The Importance of Iberian Energy to the Future of European Union and Central and Eastern Europe

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The attack at the beginning of 2022 by the Russian Federation on Ukraine, a rightful member of the international community and an aspiring adherent to the European Union (EU), can be examined with the help of a theory in international relations called 'neorealism'. This theory argues that power dynamics between nation-states are often characterized by competition and conflict, disregarding the potential for collaboration, on a zero-sum logic. These dynamics become even more complicated when there are economic interdependences, with one nation holding other ones hostage due to the need of goods essential to the less powerful ones. This phenomenon applies especially to energy dependence. These kinds of imbalances create what is called a 'security dilemma'. The actions of the Kremlin in Ukraine can, in part, be understood by a calculation made by the Russian leaders that other European countries would not oppose the said actions due to their need to access Russian energy. However, this creates an opportunity for the European Union to change this *status quo*, investing in ways to end the dependence, and, with that, attenuating the security dilemma.

There are historical precedents for this kind of progress, for example, the development of energy efficiency after the Yom Kippur war. The REPowerEU Plan, a *Joint European Action for More Affordable, Secure, and Sustainable Energy*, is a set of initiatives by the European Union to diversify the energy mix, and sources, and to reduce dependence on Russian gas by two-thirds before the end of 2022. Apart from increasing energy acquisition from sources that are outside the European continent, there is also *in-house* potential, which can be explored by investing in infrastructures to gather (renewables) and receive (gas) energy, and to create a more extensive energy network between member states, including the ones in the Central and Eastern part of the EU.

> APART FROM INCREASING ENERGY ACQUISITION FROM SOURCES THAT ARE OUTSIDE THE EUROPEAN CONTINENT, THERE IS ALSO *IN-HOUSE* POTENTIAL

The Iberian Peninsula has been, for a long time, considered to be an energy island due to the reduced connection to the western part of the continent. Spain and Portugal have enormous potential in helping relieve some of the pressure felt in the rest of the European Union due to the need for energy. This capacity can happen by increasing their green energy development, while assuring the entry of transitional energy to the continent, until the EU can have net-zero economies and energy independence.

ENERGY AND THE SECURITY DILEMMA

The European Union's energy policy, as read in Article 194 of the Treaty of Lisbon, has two important missions: to *"a) ensure the functioning of the energy market"*, and

> THE IBERIAN PENINSULA HAS BEEN, FOR A LONG TIME, CONSIDERED TO BE AN ENERGY ISLAND DUE TO THE REDUCED CONNECTION TO THE WESTERN PART OF THE CONTINENT

"*b) ensure security of energy supply in the Union*"[1]. To achieve these missions there is a need to create the conditions for accessing the energy markets, safeguard the proper functioning of the industry, and ensure the comfort of citizens in their daily lives, while striving to generate economic growth. The proper functioning of a European energy market depends, among other things, on solidarity between member states, sharing of supply solutions, increased energy transit, and access to reserves.

Still, as the European Union stands at this moment in time, it will continue to depend on external suppliers. This situation became painfully obvious during the Ukraine crisis of 2022 with the unprovoked and barbaric attack by the Russian Federation on that country. Even before that, Russia had never been a dependable energy supplier. Moscow has often proved that it can easily cut the supply to countries on the western part of its borders by ordering companies under state control to reduce, or cut, the flow of gas. Interruptions in the flow of energy happened to countries in Eastern Europe[2], affecting the rest of the continent[3], being particularly important as eleven of the member states of the EU have a direct or indirect dependency with the energy giant to the east – Bulgaria, the Czech Republic, Estonia, Lithuania, Hungary, Austria, Poland, Romania, Slovenia, Slovakia, and Finland[4].

The theory of economic interdependence argues that a deepening of those relations between states exists when there are reciprocal gains. However, asymmetries in the interdependence can cause problems regarding the defense of the state. Yet, this is dependent on the stance of the state(s), which can be *offensive* or *defensive*. In an offensive stance, also characterized by *offensive realism*, a more powerful state seeks to gain advantages over others, while preventing its own loss of power – a zero-sum scenario. In fact, one of the goals of offensive realism is to have hegemony in a certain sphere of influence – something that Moscow tried to build, both during the Soviet

[1] Treaty of Lisbon. Amending the Treaty on European Union and the Treaty Establishing the European Community – Article 176A, p. 90. Available [online]: http://publications.europa.eu/resource/cellar/688a7a98z-3110-4ffe-a6b3-8972d8445325.0007.01/DOC_19

[2] Cable News Network (CNN) (2008) "Russia, Ukraine Deal Averts Gas Crisis", [in]: *CNN*, February 12. Available [online]: http://edition.cnn.com/2008/WORLD/europe/02/12/putin.russia/index.html

[3] BBC (2006) "Ukraine 'Stealing Europe's Gas'", [in]: *BBC*, January 2. Available [online]: http://news.bbc.co.uk/2/hi/europe/4574630.stm

[4] Ellyatt, H. (2019) "Europe Is Fast-Becoming a Natural Gas Battleground for Russia and the US", [in]: *Yahoo!finance*, January 2019. Available [online]: https://finance.yahoo.com/news/europe-fast-becoming-natural-gas-104400706.html

Union times, and after becoming the Russian Federation. The reverse also applies.

