

DT2.5.7

ACTION PLANS ON ECO-SOLUTIONS DEPLOYMENT - BRATISLAVA

PUBLIC PORTS, JSC (PP9)

NOVEMBER 2019



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Executive summary

This document was elaborated under codename DT2.5.7. as a deliverable from Work Package T2 of the project *TRANSPORT AND LOGISTICS STAKEHOLDERS NETWORK* (TalkNET) financed by Interreg Central Europe Programme. Objective of abovementioned work package is Development of action plans to improve ECO-solutions deployment in freight transport in the two priorities: alternative fuels solutions, energy efficiency solutions, in cooperation with relevant stakeholders.

This document continues from the knowledge base identified in AS-IS analysis of D.T2.2.6 “*Analysis on ECO-solutions deployment – BRATISLAVA*” elaborated in earlier stages of the project TalkNET. AS-IS analysis identified problem areas and needs that will need to be addressed in order to deal with the problem areas. Its purpose is to serve as a background for action plans containing planned activities identified as necessary in order to achieve defined goals in the field of ECO-solutions deployment. At the bottom of the document *an overview of relevant stakeholders is attached.*

In the following paragraphs, a summary of an action described later in this document will be presented, clearly linking problems/needs/challenges and actions/solutions that will be illustrated through the support of the results of the SWOT analysis.

Action: Construction of LNG terminal in public port of Bratislava (chapter 5.1)

SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Support for the development of inland waterway transport by the EU • International port under the AGN agreement lying on the main inland waterway of international importance • Modern Terminal for mineral oil transshipment 	<ul style="list-style-type: none"> • Poor technical condition of buildings, objects, transshipment technology, as well as river vessels in terms of energy efficiency • Long-term lack of investment in energy-efficient solutions • Absence of decentralized energy production from renewable sources • Low transport capacities of the existing vessel fleet • Low awareness of the use of inland waterway transport

Opportunities	Threats
<ul style="list-style-type: none"> • Environmental aspect of water transport - an ecological and economic alternative to other transport modes • Marketing activities promoting the use of water transport and public port • Creating a legal ownership relationship to the port infrastructure by VPas • Possibility to use funds from EU financial instruments for upgrading the infrastructure 	<ul style="list-style-type: none"> • Continuing decline in the technical condition of objects, technologies and vessels in the public port Bratislava intensifying the investment gap and energy inefficiency • Insufficient assistance from the state for the implementation of energy-efficient solutions • Lack of interest to adopt and invest in energy-efficient solutions by the port operator • Proximity of the port to the protected areas of NATURA 2000 • Potential problem to get the high investment funds necessary to modernize the port

Analysis pointed out, among the others, long-term lack of investment in energy-efficient solutions and absence of decentralized energy production from renewable sources. Combined with strategical location of the public port of Bratislava, results of other studies elaborated for Public ports, JSC and possibility to use funds from EU financial instruments make public port of Bratislava ideal location for an LNG terminal. Liquefied natural gas, as an alternative fuel, has become one of the options for the European Commission to reduce greenhouse gas emissions from transport and end transport dependence on oil. LNG has been begun to be implemented in various areas in Europe, including in river and maritime transport. However, making full use of liquefied natural gas requires a favourable regulatory framework and a critical mass of infrastructure investments in the EU. For this purpose, the priority program No. 18 - “Waterway axis Rhine / Meuse-Main-Danube” launched by the project “LNG Masterplan for Rhine-Main-Danube, 2012-EU-18067-S”. 33 companies and organizations from 12 EU Member States were involved in the project. Construction of LNG terminal corresponds to the long-term strategy of modernisation of port facilities, will serve as a reason for destruction of old unused buildings in poor condition and with correct promotion of new modern services provided will compensate the negative trend of low awareness of the use of inland waterway transport.

