IENE Company Profile

Overview

The only Croatian gas transmission system operator, Plinacro, was established in 2001, by unbundling of the natural gas transmission activity from INA into a separate daughter company. Since 2002, Plinacro has been a 100% state-owned company.

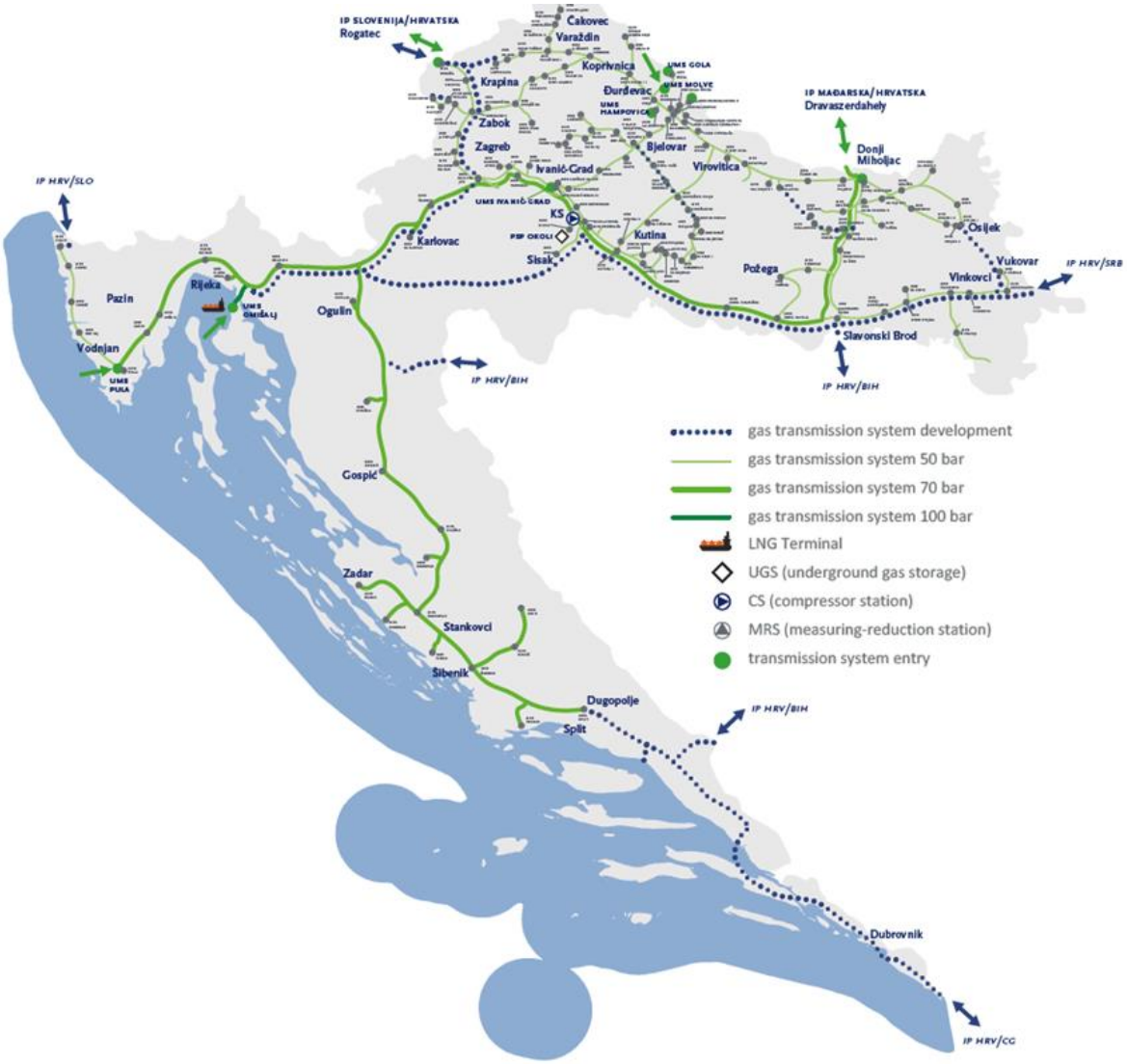
By performing gas transmission as its main activity, Plinacro guarantees safe, reliable and high-quality supply of natural gas from the entry point into the gas transmission system to off-take measuring-reduction stations of gas distributers and direct and eligible customers.