Less dependence of a state, or a union of states (like in the case of the EU) on a single supplier, leads to a greater negotiating capacity, balance of power, less dependency, and increased security. Since Adam Smith, it has been argued that there exist positive effects of economic interdependence[5]. Theoretically, this type of interdependence leads to the avoidance of military conflicts. However, an increase in the offensive stance can cause instability and an *arms* race for security and sovereignty[6].

In Marxist and neo-Marxist theories, interdependence is also seen as a source of conflict, since power asymmetries will lead to the exploitation of the economically weak by the strong. This abuse also causes a delay in the growth of the frail, while increasing the economic strength and bargaining power of the strong[7]. The way the contemporaneous international system is organized, great powers resort to offensive actions to ensure their security[8], and when states have no way of knowing what the real intentions of other states are, survival is the main objective[9]. Hence, offensive realism leads to the creation of a *security dilemma*. In Robert Jervis' "four worlds theory", offensive actions have an advantage over defensive ones, and an offensive stance is the best strategy to gain advantages[10], causing a search for power maximization rather than security maximization[11].

> RUSSIA HAD NEVER BEEN A DEPENDABLE ENERGY SUPPLIER

The security dilemma can also extend to conflicts in the political and economic arena[12]. Dependence on transaction of goods can lead to the imposition of embargoes or blockades, or, at the limit, irregular warfare[13]. One of the best examples of the use of energy in the logic of offensive realism came in October 1973, when the Organization of Petroleum Exporting Countries enacted a ten-day embargo following the start of the Yom Kippur war. That fall, Saudi Arabia, Iran, Iraq, the United Arab Emirates, Kuwait, and Qatar decided to raise the price of the barrel of oil, while announcing production cuts. The embargo served

[5] Graafland, J. and T.R. Wells (2020) "In Adam Smith's Own Words: The Role of Virtues in the Relationship Between Free Market Economies and Societal Flourishing, A Semantic Net- work Data-Mining Approach", [in]: *Journal of Business Ethics*, Vol. 172, pp. 31-42. Available [online]: https://link.springer.com/content/pdf/10.1007/s10551-020-04521-5.pdf

[6] Polachek, S. (1980) "Conflict and Trade", [in]: *Journal of Conflict Resolution*, Vol. 24(1), pp. 55-78.

[7] Lenine, V. I. (1916) *Imperialism, the Highest Stage of Capitalism*. Available [online]: https://www.marxists.org/archive/lenin/works/1916/imp-hsc

[8] Jervis, R. (1978) "Cooperation under the Security Dilemma", [in]: *World Politics*, Vol. 30(2), pp. 167-214.

[9] Mearsheimer, J. J. (2001) *The Tragedy of Great Power Politics*, New York: W.W. Norton & Company.

[10] Ibid.

[11] Baylis, J., Smith, S., and P. Owens (2019) *The Globalization of World Politics. An Introduction to International Relations. Eighth Edition*, Oxford: Oxford University Press.

[12] Krickovic, A. (2015) "When Interdependence Produces Conflict: EU-Russia Energy Relations as a Security Dilemma", [in]: *Contemporary Security Police*, Vol. 36(1), pp. 3-26. See also: Mearshimer, J. J. (1994) "The False Promise of International Institutions", [in] *International Security*, Vol. 19(3), pp. 5-49.

[13] Copeland, D. (1996) "Economic Interdependence and War: A Theory of Trade Expectations", [in]: *International Security*, Vol. 20(4), pp. 5-41.

mainly to punish *Israel-friendly* countries, and had the biggest effect in the United States, the United Kingdom, Canada, Japan, and the Netherlands[14]. This kind of disturbance was also seen during the energy crises in Europe of 2006 and 2008, as described above, when Moscow reduced, or suspended, natural gas exports, placing Europe in a fragile situation. For the Russian Federation, the use of natural resources as a form of offensive realism is justified to maintain superiority in its *sphere of influence*, or, in other words, the *near abroad*.

