuels Infrastructure

„shore-side electricity supply shall be installed as a priority in ports of the TEN-T Core Network, and in other ports, by 31 December 2025, unless there is no demand and the costs are disproportionate to the benefits, including environmental benefits”



Why shore side electricity?

Political framework

- National level:

Government Programme 2020 – 2024

„If feasible from a technical point of view, an obligatory use of shore side electricity should be ensured at the public berths of the federal waterway network, the Federal Governance will assess a set of measures to accelerate shore side electricity at private mooring places at lakes and rivers“



Technical requirements

Cargo vessels

Current: 16 A, 32 A, 63 A, (125 A)

Voltage: 400 V

Connection system: CEE



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Cruise vessels

Current: up to 2 x 400 A (and more)

Voltage: 400 V

Connection system: Powerlock



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Shore side electricity supply in public ports along the Austrian Danube **viadonau**

	Supply for cargo vessels (CEE connection system)	Supply for cruise vessels (Powerlock system)
Linz ¹	125 A	315 A
Ennshafen	32 A, 63 A	-
Krems	16 A, 32 A	-
Vienna ²	16 A, 32 A, 63 A	-

1 supply limited to part Stadthafen

2 supply limited to parts Freudenau and Lobau

Study on shore side electricity in the public Danube ports (2017 – 2019)

Investigation of

- supply of shore side electricity facilities (quantitative and qualitative)
- demand by vessels (user frequency)
- operation and billing systems
- feasibility of extension of shore side electricity supply
- cost estimate for extension
- initial assessment of cost-benefit ratio

Conclusions:

- extension of shore side electricity in all ports feasible (from a technical perspective)
- demand from side of the cargo vessels is low
- cost-benefit ratio needs to be analysed by each port individually



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Guideline planning for shore side electricity **viadonau** along the Austrian Danube (2019)

Coordinated by viadonau on behalf of the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology

Objective

Development of a basic planning across federal states for the installation and operation of shore power units

Included use cases for shore side electricity

- Cruise vessels at private landing sites
- Cruise vessels during winter break in ports
- Cargo vessels at public berths

Working group members

Grid operators, power suppliers, berth and port operators as well as representatives of the Federal States and even stakeholders from Bavaria



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Guideline planning for shore side electricity along the Austrian Danube (2019) viadonau

Elements of the guidance planning:

- Technical specification of shore power units
- Cost-efficiency studies
- Organisational concept (incl. access and charging system)

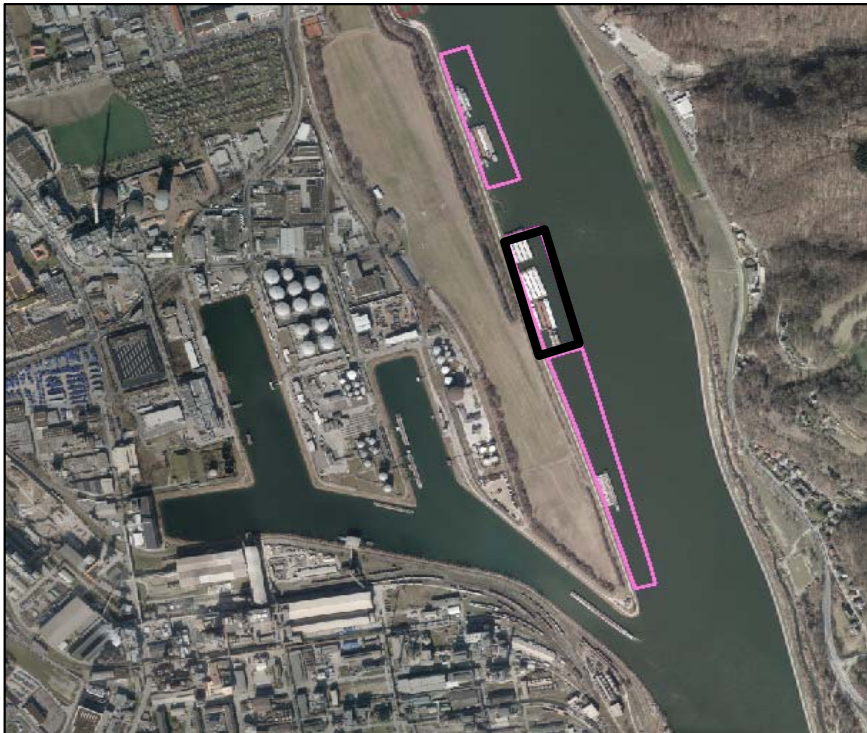
Conclusions:

- application of shore side electricity in all use cases feasible (from a technical perspective)
- use of shore power is widely accepted by cruise industry
- cost-benefit ratio needs to be analysed individually based on investment costs, user frequency, distributed amount of electricity, sales price etc.
- coordination across Federal States avoids spill over effects and facilitates know-how exchange



Pilot projects – public berths

Upgrade of public berth Trockengutlande Linz Mitte



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Location: river km 2,128.9 – 2,129.2; right bank

Length: 320 m

Current characteristics: inclined river bank construction, bollards



Co-financed by the Connecting Europe Facility of the European Union

Pilot projects – public berths

Upgrade of public berth Trockengutlande Linz Mitte

Future characteristics after upgrade
(layout is subject to minor changes):

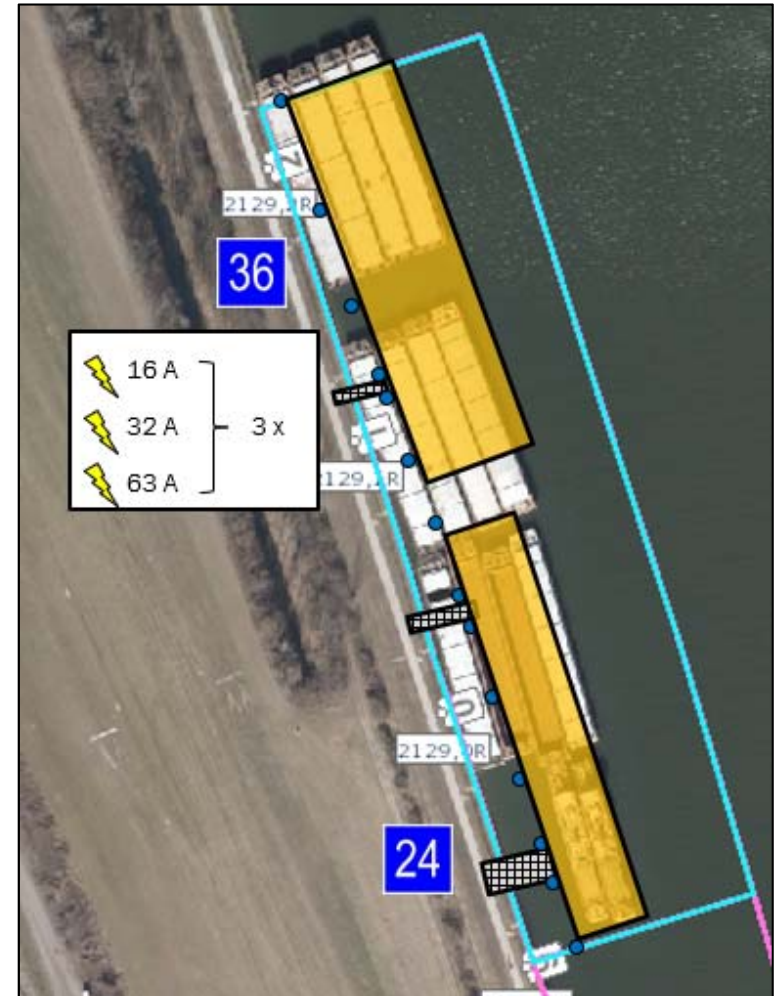
- dolphin row
- access bridges for crew and cars
- shore side electricity supply

Start of construction works coming up soon.

Financing from Connecting Europe Facility
(CEF) ensured in the frame of the „FAIRway
Works! in the Rhine-Danube Corridor“ project



Co-financed by the Connecting Europe
Facility of the European Union



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Pilot projects – public berths

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Further upgrades of public berths with future shore side electricity supply



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Wildungsmauer (currently small craft berth)
Location: river-km 1,894.85 – 1,894.88



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Brigittenau II

Location: river-km 1,931.56 – 1,932,5



Co-financed by the Connecting Europe
Facility of the European Union

Both upgrade projects also financed under
the CEF – „FAIRway Works! in the Rhine Danube Corridor“ project.

Systematic restoration and upgrade of public berths

- Implementation of construction measures according to the demand and the requirements of the shipping sector
- extension of shore side electricity supply based (prioritisation e.g. according to the demand of affected residents in settlements)
- international roll-out within the EU-funded „Preparing FAIRway 2 in the Rhine Danube Corridor“ project

Close coordination between port operators and waterway companies essential!



Contact person

viadonau



Simon Hartl

Head of Team Transport Development
viadonau – Austrian Waterway Company

T +43 50 4321-1614

simon.hartl@viadonau.org