## Topic 2.4 – Energy networks

The key objective of this Topic is achieving well-interconnected and well-functioning electricity and natural gas systems and markets in the Adriatic-Ionian Region, to foster security of energy supply, and to improve competitiveness of energy delivery in view of the transition towards decarbonised energy systems to confront the climate change challenge. Priorities are enacting the energy goals of the European Green Deal, RePower EU, and the Green Agenda for Western Balkans, while contributing to the energy transition, large-scale deployment of renewable energy sources, increased electrification of the energy system, energy efficiency and resilience of energy infrastructure with a view at EU enlargement.

**Global objectives.** Energy systems are made up of energy networks, energy markets and energy uses. The liberalisation and integration of the EU electricity and natural gas markets, pursued by the EU directives and regulations, contribute to security of supply, competitiveness, sustainability and affordability. The energy policy objectives of the EU – sustainability, security of supply, competitiveness and affordability – can only be achieved through a well-interconnected and well-functioning internal energy market.

**EUSAIR objectives.** The focus is on the cooperation energy policies and initiatives by countries of the Adriatic-Ionian Region, collaboration on infrastructure developments and harmonised operation of energy systems.

The electricityand natural gas systems and markets in the Adriatic-Ionian Region and even more in the Western Balkans Region remain fragmented. Actions for greater integration will be addressed under this Topic.

Investments in infrastructure are crucial for achieving security of supply, market integration, competitiveness, price convergence and affordability . Investments would be public and private or both. Projects which have not secured sufficient public or EU funding should be implemented through market-based instruments, such as incremental capacity processes, concessional agreements, own equity or support from commercial banks. Support and realisation of the projects within the different activities must be linked with the confirmation from the market that these infrastructures are needed and funding will be secured through market mechanisms.

On 30 May 2022, the European Union adopted Regulation (EU) 2022/869 on guidelines for trans-European energy infrastructure repealing Regulation (EU) No 347/2013.

On a proposal by the European Commission, on 14 December 2023 the Energy Community Ministerial Council followed by adopting a Decision adapting Regulation (EU) 2022/869 to the Energy Community to foster decarbonisation efforts of the Energy Community Contracting Parties in relation to energy infrastructure. This TEN-E Regulation sets out a revised regional cooperation framework for selecting and implementing key infrastructure projects necessary for achieving the 2030 and 2050 energy and climate targets and The European Green Deal. The TEN-E Regulation is key for accelerating investments in grid infrastructure. By including infrastructure for renewable and low-carbon gases, it will support the decarbonisation of gas markets and support the transformation of industrial clusters. The Energy Community Contracting Parties have to transpose the Regulation by end 2024. In parallel, the process for the selection of Projects of Energy Community Interest has been launched early 2024 by the Energy Community Secretariat with an objective to finalise this process also by the end of 2024.

In the electricity markets of the Adriatic-Ionian Region, the ultimate objective is the development of well-functioning electricity markets, underpinned by the removal of regulated retail electricity prices, the easing of network congestion**s**, integration of renewable energy sources (RES) into meshed power gridsand unhampered cross-border exchanges of power, followed by market coupling of the electricity markets of non-EU EUSAIR participating countries with the EU Member States.

Hydropower is the most commonly used type of renewable energy source in the Adriatic-Ionian Region. Substantial increase in installed capacity and generation from variable solar and wind power are expected in the coming years.Limited availability of electricity grid capacity to connect power from distributed renewable energy sources is limiting the development of renewable energy and the existing bottlenecks in the uptake and distribution of solar and wind power need to be thoroughly assessed and addressed.

The seamless integration and robust expansion of cross-border electricity grids constitute fundamental prerequisites for facilitating substantial investments in renewable energy and its widespread implementation. This entails not only the expansion and interconnection of electricity grids but also the enhancement of their capacity to accommodate the increasing demand. Electricity infrastructure initiatives identified under the EU Projects of Common Interest/Projects of Mutual Interest and Energy Community Projects, as well as the CESEC Action Plan, are aimed at integrating new renewable energy sources into the grid while simultaneously improving the reliability and efficacy of energy provision. Furthermore, they are poised to meet the escalating demand stemming from various sectors such as clean mobility, heating and cooling systems, electrification of industry, and the initiation of low-carbon hydrogen production. The planning and operation of electricity transmission and distribution networks must align closely with the development of the new hydrogen infrastructure, energy storage, e-mobility charging infrastructure, and CO2 infrastructure.