In fact, Russia's energy policy has been shaped by geostrategic concerns that are reflected in price manipulation for developing countries, the control of transport infrastructure (such as gas and oil pipelines), and disruption in supply as a form of political pressure[15]. Gazprom, the giant energy exporter from Russia, being under the control of the Kremlin, already blocked the supply of gas to Poland, Bulgaria, Finland, the Netherlands, and two other important markets (Denmark and Germany)[16], as retaliation for EU support of Ukraine.

THE PROMISE(S) OF REPOWEREU

The Foreign Affairs Council, responsible for the EU external action (foreign policy, defense/security, trade, development cooperation, and humanitarian aid) adopted in July 2015 the European Union Energy Diplomacy Action Plan[17], consisting of four priorities: facilitating the Council's regular discussion of strategies on energy issues; establishing dialogues with producing and transit countries; achieving joint positions in the multilateral institutions of the EU; and strengthening the capacity of the EU to speak "*with one voice*" on issues related to energy needs[18].

> HERE EXIST POSITIVE EFFECTS OF ECONOMIC INTERDEPENDENCE

In one passage in the document, the Action Plan includes an important, and specific, goal: "*Conditions permitting, the EU could also consider reframing the energy relationship with Russia*".[19] This kind of wording is a clear sign of the awareness of the need for solutions that would allow a decrease in the dependence on energy from Moscow. Hence, after the attack on Ukraine, a set of objectives with a packet of measures was ready to be advanced by the European Commission, and presented as a deterrent measure, but also to speed up the timetable for the EU to become more independent from Russian fossil fuels by 2030.

[14] Ditté, P. and P. Roell (2006) *Past Oil Price Shocks: Political Background and Economic Impact – Evidence from Three Cases*. Available [online]: https://css.ethz.ch/en/services/digital-library/publications/publication.html/20499

[15] Korteweg, R. (2018) *Energy as a Tool of Foreign Policy of Authoritarian States, in Particular Russia*. Available [online]:https://www.europarl.europa.eu/RegData/etudes/STUD/2018/603868/EXPO_STU(2018)603868_EN.pdf

[16] https://www.thenationalnews.com/world/europe/2022/05/31/four-point-european-energy-plan-to-escape-reliance-on-russian/

[17] Council of the European Union (2015) *Council Conclusions on Energy Diplomacy*. Available [online]: https://data.consilium.europa.eu/doc/document/ST-10995-2015-INIT/en/pdf

[18] Ibid., p. 3.

[19] Ibid., p. 5.

> WHEN STATES HAVE NO WAY OF KNOWING WHAT THE REAL INTENTIONS OF OTHER STATES ARE, SURVIVAL IS THE MAIN OBJECTIVE

The REPowerEU Plan, a *Joint European Action for More Affordable, Secure, and Sustainable Energy*, was introduced in March 2022, outlining a set of initiatives to diversify gas supplies, speed up the roll-out of renewable gases, and replace gas in heating and power generation. The short-term objective is to "*reduce EU demand for Russian gas by two thirds before the end of the year*"[20]. This phasing out of the dependence will be based on the following pillars: diversifying gas supplies via higher imports of liquefied natural gas from non-Russian suppliers paired with an increase in the imports and production of biomethane and renewable hydrogen, a transformation of the way that fossil fuels are used in habitation, industry, and power systems; and by "*boosting energy efficiency, increasing renewables and electrification, and addressing infrastructure bottlenecks*"[21].

Moreover, REPowerEU was introduced with an important data point, as 85% of Europeans believe that the EU should reduce its dependency on Russian gas and oil, as soon as possible, to help Ukraine[22]. The measures aim to increase energy savings, and result in a diversification of energy suppliers and an accelerated roll-out of renewable energy for habitations, industry, and power generation[23].

The European Commission proposed increasing the target for renewable energy from 40% to 45% by 2030, bringing the total renewable energy generation capacity to 1236 GW – compared to the 1067 GW foreseen under the *Fit for 55* for the same time frame[24]. The measures proposed, to come into force through future legislation, aim to increase the number of wind and solar farms, the utilization of solar panels, and 'go-to' areas in member state regions that have a low environmental risk.

There are plans to "*shorten and simplify*" the permitting processes with the creation of a digital mapping tool for energy, industry, and infrastructures by region[25]. Likewise, special attention will be given to

[20] European Commission (2022) *Press Release: REPowerEU: Joint European Action for More Affordable, Secure, and Sustainable Energy*. Available [online]: https://ec.europa.eu/commission/presscorner/detail/en/IP_22_1511

[21] Ibid.