Cluster 5 - Energy efficiency solutions: overview of needs and good practices in cooperation with stakeholders to develop the action plan

Water transport is currently the most competitive current in terms of external costs. The comparison of water transport with terrestrial modes is provided in the following graph. Despite the low external costs, the share of water transport in the total amount transported in tkm in the Slovak Republic is low. This causes a number of problems accompanying the inland waterway transport in the EU, in addition to the specific features of the Danube River. The use of electricity, LPG or CNG is represented only in urban public transport and in the case of passenger cars. The project of renting electric vans in the Slovak Republic with replaceable batteries was unsuccessful and ceased. The deployment of alternative fuels is currently in the hands of private companies for which cost and operational efficiency are important. Activities inside of port as well as in its surroundings are differentiated, interests and opinions of various relevant stakeholders (public / private / potential clients / suppliers) must be taken into consideration.

5.1 ACTION: Construction of LNG terminal in public port of Bratislava

Even though water transport is considered as an ecological alternative, there has also been identified space for improvement as current vessels use obsolete propulsion technologies. Modernization of vessel propulsion is not only modern trend but also a commitment defined in The Commission's White Paper from 28 March 2011 with title "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system." Document contains a call for a reduction on oil dependence. This goal must be achieved through a wide range of policy initiatives, including the development of a strategy for sustainable alternative fuels and the infrastructure. The Commission White Paper also proposes to reduce greenhouse gas emissions in transport by 60% until 2050 compared to 1990 levels. It is clear from the EU strategic documents that natural gas in the form of CNG, LNG is (at least in the middle horizon) the best-prepared alternative fuel for transport. Currently public port of Bratislava does not provide LNG neither as commodity, nor as fuel for cargo vessels. However, there is a project ongoing with an objective to plan and construct LNG fueling station in the area of public port of Bratislava enabling usage of LNG both as fuel for barges and as a shippable commodity.

Current / ongoing activities

Currently there is one project ongoing with aim to offer services for vessel with ecological propulsion, the Construction of the LNG terminal in public port of Bratislava.

Good practices

Future of propulsion in general is focused on usage of alternative fuels, such as LNG or electricity. In order to decrease negative environmental impact of waterway transport it is necessary to focus on new available technical solutions in the area of transportation of goods.

- **LNG Liquefied Natural Gas**

In the terms of LNG Masterplan for Rhine-Main-Danube / Masterplan for introduction of LNG as fuel and as cargo for inland navigation. Liquefied Natural Gas (LNG), including bio-methane (LBM), can play an important role in Europe's transition to a low-carbon economy. The European Commission works to create favorable framework conditions to allow this to happen, with several initiatives which are being deployed to facilitate the introduction of LNG as fuel for transportation. The full exploitation of this very attractive source of energy requires the development of a harmonized regulatory framework for LNG as fuel and cargo in inland navigation, as well as critical mass of investment in shipping solutions and terminal infrastructure.

As an inspiring example can serve LNG filling station at Ennschafen port (Upper Austria) that, as per media, uses LNG produced locally in Austria. Area of public port of Bratislava has a lot of land that is ready for development. Port has very good connection to international highways and, as well as Enshaffen, its neighbors with potential provider of LNG. Therefore, LNG can be focused not only on barges and vessels but on trucks as well.

5.2 Main challenges tackled

To support ecological vessel propulsion on Danube Public ports, JSC can focus its activities on supporting the spread of ecologically friendly vessel propulsion by enabling related services, such as fueling station for LNG in the area of public port of Bratislava. This would expand the portfolio of provided services.

5.3 Results to be achieved

The implementation of the project will contribute to the greening of the Bratislava public port in accordance with the requirements for the introduction of alternative fuels in public ports within EU countries. The main activity of the project is the elaboration of a feasibility study for the construction of the LNG terminal in the Bratislava public port. The feasibility study identifies the most suitable technology for the production and distribution of LNG for the Bratislava public port due to its specificities, based on a comparison of available LNG liquefaction, storage and withdrawal technologies on the market.

5.4 Tasks to be performed

Construction of LNG terminal to fulfill commitment to decrease negative impact on environment and to extend provided port services.