Electricity infrastructure projects, identified under the EU Projects of Common interest/Projects of Mutual IneterstInterest and Energy Community Projects of Energy Community lists, as well as the CESEC Action Plan aim at connecting new renewable energy to the power grid, and improving the reliability and quality of energy services. Interconnection of electricity grids and adequate grids capacity are pre-conditions for large-scale investments in renewable energy and its deployment.

In the natural gas market, limited investments are required in gas transmission and storage infrastructure, to address remaining bottlenecks.

Natural gas can be viewed as a transient fuel enabling the transition towards decarbonised energy systems through the European Union by the year 2050. Conditions should be created according to a long-term perspective to shift away from natural gas to renewable and low-carbon gases, in particular biomethane, synthetic methane and hydrogen.

To this end, repurposing of existing gas pipelines for hydrogen transportation should be planned while in the natural gas use, high efficiency cogeneration, carbon capture and sequestration technologies and the corresponding investments should receive consideration.

Increased supply of liquefied natural gas (LNG) is foreseen in countries of the Adriatic-Ionian Region. Direct use of LNG for transport and process industry can also be a transient option because of its lower carbon content as compared with other hydrocarbon fuels. LNG terminals, might serve as facilities for importing hydrogen in the future, however their potential and technical compatibility for conversion and repurposing still requires in-depth analysis and simulations.

Based on already existing natural gas infrastructure in the Adriatic-Ionian Region, and with completion of limited number of interconnectors in the Western Balkans Region whose implementation is already ongoing among EU Projects of Common Interest, Projects of Energy Community Interest and REPowerEU Plan, Western Balkan countries will be able to diversify supply sources and routes and to enhance security of energy supply.

Along a mid-term perspective developing natural gas infrastructure would help currently isolated areas and regions to have access to natural gas supplies, to ensure continuous and secure supplies by having networks renovated and modernised, and to bring natural gas from a range of export markets via new routes (notably, the upgraded Trans-Adriatic Pipeline – TAP2. The TAP project has been implemented and its upgrading and doubling of capacity are in progress.

In addition, liquefied natural gas (LNG) infrastructure in ports and on land enabling new gas import routes and fuel switching to LNG would also benefit security of supply and improve environmental quality.

**Flagships.** The work under Topic 2.4 is a continuation and expansion of work on the previous EUSAIR Action Plan and commitment to flagship projects. Three flagship projects have been identified and proposed: ‘Power networks and markets for a green Adriatic-Ionian region’, ‘Integrated natural gas corridors and markets for a green Adriatic-Ionian Region’ and ‘Development and operation of logistics for direct LNG use as a clean fuel for the Adriatic-Ionian Region’. The flagship projects support the objective of expanded and better integrated national power and gas systems and the development of small-scale direct use LNG as a low-carbon fuel for the Adriatic-Ionian Region.

**Specific objectives of the Topic**

In light of the scope as above, challenges and opportunities, the activities under this Topic aim at

* removing roadblocks to project investments, focusing on the enabling factors for creation and development of regional enterprises along the free and regulated European market principles;
* Integrated power networks and markets for a green Adriatic-Ionian Region;
* Completing limited number of priority gas infrastructure projects, subject to market interest, aiming at enhancing diversification of sources and routes for pipelined gas and LNG.
* Fostering energy market integration and security of energy supply of the Adriatic-Ionian Region.

### EUSAIR specificities opportunities and challenges

Linked to the above objectives, the Adriatic-Ionian Region faces a number of specific challenges and opportunities which the revised Action Plan aims to address.

Opportunities:

* Connecting and integrating power and natural gas networks to reduce energy system vulnerability and risk of disruptions of energy supply.
* Enhancing cooperation on cross-border energy networks to allow for investments on large energy infrastructure which would find difficulties given the limited national outreach capacity.
* Exploiting complementarities of the energy systems through the Adriatic-Ionian Region to improve security and competitiveness.
* Sharing resources concerning newpower and natural gas networks and infrastructure would compensate lack of highly trained technical staff and human resources.

Challenges related to electric power concern among others:

* Insufficiently integrated power grids and power infrastructure and market supporting the energy transition of the Adriatic-Ionian Region.
* Restricted electricity market activities in the Adriatic-Ionian Region due to inefficient use and low exploitation of interconnections as well as subsidies causing electricity market distortions.
* Regulatory barriers that hinder electricity market integration as well as the functioning of power exchange through the Adriatic-Ionian Region.
* Inability of the existing electricity grid to accommodate generation of large amounts of electricity from intermittent renewable and distributed energy sources.