[22] European Commission (2022) *Press Release: Eurobarometer: Europeans Approve EU's Response to the War in Ukraine*. Available [online]: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2784

[23] European Commission (2022) *REPowerEU: A Plan to Rapidly Reduce Dependence on Russian Fossil Fuels and Fast Forward the Green Transition*. Available [online]: https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131

[24] European Council, Council of the European Union (2022) *Fit for 55*. Available [online]: https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/

[25] https://joint-research-centre.ec.europa.eu/energy-and-industry-geography-lab_en

regulatory incentives for the creation of innovative technologies, and the EU Solar Energy Strategy aims to "*ensure that solar energy achieves its full potential in helping to meet the European Green Deal's climate [and] energy targets*", with a roll-out of photovoltaic energy to bring online over 320 GW of solar photovoltaic by 2025[26].

Equally, there is a goal to produce 10 million tons of domestic renewable hydrogen, and 10 million tons of renewable hydrogen imports by 2030, included in the Hydrogen Accelerator strategy[27]. Also included is the financing of renewable hydrogen projects under Horizon Europe "swift approval", and of projects included in the Important Projects of Common European Interest (PICs) – the development of technical hydrogen standards for production, infrastructure, and end-use appliances, and the establishment of a Global European Hydrogen Facility and a Green Hydrogen Partnership to "*incentivize European and global renewable hydrogen production and trade*"[28].

To fast-track the hydrogen market there is a need for a regulatory framework. The European Commission is working on acts that will provide regulations to produce renewable hydrogen, with an additional funding of EUR 200 million for research[29]. All these initiatives come after the already approved NextGenEU Fund, a EUR 750 billion package, with 37% of the money to projects that are part of the European Green Deal, which includes the "*launch a clean hydrogen economy in Europe*" project[30]. This type of hydrogen, produced from energy from renewable sources, is considered to be the future of energy[31] and a way to invest in sustainable growth. The European Commission created the European Clean Hydrogen Alliance[32], with investments around EUR 430 billion by 2030.

Equally, the EU External Energy Strategy[33] exists to facilitate energy diversification and creation of long-term commercial relations with suppliers, reinforcing the European Union's commitment to a green and just energy transition that includes hydrogen. This strategy already includes the pledge to support Ukraine, Moldova, the Western Balkans, and Eastern Partnership countries[34].

Albeit accounting for the importance of investment in renewable energy sources and non-polluting hydrogen, the European Commission is aware of the time horizon for those solutions to have a significant impact in EU energy security, and with that, an effect on the security dilemma. Therefore, some of the focus is centered around what

[26] http://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13338-EU-solar-energy-strategy_en

[27] https://ec.europa.eu/info/news/commission-launches-consultation-regulatory-framework-renewable-hydrogen-2022-may-20_en

[28] European Commission (2022) *Press Release: REPowerEU: A plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition.* Available [online]: https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_22_3131/IP_22_3131_EN.pdf

[29] Ibid.

[30] European Commission (2020) *Com: Europe's moment: Repair and Prepare for the Next Generation*. Available [online]: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0456&from=EN

[31] https://liberalforum.eu/wp-content/uploads/2021/10/Research-Paper-Clean-Hydrogen-and-the-Future-of-Energy.pdf

[32] https://ec.europa.eu/growth/industry/strategy/industrial-alliances/european-clean-hydrogen-alliance_en

[33] European Commission (2022) *EU External Energy Engagement in a Changing World*. Available [online]: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022JC0023&from=EN

[34] European Commission (2022) *REPowerEU: A Plan to Rapidly Reduce Dependence on Russian Fossil Fuels and Fast Forward the Green Transition.* Available [online]: https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_22_3131/IP_22_3131_EN.pdf

> RUSSIA'S ENERGY POLICY HAS BEEN SHAPED BY GEO-STRATEGIC CONCERNS THAT ARE REFLECTED IN PRICE MANIPULATION FOR DEVELOPING COUNTRIES, THE CONTROL OF TRANSPORT INFRASTRUCTURE (SUCH AS GAS AND OIL PIPELINES), AND DISRUPTION IN SUPPLY AS A FORM OF POLITICAL PRESSURE

the *transitional sources of energy* are, gas being an obvious one. Since most of the gas to the EU is imported from Russia, there is a need to change sources, acquiring this energy from more reliant providers and allied nations. One of the solutions at hand is the acquisition of more liquified natural gas.