The LNG terminal is planned to follow the wider distribution chain relationships, where the gas supplier supplies pipelines to the terminal in the port of Bratislava, which will then be processed and distributed by the waterway to the end user - other ports on the Danube, etc. As the LNG is not only a commodity traded, but also an LNG terminal is assumed to be used as a LNG.

The terminal will contribute to the greening of the public port of Bratislava in line with the requirements for introducing alternative fuels in public ports within the EU countries as well as reducing negative environmental impacts.

The LNG terminal will be a key logistics point for LNG tankers that supply petrol stations. At the same time, it can provide LNG-powered tanker services. The LNG terminal should have separate handling equipment for riverboats and motor boats. In addition, vessels and LNG tankers must have the option of further logistics and take over the LNG for further LNG transport along the Danube. In addition, the planned alternative fuel terminal in Bratislava is already part of the European TEN-T corridor and is eligible for EU funding.

5.5 Key actors

- Public ports, JSC
Port authority, co-investor and future owner and operator of LNG terminal
- Ministry of Transport and Construction of the Slovak Republic

Provides co-financing from state funds / operational program, project support and project control

- Ministry of Environment of the Slovak Republic
Shall grant the necessary waste management permits, provide an opinion on EIA (Environment Impact Assessment)
- Slovenská plavba a prístavy, JSC
Current major port operator owning fleet of vessels. Potential customer.
- Slovenský plynárenský priemysel, a.s.
Major energy supplier in Slovakia, potential future producer and provider of LNG

5.6 Timeline and financial resources

Finalization of pre-project preparation (submission of study) is expected in 8.2020

5.7 Expected results

Considered that this pre-investment and project preparation, the measurable indicator of the project is the number of feasibility studies carried out, with a target value of 1.

5.8 References

- 1 D.T1.2.6 ANALYSIS ON MULTIMODAL NODES EFFICIENCY AND CONNECTIONS – PUBLIC PORT OF BRATISLAVA
- 2 Aktualizácia koncepcie rozvoja verejných prístavov 2010
- 3 Strategický plán rozvoja dopravnej infraštruktúry SR do roku 2020 Fáza I
- 4 Strategický plán rozvoja dopravy SR do roku 2030 – Fáza II
- 5 Stratégia rozvoja Verejného prístavu Bratislava (Master plan) 2015

Annex - Mapping of Stakeholders

Potential stakeholders involved:

- Verejné prístavy, a.s. / Public ports, jsc
- Ministry of Transport and Construction of the Slovak Republic
- Ministry of Environment of the Slovak Republic
- Slovenská plavba a prístavy, jsc
- Slovenský plynárenský priemysel, a.s.

- **Verejné prístavy a.s. / Public ports, jsc**

<https://www.portslovakia.com/>

Public Ports, jsc was established on 21 January 2008 under the Act No. 500/2007 Coll., Amending Act No. 338/2000 Coll. on inland navigation. The founder of the company is the Slovak Republic, in which the Ministry of Transport and Construction of the Slovak Republic acts. Public Ports, jsc is responsible for:

- ensuring the preparation and realization of the construction of public ports in the Slovak Republic, together with the elaboration of long-term and short-term concepts of their development,
 - ensuring the operation, maintenance and repairs, as well as the registration of facilities and facilities in the territorial districts of public ports,
 - renting land in the territorial districts of public ports and other activities directly related to the loading of property in the territorial districts of public ports,
 - collecting payments for the use of public ports,
 - creating the conditions for the development
- **Ministry of Transport and Construction of the Slovak Republic**