Challenges related to natural gas concern among others:

* Delayed implementation of the priority cross-border gas infrastructure projects .
* Regulatory barriers that hinder energy market integration and natural gas trading through the Adriatic-Ionian Region such as lack of uniform criteria for the allocation of transborder capacity
* Insufficient reverse flows and storage capacities for natural gas to enhance regional security of supply.
* Very limited readiness of the regional gas infrastructure for transporting and storing pure hydrogen and hydrogen fuels and need to identify priorities for corresponding future investments in infrastructure.

Further challenges:

* Pending reform of the Energy Community Treaty envisaging reciprocity with EU Member States and credible enforcement of the EU directives and regulations, as they are relevant to facilitate energy market integration.
* Prosperous business environment is required to attract investments for the development of networks and international and regional interconnections. Political instability, which is a recurrent phenomenon in the Adriatic-Ionian Region, is often regarded as a threat and deterrent to committing long-term investment on energy networks.
* Alliances, agreements, joint ventures amongst energy enterprises from countries of the Adriatic Ionian Region should be promoted and looked for to create larger and efficient regional industry players with adequate human resources and international connections while facing technology innovations and economies of scale.
* Cyber-security threats to power and natural gas networks and infrastructure, as well as to information systems used for providing essential services in the energy sector. Exceptional events due to global climate change with the consequent need for reducing vulnerability and ensuring early warning and continuity of energy services when facing incidents and disruptions.

### Relevant policy frameworks

This Topic connects to a wide range of EU and national policies related to energy provision and networks and many other fields:

* An Economic and Investment Plan for the Western Balkans [COM(2020) 641 final]
* Council Regulation on enhancing solidarity through better coordination of gas purchases, reliable price benchmarks and exchanges of gas across borders [(EU) 2022/2576]
* European Investment Bank (EIB) Guidelines for (Energy) Project Financing and Risk Assessment
* Fit for 55 Package: Clean Energy for All Europeans Package
* Guidelines for the Implementation of the Green Agenda for the Western Balkans [SWD(2020) 223 final]
* Regulation (EU) 2022/869 on guidelines for trans-European energy infrastructure repealing Regulation (EU) No 347/2013.Regulation on European Union guidelines for the development of the trans-European transport network [(EU) No 1315/2013]
* REPowerEU Plan [COM(2022) 230 final]
* The Central and South Eastern Europe energy connectivity (CESEC)
* The Energy Community Treaty [2006/500/EC]
* The European Green Deal [COM (2019) 640 final]
* The Paris Protocol – A blueprint for tackling global climate change beyond 2020 [COM/2015/081 final]

In addition, the Topic also links to following policy framework:

* Directive on common rules for the internal market for electricity [(EU) 2019/944]
* East Mediterranean Gas Forum - Long-term strategy
* Regulation concerning measures to safeguard the security of gas supply [(EU) 2017/1938, (EU) 2022/1032]
* Regulation on risk-preparedness in the electricity sector [(EU) 2019/941]
* Regulation on the Governance of the Energy Union and Action to Confront Climate Change [(EU) 2018/1999]
* Regulation on the internal market for electricity [(EU) 2019/943]
* South East Europe 2030 Strategy (Regional Cooperation Council)
* Strategy for EU External Energy Engagement [REPowerEU]

### Indicative key stakeholders

The implementation of this Topic needs to draw on the engagement of a wide range of players, including:

* Adriatic and Ionian Initiative (AII)
* Central and South Eastern Europe Energy Connectivity (CESEC) High-Level Working Group
* Connecting Europe Facility (CEF)
* Energy Community (EnC)
* Energy Community Distribution System Operators in Electricity (ECDSO-E)
* European Investment Bank
* European Network of Transmission System Operators for Electricity (ENTSO-E)
* European Network of Transmission System Operators for Gas (ENTSO-G)
* Technical Assistance to Connectivity in the Western Balkans (CONNECTA)
* Western Balkans Investment Framework (WBIF)
* National electricity, natural gas and hydrogen Transmission System Operators (TSOs)

In addition, also the following stakeholders may be of relevance for the Topic:

* Adriatic and Ionian Interregional Group at the Committee of the Regions
* Agency for the Cooperation of Energy Regulators (ACER)
* European Climate, Infrastructure and Environment Executive Agency (CINEA)
* International Energy Agency (IEA)
* International Renewable Energy Agency (IRENA)
* Local environmental associations (e.g. Friends of the Earth)
* Regional Cooperation Council (RCC)
* United Nations Economic Commission for Europe (UNECE)

### Support to horizontal and cross cutting topics

Activities under this Topic contribute actively to the horizontal and cross-cutting topics of the revised Action Plan.