Plinacro is in charge of the supervision, maintenance, development and construction of the entire gas transmission system, and of other activities necessary for the technical functioning of the system. Today, Plinacro operates 2,544 km of high-pressure gas pipelines, 1,573 km of which is 50-bar, 954 km is 75-bar system and 18 km is 100-bar system, 2 interconnection measuring stations at the connections with the transmission systems of the Republic of Slovenia and the Republic of Hungary, 5 entry measuring stations at the connections with natural gas production facilities, 1 entry-exit measuring station at the connection with the Okoli underground gas storage, 1 entry measuring station at the connection with the LNG Terminal (Omišalj) and 156 exit measuring-reduction stations and the state-of-the-art National Dispatching Centre, a center of remote supervision and managing the entire gas transmission system.

The “IENE Company Profile” is an occasional communication published by the Institute of Energy for SE Europe in its effort to broaden the dialogue on current energy issues of regional and global interest. A Company Profile, as the name implies, focuses on a particular company engaged in one or more areas of activity in the broad energy field. The scope of the “Company Profile” is to focus on the achievements and plans of prominent energy companies and organizations which through their work paradigm could provide inspiration for leadership, strategy and innovation. Material used for a Company Profile may come from published sources but also from original input contributed by IENE's staff and research associates.

Operative control of Plinacro infrastructure is carried out through four gas transmission regions: (a) Gas Transmission Region Central Croatia (head office in Ivanić Grad), (b) Gas Transmission Region Northern Croatia (head office in Zabok), (c) Gas Transmission Region Eastern Croatia (head office in Donji Miholjac), (d) Gas Transmission Region Western and Southern Croatia (head office in Rijeka), and the Maintenance Department and Storage located in Ivanić Grad as well as through the mentioned National Dispatching Centre.

Plinacro Group today comprises Plinacro Ltd and Podzemno skladište plina Ltd (a company 100% owned by Plinacro)



Map 1: Croatian Gas Transmission System

Gas storage is an integral technological and business activity of each gas system, and underground gas storage facilities are fundamental for security and flexibility of supply. At the moment, Croatia has got only one underground gas storage facility in Okoli, 50 km southeast of Zagreb, put into operation in 1987. It is currently managed by the national storage system operator – Podzemno skladište plina Ltd Company (PSP). The peak underground storage in Grubišno Polje, which is included in the list of strategic projects of the Republic of Croatia, is currently under construction

Along with its core business of natural gas storage, PSP Ltd is responsible for management, maintenance and development of a safe, reliable and efficient gas storage system, as well as for further development of storage capacities and storage operations. In compliance with the mentioned, PSP is the bearer of the strategic project of the construction of a new gas storage facility in Grubišno Polje, for covering peak consumption of the system. Plinacro acquired a 100% share in PSP in January 2009, after signing the Agreement of purchase and sale with INA.

Moreover, Plinacro's significant role in the implementation of the LNG terminal project on the island of Krk should be highlighted, both as a co-founder of the LNG Croatia LLC company, with the Croatian National Energy Company HEP d.d., and as an active partner in the planning and construction process. In addition to this, Plinacro is a co-owner of the LNG Croatia LLC company, with a 25% stake +1 share. The project provided energy needs and increased security of supply by a new natural gas supply route for the countries of Central and Southeastern Europe.

Plinacro Ltd. as the national gas transmission system operator and the leading infrastructural energy entity of the gas economy in the Republic of Croatia is committed to the development, construction and maintenance of the gas transmission system. Plinacro is also dedicated to achieving its vision to become an important strategic energy partner of the neighbouring region and the European Union, which in times of energy transition and uncertainty guarantees energy security and contributes to the fight against climate change.