LIQUIFIED NATURAL GAS (LNG) AS A TRANSITION ENERGY SOURCE

The EU is collaborating with international partners to secure record levels of LNG imports and higher gas delivery[35]. The EU Energy Platform[36] will enable common purchases of gas and LNG by *pooling demand*, increasing the efficiency of infrastructures, and coordinating the outreach to suppliers outside Europe. However, regarding *pooling* demand, there are legitimate questions about the efficacy and efficiency of joint purchases, and there is a need to see the plan in action for a proper evaluation. This fits in the aim of ensuring "cooperation in areas where it is more effective to act in a coordinated way at the EU level rather than at a national level".[37] This will allow the European Commission to negotiate joint contract gas purchases on behalf of the member states that joined the platform.

The Commission will also lead the process of diversification of gas supply through the force of legislation[38]. Even before the Ukraine crisis started by the Russian Federation, the European Commission estimated that by 2023, the EU would increase the demand for gas up to 100 billion cubic meters, with imports growing 20% by 2040[39].

Access to the LNG market has been a long-term objective of the European Commission, which argued in 2020 that "liquefied gas can

[35] Ibid.

[36] http://energy.ec.europa.eu/topics/energy-security/eu-energy-platform_en

[37] Ibid.

[38] European Commission (2022) *Press Release: REPowerEU: A Plan to Rapidly Reduce Dependence on Russian Fossil Fuels and Fast Forward the Green Transition.* Available [online]: https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_22_3131/IP_22_3131_EN.pdf

[39] European Commission (2019) *Liquefied Natural Gas (LNG) Has the Potential to Help Match EU Gas Needs*. Available [online]: https://ec.europa.eu/energy/sites/ener/files/eu-us_lng_trade_folder.pdf

> TO FAST-TRACK THE HYDROGEN MARKET THERE IS A NEED FOR A REGULATORY FRAMEWORK

significantly contribute to the diversification of gas supply and thus considerably increase energy security" and assumed as one of its missions "to ensure that all member states have access to liquid gas markets".[40] However, this security is dependent on what suppliers make the EU market. There are differences between dealing with countries like the United States or Canada, or, for example, Qatar, which recently suffered a blockade from neighboring countries[41]. The access to this form of energy is more facilitated to southern and western European countries, due to access to LNG by sea, unlike those who are land-locked and depend on external sources. In the assessment of the European Commission, there is a "significant capacity" to import more LNG, sufficient to guarantee 45% of total gas consumption[42]. This means that more LNG hubs are needed in the southeast, central-eastern Europe, and Baltic countries.

Projects of Common Interest (PICs) incorporate investments in infrastructures, including new terminals and gas pipelines, in a way that creates conditions for a more extensive energy network between member states. Projects led by the EU include the extension of the Swinoujscie terminal in Poland, the new Brunsbüttel and Wilhelmshaven terminals in Germany[43], and investments in the terminals from Krk in Croatia, Gothenburg in Sweden, Shannon in Ireland, and Vasilikos Bay in Cyprus[44]. The port of Swinoujscie, in Poland, is an example of success when it comes to reducing Russian energy dependence, and in that way attenuating the security dilemma, both for the country and for the region.

After the 2009 energy crisis, the terminal provides the entry of LNG and the transit of gas to Baltic countries, Slovakia, the Czech Republic, and Ukraine. When interviewed by the *New York Times* in 2019 about the importance of this port, the then president of PGNiG, the Polish State energy company, Piotr Wozniak, mentioned something that can be easily transferred to the rest of the EU after the Ukraine attack: "*The strategy of the company is just to forget about Eastern suppliers and especially about Gazprom (...) If I pay [for LNG] to Americans, I pay to my NATO allies*"[45].

[40] European Commission (2022) *Liquefied Natural Gas*. Available [online]: https://energy.ec.europa.eu/topics/oil-gas-and-coal/liquefied-natural-gas_en?redir=1

[41] Ramani, S. (2021) "The Qatar Blockade Is Over, but the Gulf Crisis Lives On", [in] *Foreign Policy*. Available [online]: https://foreignpolicy.com/2021/01/27/qatar-blockade-gcc-divisions-turkey-libya-palestine/

[42] European Commission (2022) *Liquefied Natural Gas*. Available [online]: https://energy.ec.europa.eu/topics/oil-gas-and-coal/liquefied-natural-gas_en?redir=1

[43] European Commission (2019) *Liquefied Natural Gas (LNG) Has the Potential to Help Match EU Gas Needs*. Available [online]: https://ec.europa.eu/energy/sites/ener/files/eu-us_lng_trade_folder.pdf

[44] European Commission (2019) *Press Release: EU-U.S. Joint Statement: Liquefied Natural Gas (LNG) imports from the U.S. continue to rise, up by 181%*. Available [online]: https://ec.europa.eu/commission/presscorner/detail/en/IP_19_1531