**Horizontal topics:**

* **Enlargement.** The activities help candidate countries to better integrate with EU Member States in field of EU energy policies, also including programmes and projects and their harmonisation and alignment to the EU directives and regulations. Enactment and implementation of cross-border interconnections and transnational energy infrastructures would contribute to the integration of non-Member States with the European Union. The creation of integrated markets within the Adriatic-Ionian Region would allow cost reductions and regulatory alignment with the EU Member States while reducing risk in energy supply and distribution.
* **Capacity building.** The activities have a strong focus on capacity building to ensure relevant players are well informed and involved. This includes, among other activities, joint capacity building and innovative solutions for implementing a common market. Local energy enterprises may find new opportunities while creating joint ventures and merging into larger more efficient regional enterprises.
* **Innovation and research.** The activities will touch on innovation and research in various contexts, e.g. related to new technologies improving energy transmission and storage while activating measures for cybersecurity.

**Cross-cutting topics**:

* **Circular economy.** The Topic does not explicitly address circular economy. However, improving energy networks to support a green transition is also supporting the transition to a circular economy.
* **Green rural development.** Increased energy interconnections and power grid meshing would facilitate the inclusion of rural and remote areas into the main power and natural gas infrastructure.
* **Digitalisation.** The digital transition and large-scale use of artificial intelligence are an integral part of the development of energy networks. Digitalisation and artificial intelligence would be a key driver for the operation of the energy networks, for the management of spore capacity, deployment of smart power grids, prevention of human errors and recovery from accidents and failures.

### Action 2.4.1 – Integrated power networks and market supporting the green transition

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| **Action 2.4.1** | Description of the Action |
| Name of the Action | **Integrated power networks and market supporting the green transition and security of energy supply of the Adriatic-Ionian region** |
| What are the envisaged activities?  | * Master Plan 2026 of Energy and Energy Networks for the Adriatic-Ionian Region. Activity cross-cutting Topic 2.4 and Topic 2.5 of the EUSAIR Master Plan.
* Promoting projects supporting the Trans-Balkan Electricity Corridor.[[1]](#footnote-1)
* Digitalising the power system, smart electricity grids deployment adapting smart grid technologies across the Adriatic-Ionian Region to efficiently integrate the behaviours and actions of all users connected to the electricity network in particular the generation of large amounts of electricity from renewable or distributed energy sources and demand response by consumers, energy storage, electric vehicles and other flexible sources.
* This would include:
1. Doubling the existing Trans-Adriatic power interconnectors.
2. Enhancing power supply for islands and islands systems where renewable energies can play a fundamental role.
3. Promoting early warning and cybersecurity capabilities for the resilience of the power and electricity system when facing threats and incidents.
* Road Map 2026 towards a EUSAIR Power Exchange and Natural Gas Trading Hub for the Adriatic-Ionian Region Activity cross-cutting Action 2.4.1 and Action 2.4.2 of Topic 2.4
* Developing analysis and evaluating differences in the regional and national electricity markets, with respect to regulatory frameworks, market maturity and barriers to cross-border investments. Developing customised approaches to address these barriers while paying close attention to systemic market differences.
* Supporting joint capacity building and innovative solutions for the building of a common power market.
* Creating a wholesale power market for the Adriatic-Ionian Region[[2]](#footnote-2) including support to the flagship ‘Power networks and markets for a green Adriatic-Ionian Region’[[3]](#footnote-3) and the establishment of a Coordinated Auction mechanism and instruments.
* .
* Implementing and operating the Western Balkans Energy Regulators School.
 |
| Which challenges and opportunities is this Action addressing? | * Insufficiently integrated power grids and power infrastructure and market supporting the energy transition of the Adriatic-Ionian Region;
* Restricted electricity market activities in the Adriatic-Ionian Region due to inefficient use and low exploitation of interconnections as well as subsidies causing electricity market distortions;
* Inability of existing electricity grid to accommodate generation of large amounts of electricity from intermittent renewable and distributed energy sources;
* Regulatory barriers hindering energy market integration as well as the functioning of power exchange through the Adriatic-Ionian Region.
 |
| What are the expected results/targets of the Action? | * Integrated power networks and markets for a green Adriatic-Ionian Region.