Mission, Vision and Goals

Mission

As the gas transmission system operator, Plinacro Ltd. is in charge of:

- transmission and transit of natural gas

- management (supervision and control), maintenance, development and construction of the gas transmission system
- non-discriminatory access to the transmission system when it is financially, technically and technologically reasonable and justified
- balancing the quantity of gas in the transmission system
- connecting with other gas systems.

Plinacro Ltd. is also in charge of securing a long-term transmission system capability to meet the gas transmission requirements in order to provide usage of natural gas as environmentally most acceptable energy source.

Vision

Plinacro aims to be an esteemed and leading infrastructural energy entity in the gas business in the Republic of Croatia and an important strategic energy partner in the region and the European Union, which enables its owners to meet their energy requirements in a transparent and socially responsible manner, and provides users with a safe and reliable natural gas transmission as an environmentally and financially most acceptable option of energy supply in the open market circumstances.

Goals

- **General goals:**
  - Satisfaction of gas transmission system users and their confidence;
  - Considering the needs, interests and qualifications of their employees through the system of awarding and promotion, since their employees are an irreplaceable creative potential and support in achieving the Company's goals;
  - Implementation of sustainable development principles and promotion of the coexistence with nature;
  - Cooperation with wider community and population in the regions of their activities
- **Natural goals:**
  - safe and reliable natural gas transmission through the gas transmission system of the Republic of Croatia;
  - maintenance of full availability of the gas transmission system;
  - creating technical-technological preconditions for the increase of transmission capacities, i.e. the transmission capacity market and the natural gas storage capacity;

- continued gasification of the Republic of Croatia aiming at the uniform economic development as well as possibility for all Croatian citizens to choose among energy sources;
- connecting the gas transmission system with gas transmission systems of the neighbouring countries;
- transit of natural gas through the Croatian gas transmission system

➢ **Business goals:**

- balance of natural goals, operative costs and investments with the income through the implementation of development plans and business plans;
- sustainable business activities through liquidity and solvency of the company;
- investment in fixed assets entirely with own funds;
- achievement of reasonable profit

Corporate Responsibility

Since its establishment, Plinacro opted to do business in accordance with the principles of sustainable development, making continuous efforts to meet its current needs without jeopardising the possibility of future generations to achieve the same.

Through its business activities, Plinacro strives to achieve the best value, not only in the financial, but also in social, environmental and ethic sense. It constantly improves its business quality system, takes care about the safety and protection of health and environment, invests significant resources in the development and education of its employees and contributes to worthy projects in its community.

By adopting the principles of modern corporate management and sustainable development in general, Plinacro has adopted a commitment to further continuous development of a long-term active policy of socially responsible business activities.

Plinacro is thereby confirming that social responsibility is its permanent commitment. In the years ahead, Plinacro will strive to be a reliable partner in the community by actively cooperating and responding to its expectations.

Environmental Protection

Despite the fact that gas is an environmentally friendly energy source that is not released into the atmosphere under the conditions of normal activities and functioning of the gas transmission system, Plinacro attributes great importance to

the environmental issues and implements a number of preventive measures in the field of environmental protection:

- its measuring-reduction stations and gas pipelines are equipped with safety devices that prevent even the least harmful consequences for people, objects and the environment
- Plinacro keeps a Pollutant Emission Register
- Plinacro measures air emissions from stationary sources, as well as greenhouse gas emissions
- Plinacro disposes of waste in accordance with the legislation
- in order to preserve the original layout of the environment as much as possible, and reduce the possibility of its damage to a minimum, when designing and constructing the gas system Plinacro ensures that gas transmission pipes are buried into the ground
- during construction of the gas pipeline Plinacro keeps a daily journal on environmental compliance and, if necessary, the company delivers the data to the competent institutions
- Plinacro conducts internal inspections of protection measures implementation on a regular basis in order to keep the system safe and reliable.

International Activities

Plinacro's international activities are comprehensive and take place on various levels, through the institutions and working groups of the European Union and the Energy Community, participation in international projects, direct cooperation with similar foreign companies, membership and activities in international professional associations and active participation at international conferences.