[45] Reed, S. (2019) "Burned by Russia, Poland Turns to U.S. for Natural Gas and Energy Security", [in] *The New York Times*. Available [online]: https://www.nytimes.com/2019/02/26/business/poland-gas-lng-russia-usa.html

> SPAIN IS MAKING A CONCERTED EFFORT TO INCREASE THE SHARE OF RENEWABLES IN ITS ENERGY MIX

If the future of energy availability, via LNG, has been a concern to the European Union and to its member states for some time, it's even more pressing now. Particularly in the Central and Eastern part of Europe, a normal (expected) delay in the commission, building, and making operational of entry ports and distribution networks, calls for solutions that can alleviate the pressure on western European countries derived from a decrease of energy imports from Russia. One possible solution is the increase of energy transport not in an east-west direction, but in a west-east, and from the Iberian Peninsula to the western part of Europe. Before mentioning how can that be done, and the benefits for the EU, we need to focus on the two constituents of the peninsula.

THE REALITY AND THE OBJECTIVES OF SPAIN AND PORTUGAL

In Spain, one of the 2050 objectives to reach climate neutrality is to have 100% renewable energy in the electricity mix, and 97% renewable energy in the total energy mix[46]. This will be obtained with transformative investments in solar and wind, energy efficiency, electrification, and clean hydrogen. For 2030 the objective is to achieve a 42% share of renewables in energy end-use, and a 74% share of renewables in electricity generation[47]. The Spanish government presented a set of initiatives to achieve the 2030 objectives including a *Hydrogen Roadmap*[48], and the *Offshore Wind Roadmap and Marine Energy*[49]. The contribution of wind energy is substantial for electricity generation, with a share of 23%, and a production of around 60.5 terawatt hours[50].

Hydropower is also an important source of electricity with a share of 28%[51]. Spain is making a concerted effort to increase the share of renewables in its energy mix, which has grown from 24% in 2009 to 38% in 2019, climbing to 42% of electricity from renewables in 2022, and with the goal of reaching 74% in 2030[52]. As for the gas market, the Spanish national transmission system operator, Enagas, is opening new slots to LNG tankers to unload gas into terminals[53], with Spain now having six LNG ports. The amount of gas regasification

[46] International Energy Agency (2021) *Spain 2021, Energy Policy Review*. Available [online]: https://www.iea.org/reports/spain-2021

[47] Ibid.

[48] https://ec.europa.eu/info/sites/default/files/energy_climate_change_environment/events/presentations/02.03.02_mf34_presentation-spain-hydrogen_roadmap-cabo.pdf

[49] Spanish Government. Ministry for the Ecological Transition and the Demographic (2022) *Roadmap Offshore Wind and Marine Energy in Spain.* Available [online]: https://www.miteco.gob.es/es/ministerio/planes-estrategias/desarrollo-eolica-marina-energias/202203_roadmapoffshoreespain_en_tcm30-538999.pdf

[50] https://www.statista.com/statistics/1003792/total-electricity-generation-in-spain/

[51] https://www.statista.com/statistics/1007877/share-of-electricity-generation-in-spain/

[52] Red Eléctrica (REE) (2022) *Electrical Energy Balance*. Available [online]: https://www.ree.es/en/datos/balance

[53] https://www.reuters.com/business/energy/spain-portugal-urge-energy-coordination-russia-supply-fears-rise-2022-02-24/

accounts for 37% of the European Union[54], however, conditioned by the limited connections to the French gas network, which will be tackled ahead.

There is also the entry of natural gas from Africa, with the Maghreb-Europe Gas Pipeline and the Medgaz pipeline. The imports of natural gas from Algeria reached 10 billion cubic meters per year in 2021[55], and the Medgaz pipeline is expected to reach 30 million cubic meters per day, following a recent expansion[56]. However, it is important to account for local dynamics in North Africa and the political turmoil – like the one seen in 2022, when a cessation of diplomatic relations between Marocco and Algeria caused a drop in gas distribution[57]. These dynamics can lead to disruptions of the flow towards the Iberian Peninsula, as the Maghreb-Europe pipeline also serves Portugal via Spain.

Spain is also working on a *Renewable Hydrogen Roadmap*[58]. The target for 2030 is to have a 25% consumption of industrial hydrogen from renewable sources, with the installation of 4GW electrolyzers and a network of 100 renewable hydrogen stations and green hydrogen-powered handling machinery at five main ports and airports. Moreover, there is also a project by Enagás (an energy company that owns and operates the nation's gas grid) of installing a 32 MW electrolyzer, powered by a 150 MW photovoltaic plant. There are also plans to progressively move from 'grey hydrogen' (from polluting sources, but carbon captured and stored) to clean hydrogen by 2024.