Progressive power markets and systems coupling and harmonisation . |
| EUSAIR Flagships and strategic projects | Under Flagship POWER NETWORKS AND MARKET FOR A GREEN ADRIATIC- IONIAN REGION the following masterplan was developed: * **EUSAIR MPEN –** Master Plan of Energy Networks for the Adriatic-Ionian Region
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| Indicators | Indicator name  | Common Indicator name and code, if relevant | Baseline value and year | Target value and year | Data source |
| How to measure the EUSAIR activities under this Action? | OUTPUT INDICATORS |
| OI. Number of implemented transnational interconnectors to the Trans-Balkan Electricity Corridor | RCO81 Interreg: Participation in joint actions across bordersRCO117 Interreg: Solutions for legal or administrative obstacles across border identified | 0 (2023) | 2 (2029) | TSG |
| OI. Master Plan 2026 of Energy and Energy Networks for the Adriatic-Ionian Region. Activity is cross-cutting Topic 2.4 and Topic 2.5 | RCO83 Interreg: Strategies and action plans jointly developed  | Update(2023) | 1 (2026) | TSG |
| OI. Roadmap 2026 towards an electricity market and natural gas trading hub for the Adriatic -Ionian Region. Activity cross-cutting Action 2.4.1 and Action 2.4.2  | RCO83 Interreg: Strategies and action plans jointly developed  | Update(2023) | 1 (2026) | TSG |
| OI. Operation of the Western Balkan Energy Regulators School |  RCO85 Interreg: Participations in joint training schemes | 0 (2023) | 1(2025) | TSG |
| RESULT INDICATORS |
| RI. Improved electricity interconnection in Western Balkan Region with reduced electricity cost, sharing spare capacity and increased supply reliability with a view at the horizontal topic of EU enlargement | RCO81 Interreg: Participation in joint actions across bordersRCO117 Interreg: Solutions for legal or administrative obstacles across border identified | 0 (2023) | 1(2027) | TSG |
| RI. Defining priorities with a view at different shared policy scenarios according to a long-term perspective (years 2030 and 2050 as the time horizon) | RCO83 Interreg: Strategies and action plans jointly developed | 0 (2023) | 1 (2027) | TSG |
| RI. Integration of power and natural gas markets of Western Balkan Region into a coherent and harmonised regional market. First achievements expected: market coupling, sharing of spare capacity, joint mechanisms to confront risk of energy supply. Energy market integration is key element to the horizontal topic of EU enlargement. Activity is cross-cutting Action 2.4.1 and 2.4.2.  | RCO116 Interreg: Jointly developed solutions | 0 (2023) | 1 (2027) | TSG |
| RI. Training of energy (electricity and natural gas) regulators from the Adriatic and Ionian Region according to shared principles, metholodogies and criteria with a view at the horizontal topic of EU enlargement. Activity is cross-cutting Action 2.4.1 and Action 2.4.2.  | RCO81 Interreg: Completion of joint training schemes | 0(2023) | 1(2025) | TSG |