A significant part of the activities is carried out under the auspices of and in cooperation with the competent Ministry of Environment and Energy, and particularly through the European Network of Transmission System Operators for Gas (ENTSOG), an association of Europe's transmission system operators, of which Plinacro is an active member.

Plinacro has accomplished significant international activity by working on the new supply projects, including the Ionian-Adriatic Pipeline projects and LNG terminal project in Omišalj. Apart from Croatia, countries such as Albania, Montenegro and Bosnia and Herzegovina also participate in the Ionian-Adriatic Pipeline project, which was initiated and designed by Plinacro and has become a leading regional project. With its preparation, besides the aforementioned international cooperation, Plinacro

accomplished a successful cooperation with a number of foreign companies such as EGL, TAP, Shah Deniz 2 and Socar.

The longest and the most enduring international activity of Plinacro is related to cooperation with similar companies, primarily gas transmission system operators. Plinacro primarily cooperates with the operators whose systems are connected to the company's system, the Slovenian Plinovodi (Geoplin) and the Hungarian FGSZ, as well as with those with which Plinacro plans direct interconnection of systems, joint participation in projects or some form of professional cooperation, including BHGas, Srbijagas, GCA, Gaz-System.

Plinacro's experts have also been actively participating in activities of other international professional associations, such as the International Gas Union (IGU). Plinacro has become a member of the two new initiatives, Eastern Europe Natural Gas Partnership (EE-NGP), under the auspices of the United States Energy Association (USEA), and the Association of the Mediterranean Gas Infrastructure Operators (MEDGIO). In addition to this, Plinacro's representatives participate in numerous international assemblies, conferences and forums.

Financial Statement

Major financial indicators of Plinacro, such as total income, gross and net profit as well as total expenses, are shown in the following tables.

Table 1: Plinacro's Total Income, 2011-2021

Year	in HRK 000	in EUR 000
2021	504 460	67 045
2020	381 937	50 701
2019	399 376	53 871
2018	477 497	64 404
2017	655 900	87 921
2016	601 557	79 895
2015	525 054	68 999
2014	576 362	75 539
2013	619 473	81 794
2012	633 565	84 280
2011	631 767	84 981

Table 2: Plinacro's Gross Profit, 2011-2021

Year	in HRK 000	in EUR 000
2021	79 610	10 581
2020	-23 507	-3 121
2019	17 473	2 357
2018	95 348	12 860
2017	271 354	36 374
2016	223 143	29 636
2015	123 122	16 180
2014	131 922	17 290
2013	152 797	20 175
2012	84 660	11 262
2011	70 080	9 427

Table 3: Plinacro's Net Profit, 2011-2021

Year	in HRK 000	in EUR 000
2021	65 140	8 657
2020	-17 214	-2 285
2019	15 089	2 035
2018	77 847	10 500
2017	234 985	31 499
2016	188 870	25 084
2015	108 738	14 290
2014	113 920	14 931
2013	143 054	18 889
2012	74 605	9 924
2011	62 690	8 433

Table 4: Plinacro's Total Charges, 2011-2021

Year	in HRK 000	in EUR 000
2021	424 849	56 464
2020	405 445	53 822
2019	381 903	51 514
2018	382 149	51 543
2017	384 546	51 547
2016	378 413	50 258
2015	401 932	52 819
2014	444 441	58 249
2013	466 676	61 619
2012	548 905	73 019
2011	561 687	75 554

Quality Management System

By realizing the importance of continuous improvement of business processes and the quality of its service, Plinacro decided to introduce the quality management system according to ISO 9001:2000 at its very establishment. The ISO Standard was accepted as a good basis for raising the efficiency of business, as well as for continuous improvement of the quality system and the satisfaction of the increasing number of natural gas transmission users.