> PORTUGAL HAS A HISTORY OF UNDERUSING ITS RESOURCES, BOTH DUE TO (A LACK OF) POLITICAL VISION, BUT ALSO A LACK OF SUFFICIENT INVESTMENTS IN RESEARCH AND DEVELOPMENT, AND INFRASTRUCTURES

Portugal has a history of underusing its resources, both due to (a lack of) political vision, but also a lack of sufficient investments in research and development, and infrastructures. However, it was not sustainable for an economy that aims to

[54] https://www.cnbc.com/2022/05/24/spain-paints-itself-as-the-answer-to-europes-russian-energy-problem.html

[55] Le Monde (2021) "L'Algérie ne passera plus par le Maroc pour exporter son gaz en Espagne", [in] *Le Monde*. Available [online]: https://www.lemonde.fr/afrique/article/2021/10/28/l-algerie-ne-passera-plus-par-le-maroc-pour-exporter-son-gaz-en-espagne_6100181_3212.html [in French]

[56] https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/012822-as-europe-seeks-alternatives-to-russian-gas-algeria-has-pipeline-capacity-to-spare

[57] https://www.reuters.com/world/africa/algeria-end-gas-supplies-morocco-supply-spain-directly-sources-2021-10-25/

[58] Spanish Ministry for the Ecological Transition and the Demographic (2020).

be competitive. In the beginning of 2020, a stimulus package of EUR 9.2 billion was introduced to modernize the country, which included solar photovoltaic projects and financial programs for energy efficiency measures in buildings[59]. The following year, the Portuguese Recovery and Resilience Plan[60] (an offshoot of the Next Generation EU Fund)[61], included more capital for projects in energy transition – part of the *climate change pillar*.

Furthermore, Portugal has increased its levels of electrification, mostly with hydropower and wind generation, with renewables covering 54% of total generation[62]. In 2021, gross annual electricity production from renewables reached nearly 32.8 gigawatts per hour[63]. Still, the country is set on a path for even more ambitious goals. The Portuguese National Energy and Climate Plan aims to reduce external energy dependency to below 65% by 2030, and the *Roadmap for Carbon Neutrality 2050* to below 19% by 2050[64].

Apart from the very advantageous geographical position to capture energy from renewable sources, Portugal, also has direct access to the Atlantic Ocean, and it is a main entry point for energy by being at the center of inter and intra-oceanic routes, with connections between Europe, Asia, Africa, and the Americas. In addition, the port of Sines (a deep-water port, located on Portugal's south-central coast, 58 nautical miles from Lisbon), is a gateway for gas to the EU from Nigeria, Trinidad and Tobago, Qatar, Australia, and the United States. Portugal aims to improve the efficiency of LNG offloading in Sines, increasing storage and building a third pipeline to Spain, increasing the capacity to transit gas from 70GW/day to 150GW/day[65].

Another national priority is the positioning of Portugal as one of the key players in the European Union for clean hydrogen production, exactly because of the easy access to renewable sources. The National Hydrogen Strategy calls for ambitious goals of having 10-15% clean hydrogen injection into the natural gas network, 2-5% consumption in the industrial sector, 1-5% in land transportation, 3-5% in maritime transportation, and 1.5-2% in final energy consumption by 2030[66].

THE ENERGETIC POTENTIAL OF THE IBERIAN PENINSULA AND THE INVESTMENTS NEEDED

In the REPowerEU plan, special attention is given to the importance of the Trans-European Networks for Energy in a way to create a "*resilient and interconnected EU gas*

[59] International Energy Agency (2021) *Portugal 2021, Energy Policy Review*. Available [online]: https://www.iea.org/reports/portugal-2021

[60] Portuguese Government (2022) *Recovery and Resilience Plan (RRP).* Available [online]: https://recuperar-portugal.gov.pt/?lang=en

[61] Silvestre, R., and G.M. Bovenzi (2021) "RDR Next Generation EU: A Southern-Northern Dialogue", [in] *European Liberal Forum Publications,* Policy Brief December. Available [online]: https://liberalforum.eu/wp-content/uploads/2021/12/Policy-Brief_Next-Generation-EU-A-Southern-Northern-Dialogue_final-_compressed-1.pdf

[62] IEA (2021) *Portugal 2021, Energy Policy Review*.