### Action 2.4.2 – Integrated natural gas corridors

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| **Action 2.4.2** | Description of the Action |
| Name of the Action | **Integrated natural gas corridors, infrastructure and market supporting the energy transition and security of energy supply of the Adriatic-Ionian Region** |
| What are the envisaged activities?  | * Master Plan 2026 of Energy and Energy Networks and Road Map 2026 towards Energy Market Activity as under Action 2.4.1
* Subject to market interest and financial viability, supporting projects concerning cross-border gas infrastructure, in accordance with the flagship project on integrated natural gas corridors and markets for a green Adriatic-Ionian Region, including
	+ Promoting and implementing transborder interconnections towards a Trans-Balkan Gas Ring with a view its future conversion into a Trans-Balkan Hydrogen Ring including priority gas pipeline interconnections between Croatia and Bosnia and Herzegovina and between Serbia and Croatia
	+ Doubling of the Trans-Adriatic gas Pipeline " and Matagiola - Massafra pipeline
	+ North Macedonia natural gas interconnectors with Greece and Serbia
	+ New Compressor Station in Sulmona and Minerbio-Sulmona gas pipeline and as a part of the Adriatic Line project
	+ Expanding of the Krk LNG terminal in Croatia with related natural gas network reinforcement
	+ Building and operating Floating Storage and Regasification Units (FSRU) in the Adriatic-Ionian Sea – Port of Vlora (Albania), Port of Ravenna (Italy) and LNG refuelling points aimed at supply diversification and security.
	+ Designing and financing the East-Med Gas Pipeline including the Eastern Mediterranean Pipeline and Poseidon Gas Pipeline depending upon their continuing strategic interest and changing geopolitical context;;
	+ ;
	+ ;
* Supporting projects increasing gas storage capacities and their flexibility, and reverse flows for security of supply and competitiveness.
* Supporting the development of a natural gas trading hub for the Western Balkan Region.[[4]](#footnote-7)
* Developing and implementing pilot projects for adapting and repurposing natural gas transport networks and infrastructure to the transmission and distribution of renewable and low-carbon gases and eventually hydrogen.
* Promoting cybersecurity capabilities for the resilience of the natural gas system when facing threats and incidents.
 |
| Which challenges and opportunities is this Action addressing? | * Insufficiently integrated natural gas corridors and gas infrastructure and market support towards the energy transition of the Adriatic-Ionian Region.
* Insufficient readiness of the regional gas infrastructure for biomethane and hydrogen and the need to identify priorities for future investments in infrastructure.
* Insufficient storage capacities and reverse flows to allow for better security of natural gas supply and competitiveness.
* Regulatory barriers that hinder natural gas trading through the Adriatic-Ionian Region.
 |
| What are the expected results/targets of the Action? | Integrated natural gas corridors, infrastructure and market supporting the energy transition and security of energy supply of the Adriatic-Ionian Region. |
| EUSAIR Flagships and strategic projects | Under Flagship INTEGRATED NATURAL GAS CORRIDORS AND MARKET FOR A GREEN ADRIATIC- IONIAN REGION the following Action Plan was developed: * **EUSAIR AP** - Action Plan (Road Map) towards a EUSAIR Power Exchange and Natural Gas Trading Hub
 |
| Indicators | Indicator name  | Common Indicator name and code, if relevant | Baseline value and year | Target value and year | Data source |
| How to measure the EUSAIR activities under this Action? | OUTPUT INDICATORS |
| OI. Dou-bling of Trans-Adriatic Pipeline  | RCO81 Interreg Participation in joint/actions across borders | 0 (2023) | 1 (2026) |  |
| OI. Operating Floating Storage and Regasification Units in the Adriatic-Ionian SeaExpansion of the Krk LNG terminal  |  RCO116 Interreg: Jointly developed solutions  | 0(2023) | 1 (2026) |  |
| OI. Pilot projects for adapting and repurposing natural gas transport infrastructure to non-carbonated gases.  |  RCO90 Interreg: Projects for innovation networks across bordersRCO116 Interreg: Jointly developed solutions  | 0 (2023) | 1(2029) | TSG |
| RESULT INDICATORS |
|  |  | 0(2023) | 1(2029) | TSG |
| RI. The doubling of the Trans-Adriatic Pipeline (TAP2) can contribute to connecting countries through the Adriatic-Ionian Seas to improve security of natural gas supplies, to increase diversification.  | RCO81 Interreg: Participation in joint actions across bordersRCO87 Interreg: Organisations cooperating across borders  | 0(2023) | 1(2026) | TSG |
| RI. Improving LNG delivery and security of supply | **RCO116 Interreg: Jointly developed solutions**  | 0 (2023) | 1 (2027) | TSG |
| RI. The EU objective is at decarbonising the energy systems through the EU and candidates countries by the year 2050. Decarbonisation is mandatory. The pilot project might involve all the interested countries of the Adriatic- Ionian Region.  | RCO116 Interreg: Jointly developed solutions RCO90 Interreg: Projects for innovation networks across borders  | 0(2023) | 1(2027) | TSG |