The system was certified for the first time in 2003, and is continuously being improved and enhanced as evidenced by the successful completion of the system recertification. In 2015, a decision was taken on further development and improvement of the ISO system. In 2016, the Information Security Management System was introduced and successfully certified in compliance with the ISI/IEC 27001:2013 standard. Moreover, in 2016 and 2017, all preparatory activities were carried out for certification in accordance with ISO 50001 standard (Energy Management System) and at the beginning of 2018, Plinacro has been successfully certified in accordance with this standard.

System Development

From the Incorporation Up to Now

In the first ten years since incorporation, through two development - investment cycles, Plinacro invested 600 million euro building over 1,100 kilometres of new transmission infrastructure enabling country's infrastructure capacity to be able to meet the long-term needs of the local natural gas market. In order to create preconditions for gas transit, at the beginning of 2018, Plinacro commenced the third development and investment cycle. As a part of the third cycle, the first compressor station on the gas transmission system was constructed, which created the prerequisites for bidirectional flow and transmission of larger quantities of gas at the interconnection with Hungary, and with the reconstruction of the Rogatec - Zabok main gas pipeline, bidirectional gas flow was made possible with Slovenia as well, which fulfilled the requirements of the EU legislation to ensure a constant bidirectional gas flow at interconnections among the EU member states.

At the beginning of 2021, the Zlobin - Omišalj delivery gas pipeline was put into operation, which connects the LNG terminal on the island of Krk with the onshore gas transmission system. This 18 km long gas pipeline is of a vital importance for the operation of the LNG terminal in Omišlj, which provides the Republic of Croatia with a strategically extremely important new diversified gas supply route that ensures the

security and stability of gas supply for the Republic of Croatia, as well as for Central and Southeastern Europe through bidirectional interconnections with Hungary and Slovenia. Implementation of the mentioned projects provided the fulfilment of the conditions of security of gas supply in accordance with Regulation (EU) 2017/1938 as well as the integration of the Croatian gas transmission system into the European gas flows.

Along with these projects, Plinacro is continuously working on developing the existing gas system and increasing the quality of natural gas supply.

Future Development of the System

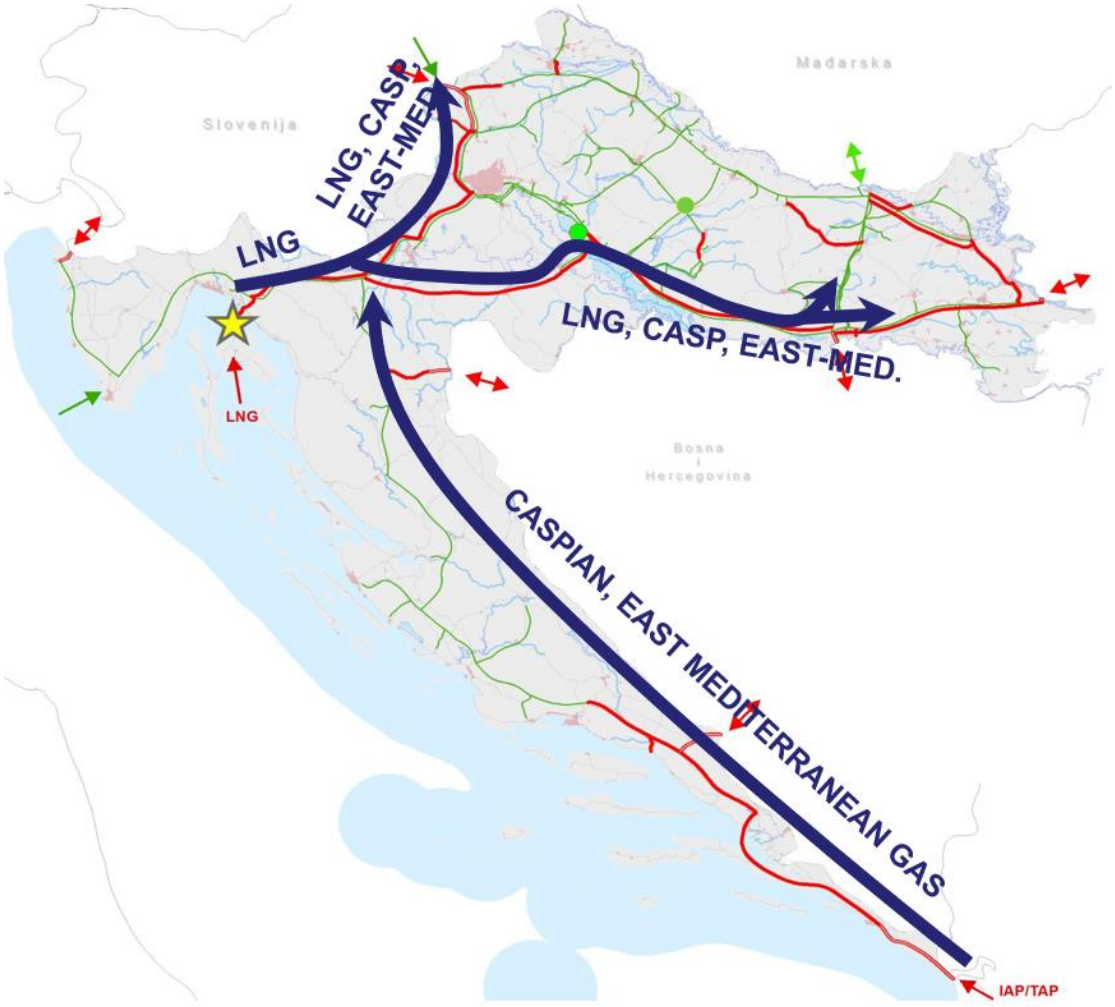
In accordance with the Gas Market Act, Plinacro develops the gas system according to the guidelines for the construction of energy infrastructure for gas, which according to Energy Development Strategy of the Republic of Croatia until 2030 with a view to 2050 includes the following:

- gas pipelines for transmission of natural gas and biomethane that are part of the system that mainly contains high-pressure gas pipelines, excluding high-pressure gas pipelines used for the production needs or for local distribution of natural gas
- underground gas storage facilities
- facilities for receiving, storing and regasification or decompression of LNG and CNG/CBM
- all equipment important for the protected, safe and efficient operation of the system or enabling bidirectional capacity, including compressor stations.

The development of the gas storage system includes the extension of the existing underground gas storage, the construction and commissioning of a new (peak) underground gas storage and the potential construction of a new seasonal gas storage in accordance with possibilities and requirements.

It is a strategic imperative to increase the diversification of gas supply by constructing the LNG terminal, that is, by developing projects for the supply of gas from the Caspian region or the Eastern Mediterranean. It is also necessary to develop all projects that can increase gas transmission through the Croatian gas transmission system and the efficiency of the system itself. Strategic projects that make it possible to diversify the supply routes, enhance the efficiency of the transmission system and ensure the security of gas supply in accordance with the N-1 criterion are the LNG terminal in the

Omišalj municipality on the island of Krk, with the evacuation gas pipelines to the domestic market, Slovenia, Hungary and Serbia, and the Ionian-Adriatic pipeline.



Map 2: Guidelines from the Energy Development Strategy of the Republic of Croatia until 2030 with a View to 2050