<https://www.mindop.sk/en>

The Ministry within the scope of the defined relevant area of competence

1. defines the concept of the development of inland navigation of ports and waterways and in cooperation with the Ministry of the Environment of the Slovak Republic ensures its implementation in accordance with the intentions of the state transport policy,
2. provides the development of inland waterway transport, determines its needs and represents its interests in the construction and modification of waterways and ports,
3. helps to involve waterborne transport in intermodal transport,
4. represents the Slovak Republic in matters of inland navigation in contact with international organizations operating in the field of inland navigation,
5. supports international cooperation on the transport of dangerous goods by inland waterways,
6. monitors the development of the capacity offer of vessels engaged in the transport of goods in water transport recorded in the register of vessels, evaluates the intensity of waterborne transport in relation to vessel capacity, waterway navigability and their condition, and monitors whether the development of vessel capacity and water transport intensity do not lead to serious disturbance the financial capacity of carriers,
7. imposes sanctions
8. submits to the European Commission a request for recognition of the classification company and shall send all the information and documents necessary to meet the recognition criteria,
9. agrees to establish ports and defines their territory,
10. determines the territory of the public ports after negotiating with the competent local self-government authority,
11. grant and withdraw the authorization to carry out the technical inspection of the vessel,
12. grants and revokes a certificate of belonging to the Rhine,
13. grants and revokes permission for the participation of foreign carriers in national waterways,

14. grants and revokes a license for the operation of public water transport
15. issue a certificate of professional competence of the carrier,
16. Issues a binding position in proceedings in which the relevant building authority is involved in the establishment and operation of temporary buildings serving public port users on a priority
17. investment property or construction that enters a waterway or is part of a waterway,
18. expresses its views on the planning of land-use planning documentation for the interests of inland navigation,
19. grants and revokes the mandate to carry out the training of applicants for the issue of a certificate of professional competence of the Safety Advisor and for the training of applicants for the issue of a certificate of special knowledge in the field of the transport of dangerous goods by inland waterways,
20. approves the charging rate for the use of public ports
21. refers to lease agreements for priority investment property in public ports where the Ministry's approval is required,
22. issues a permit for third-country transport,
23. expresses its views on the registration of priority capital assets,
24. provides the transporter with a subsidy.

- **Ministry of Environment of the Slovak Republic**

<https://www.minzp.sk/en/>

The Ministry of the Environment was re - established as of 2 November 2010 to function as the central state administrative authority and supreme inspection authority in environmental affairs. To guarantee an inspection activity of the Government of the Slovak Republic, the Ministry of the Environment co-ordinates the activities of all Ministries and other central state administrative authorities of the Slovak Republic in environmental matters.

- nature and landscape protection
- waste management

- protection of water resources and the quality of groundwater and surface water
 - fisheries and forestry in national parks
 - environmental impact assessment of activities and their consequences
 - air protection,
 - geological works,
 - genetically modified organism.
 - national environmental policy
 - unified information system on environment and area monitoring
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- **Slovenská plavba a prístavy, jsc**

<http://www.spap.sk/en>

Slovenská plavba a prístavy a.s. (SPaP a.s.) has been a dominant company in the field of transport, transshipment and warehousing of goods, forwarding services, repair works and building of new vessels on the territory of the Slovak Republic. The company offers logistics services, being connected with transportation of all kinds of goods on the river Danube as well as on the whole network of West European waterways between the North Sea and the Black Sea. The company SPaP a.s. with its technical equipment, high-quality services and skilled workers, has an interesting geographic and logistic location in the field of warehousing, transshipment and transport of cargoes.

The SPaP a.s. has been directly connected to:

1. Railway transport
2. Road transport (highway junction)
3. Internal pipeline from the SLOVNAFT-refinery

- **Slovenský plynárenský priemysel, a.s.**

<https://www.spp.sk/en/>

Slovenský plynárenský priemysel, a.s. (SPP) is the largest energy supplier in Slovakia, which, in the area of gas supply, directly follows the more than 160-year tradition of the Slovak gas industry and has been successfully operating on the electricity supply market since 2012. Overall, more than 1.3 million customers use reliable energy supplies and other energy services from the SPP. Through its subsidiary SPP CNG, s.r.o., which currently operates 9 public filling stations in Slovakia, supports the development of compressed natural gas (CNG) transport as an ecological alternative to traditional fuels. Social responsibility activities are implemented through EkoFond, n.f. and the SPP Foundation. Since 2014, it owns 100% of the shares in the Slovak Republic, which exercises its shareholder rights through the Ministry of Economy of the Slovak Republic.