### Action 2.4.3 – Liquified Natural Gas (LNG) logistics and infrastructure

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| **Action 2.4.1** | Description of the Action |
| Name of the Action | **Liquefied Natural Gas (LNG) direct use, logistics and infrastructure, for marine and road transport, as well as other use (notably in process industry)** |
| What are the envisaged activities?  | * Promoting agreements between Port Authorities of the Adriatic and Ionian Seas on logistics for the deployment and use of LNG as a fuel for maritime transport.
* Designing, constructing and operating a network of LNG refuelling stations along blue corridors for road heavy transport and rail transport.
* Promoting simulations and analyses of existing LNG terminals and storage facilities on their capability to receive hydrogen, biomethane and synthetic methane
* Projects are foreseen for:
1. Marine and road truck engine conversion to the LNG use as a fuel;
2. Direct small-scale LNG use in process and gas-intensive industries and applications.
* Supporting to the flagship project on the ‘Development and operation of logistics for direct LNG use as clean fuel for the Adriatic-Ionian Region’.
 |
| Which challenges and opportunities is this Action addressing? | Challenges related to the LNG concern among others the need to repurpose LNG infrastructure to renewable fuels and hydrogen, biomethane and synthetic methane in the future. |
| What are the expected results/targets of the Action? | * Small-scale direct use of LNG as a fuel is transient option for the Adriatic-Ionian Region requiring existing and new logistics and infrastructure which would be converted in the future to delivery and use of hydrogen and other non-carbonated gas..
 |
| EUSAIR Flagships and strategic projects | Under Flagship DEVELOPMENT AND OPERATION OF LOGISTICS FOR DIRECT LNG USE AS A CLEAN FUEL FOR THE ADRIATIC-IONIAN REGION no strategic implementation formats were developed yet. |
| Indicators | Indicator name  | Common Indicator name and code, if relevant | Baseline value and year | Target value and year | Data source |
| How to measure the EUSAIR activities under this Action? | OUTPUT INDICATORS |
| OI. No. of agreements on LNG logistics between Port Authoritiesthrough the Adriatic and Ionian Seas signed.  | RCO87 Interreg: Organisations cooperating across borders | 0(2023) | 1(2028) | TSG |
| OI. Blue corridors ans logistics for the use of LNG in road transport: preliminary design of LNG logistics. | RCO116 Interreg: Jointly developed solutions  | 0(2023) | 1(2028) | TSG |
| OI. Converting LNG infrastructure to deployment of non-carbonated gases. No of pilot projects for hydrogen use | RCO84 Interreg: Pilot actions developed and implemented jointly | 0(2023) | 1(2028) | TSG |
| RESULT INDICATORS |
| RI. Agreement on the use of LNG as clean fuel for the marine transport would facilitate the adoption of LNG and other clean fuels through the Adriatic and Ionian Seas while harmonising safety requirements and logistics. Result is cross-cutting Topic 2.1 and Topic 2.2 of Pillar 2.  | RCR79 Interreg: Joint strategies and action plans taken up by organisations | 0(2023) | 1(2026) | TSG |
| RI. Blue corridor for road transport implying LNG refuelling stations and cross-border agreements. Result is cross-cutting Topic 2.1 and Topic 2.2 of Pillar 2.  | RCR79 Interreg: Joint strategies and action plans taken up by organisations | 0(2023) | 1(2026) | TSG |
| RI. Non-carbonated gases are key to the transition towards a net-zero carbon energy system. Pilot projects are providing background and means towards the goal of decarbonisation.  |  RCO84 Interreg: Pilot actions developed and implemented jointly | 0(2023) | 1(2027) | TSG |

1. New power transmission lines, their reinforcements to allow electricity trade, improve grid stability and the large-scale deployment of source, future-proofing - market integration of planned RES investments. [↑](#footnote-ref-1)
2. Power market coupling and integration according to steps including harmonisation of electricity transmission tariffs, addressing regulatory barriers and pending Treaty reform in the Energy Community , progressive market coupling, power purchase agreements and use of blockchain to facilitate electricity trading. [↑](#footnote-ref-2)
3. It is in the interest of all EUSAIR participating countries to interconnect their power grids, as a means to optimise the deployment of low-carbon power generation, to maintain grid stability and security while expanding the use of intermittent and diversified power sources. Electricity storage, digitalisation of the power grid and smart grids offer further opportunities for reducing costs and improving the service. Electricity market integration, market coupling would be feasible should investments in new power infrastructure become a reality. [↑](#footnote-ref-3)
4. The natural gas trading hub would allow to exchange contracts, enhance competition when feasible, while promoting security of natural gas supply. [↑](#footnote-ref-7)