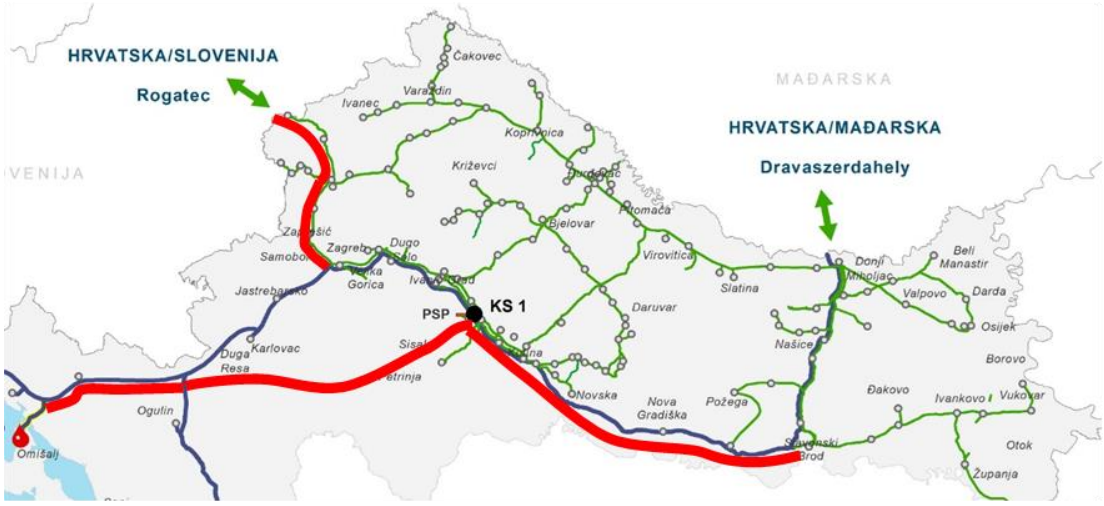
After the Russian invasion of Ukraine, the European Union adopted the REPowerEU plan focused on reducing the EU's dependence on Russian fossil fuels. At the Commission's request, the European Network of Transmission System Operators for Gas (ENTSOG) has produced an assessment of additional gas infrastructure needs per region. It was concluded that, among other projects in the region, in the medium term, expanding the capacity of the LNG terminal on Krk and enhancing Plinacro's transmission system towards Hungary and Slovenia would further reduce dependence on Russian gas in Central and Eastern Europe.

Projects for the transmission of LNG from the terminal on the island of Krk include gas pipelines that are not on the PCI list and are necessary for the transmission of gas towards domestic users or Hungary:

- Zlobin – Bosiljevo:
- Bosiljevo – Sisak and Sisak – Kozarac
- Kozarac – Slobodnica

and projects from the PCI list that enable transmission to Slovenia, Austria and Central and Eastern Europe:

- Group of projects Croatia – Slovenia
  - Interconnection Croatia – Slovenia (Lučko – Zabok – Rogatec)



Map 3: Gas Interconnection Croatia – Slovenia (Lučko – Zabok – Rogatec)

Following the REPowerEU guidelines, on 18 August 2022, the Government of the Republic of Croatia made a Decision on increasing the security of gas supply by constructing the Zlobin – Bosiljevo gas pipeline and expanding the LNG Terminal capacity to 6.1 billion cubic meters of gas per year. LNG Croatia LLC was requested to increase the capacity of the terminal to 179.25 (GWh/d) that is 6.1 bcm/year, and Plinacro was requested to commence the works on the construction of the Zlobin – Bosiljevo gas pipeline.

The construction of the Zlobin – Bosiljevo gas pipeline (DN 800/100 bar, length 58 km) can significantly enhance security of gas supply for the consumers in the Republic of Croatia by increasing gas transmission from the existing LNG Terminal to its current technical capacity of ca 3.5 billion m3/y. The construction of the Zlobin – Bosiljevo gas pipeline provides main preconditions for the further development of the gas pipeline system and the increase of gas transmission towards Hungary and the Republic of Slovenia.

Expansion of the capacity of the LNG Terminal on the island of Krk and the construction of the Zlobin – Bosiljevo gas pipeline will further diversify supply routes and sources of natural gas supply on the Croatian market as well as provide the main preconditions for additional supply of the European Union, which will have a significant impact on the security of natural gas supply.

Further development of pipelines toward Slovenia (Lučko-Zabok-Rogatec) and Hungary (Bosiljevo-Sisak-Kozarac and Kozarac-Slobodnica) will enable significant transmission of gas from the LNG terminal towards the region.

In addition to the planned projects, to increase the safety of CE and CEE countries of the European Union, ENTSOG assessment for REPowerEU plan has shown that projects of common interest and additional projects recognised by the REPowerEU plan, if implemented, would provide additional benefits also to the Energy Community Contracting Parties, whose needs would be fully satisfied. With the completion of Projects recognised by the flagship 5 of the Economic Investment Plan for Western Balkans (EIP projects), the Energy Community Contracting Parties will have the access to various alternative sources and routes. The implementation of the EIP projects would need to be assessed on a case-by-case basis in order to avoid the risk of stranded assets.

Flagship 5 includes the construction of the IAP, Southern gas interconnection with BiH, while further regional gas market and security of supply can be achieved by developing interconnection with Serbia.

IAP will cross the territory along the Adriatic coast from Fieri in Albania via Montenegro to Split in Croatia and will be connected to the existing Croatian gas transmission system (main direction Bosiljevo – Split). The Ionian-Adriatic Pipeline will have an influence on providing gas network for the entire region. The IAP project is based on the idea of connecting the existing Croatian gas transmission system, via Montenegro and Albania, over Southern Gas Corridor and the TAP gas pipeline system (Trans Adriatic Pipeline) to Kaspian natural gas.

Concerning the south Interconnection of Croatia and BiH, it must be emphasized that the pipeline is a new supply route for Bosnia and Herzegovina that will enable the reliable and diversified natural gas supply. Having a single point of entry of gas supplies presents a significant risk of disruption in gas supply to BiH; therefore, the need for an alternative supply route and source is evident. The pipeline will enable the flow of gas from IAP and Krk LNG to Bosnia and Herzegovina.

The Slobodnica – Sotin (Croatia) – Bačko Novo Selo (Serbia) pipeline connects the Croatian and the Serbian gas transmission systems. First phase would be Negoslavci-Sotin-Bačko Novo Selo and the pipeline Osijek-Vukovar. It will be a new interconnection, new entry point and transmission route for the needs of Serbia; it will be SoS and diversification of supply route for Serbia. It will enable Serbia access to Croatian UGS, LNG and enable supply of gas from Austria, Slovenia and Italy by the Croatian gas transmission system.

In addition to the above, the development of future decarbonized infrastructure is also planned, respecting the guidelines of EU policies and the Croatian strategy for hydrogen until 2050. When it comes to hydrogen, it is predicted that the infrastructure requirements for hydrogen transmission will remain limited in the first phase since the demand will initially be met by the production in the vicinity or at the point of consumption. Mixing with natural gas is expected in certain areas. The planning of transport infrastructure for the transmission of clean hydrogen, and infrastructure for the capture and use of CO2 will begin immediately to facilitate the use of certain forms of hydrogen with a low share of CO2 emissions.

Planning the development of the network for the transmission of hydrogen and CO2 will be based on the principle of the lowest cost, i.e. on optimizing the use of the existing gas infrastructure and the repurposing of the existing gas pipelines into the pipelines for the transmission of hydrogen and CO2. In the second phase, infrastructure intended for hydrogen (newly built or infrastructure from the converted gas pipelines for natural gas) will transport hydrogen not only for industrial and transport use and for the purpose of electricity balancing, but also for supplying heat to the residential and commercial buildings.

In this phase, transmission infrastructure will be required at the level of the whole Croatia and the EU. All necessary steps will be taken to enable the transmission of hydrogen from the areas with high renewable potential to demand centres located in the areas with lower renewable energy potentials, as well as to other EU or Energy Community Member States. Croatia will actively participate in the development of the backbone of the future pan-European Backbone Transmission Infrastructure. Wherever technically and economically justified, the existing gas network will be repurposed for the transmission of renewable hydrogen over longer distances, while larger hydrogen storage facilities, assumed to become needed in this phase, will be considered and developed.

The EU expects the development of international hydrogen trade, and accordingly, Croatia will use its favourable geographical position and the potential of the existing

gas transmission network and, if necessary, will construct new gas pipelines for the transmission of hydrogen with the aim of assuming the role of an indispensable link in the transmission of hydrogen from Eastern Europe, the Balkans and countries of the Southern and Eastern Mediterranean to hydrogen users in Croatia and to the growing regional and European hydrogen market. The existing location for the LNG terminal will, depending on the development of the market and the realized national potential for hydrogen production, be converted into a location for the supply of renewable hydrogen.

All future development projects are planned as H2 ready.

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