[63] Direção Geral de Energia e Geologia (2021) *Renováveis.* Available [online]: https://www.dgeg.gov.pt/media/5fjpfuk1/dgeg-arr-2021-12_v2.pdf [in Portuguese]

[64] República Portuguesa (2019) *Roteiro para a Neutralidade Carbónica 2050*. Available [online]: https://www.portugal.gov.pt/pt/gc21/comunicacao/documento?i=roteiro-para-a-neutralidade-carbonica-2050- [in Portuguese]

[65] https://www.euractiv.com/section/energy/news/portugal-seeks-to-position-itself-as-europes-new-gateway-for-gas/

[66] Presidência do Conselho de Ministros (2020) *Resolução do Conselho de Ministros n.º 63/2020. Aprova o Plano Nacional do Hidrogénio. XXII Governo Constitucional*. Available [online]: https://files.dre.pt/1s/2020/08/15800/0000700088.pdf [in Portuguese]

> AROUND EUR 10 BILLION WILL BE ADDED TO THE EXISTING PICS IN ORDER TO OVERCOME THE LOSS OF RUSSIAN GAS

infrastructure".[67] An estimated investment of around EUR 10 billion will be added to the existing PICs in order to overcome the loss of Russian gas. Equally, there is a need to speed up the PICs that will adapt the power grid to future energy needs. The European Commission launched a call, with a budget of EUR 800 million[68] for projects in the scope of the work done in the Connecting Europe Facility[69].

In 2018, the European Commission warned that the Iberian Peninsula was, largely, an 'energy island' with an electricity interconnection capacity of 6% – far behind the 15% target set by the Energy Union. Also, regarding natural gas, the Iberian and French markets are interconnected by just two pipelines with an exchange capacity of around 7 billion cubic meters/year[70]. With an increase in energy production with renewable sources, and with multiple entry points for LNG, there is the need for a broader electric interconnection, flowing of natural gas, and, in the future, transport of hydrogen. Positively, the two regional markets have a higher level of connection. The two electricity markets are coupled more than 95% of the time[71].

The interconnection with France yields a total capacity of 2.8 GW, and, during 2021, there was an export of 6.8 TWh to Morocco and France. The installed generation capacity of the Peninsula (including the Balearic Islands) is close to 130 GW, with a maximum capacity of the interconnections of 4.5 GW[72]. These reduced flows of energy call for an increased connectivity. Both prime ministers from Portugal and Spain, as well as the President of the European Commission, in the wake of the Russian attack on Ukraine, stressed the importance of a comprehensive and sustained investment in energy connections from the peninsula to the western part of the EU[73]. Regarding electricity transport, there are three interconnection projects with France, to be concluded before 2030: the 2200 MW submarine cable crossing the Bay of Biscay to connect Gatika and Cubnezais[74]; the Navarra-Landes intercon-

[67] European Commission (2022) *REPowerEU: A Plan to Rapidly Reduce Dependence on Russian Fossil Fuels and Fast Forward the Green Transition.* Available [online]: https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_22_3131/IP_22_3131_EN.pdf

[68] Ibid.

[69] https://ec.europa.eu/inea/en/connecting-europe-facility

[70] European Commission (2018) *Memo: Integration of the Iberian Peninsula into the Internal Energy Market*. Available [online]: https://ec.europa.eu/commission/presscorner/detail/en/MEMO_18_4622

[71] https://www.evwind.es/2022/03/31/why-is-the-iberian-peninsula-an-energy-island/85414

[72] Ibid.

[73] https://www.euronews.com/2022/08/12/portugal-and-spain-welcome-scholzs-call-for-gas-pipeline-from-iberia-to-central-europe

[74] Interconexión Eléctrica Francia-España or Electricity Interconnection France-Spain (2022) *The Electricity Interconnection Across the Biscay Gulf*. Available [online]: https://www.inelfe.eu/en/projects/bay-biscay

nection with 1500 MW of capacity; and the 1500 MW Arago-Marsillon interconnection through the Central Pyrenees[75]. Together, this would mean a 5200 MW of capacity by 2030. These projects will help to ease the congestion observed between Spain and France, which has hampered the objective to reach the 15% target determined by the EU by 2030[76].

Regarding gas transport via (the north of) Africa, or by LNG acceptance in Iberian ports (with subsequent regasification), one of the essential infrastructures would be a gas pipeline connecting Sines to Larrau in France, through the Pyrenees[77]. However, there is a need to add that this project, despite the calls presented above, still deals with resistance from the French government, which sows doubt on the future of this endeavor[78]. The projects, supported by the European Union, include the installation of a compressor unit in Cantanhede (Portugal) with a pipeline connecting to Zamora (Spain)[79]. Another important project is the connection between Guitiriz and Zamora and the Andradas gas pipeline, which will allow the transport of gas from the Iberian Peninsula to France[80].

Another Project of Common Interest is the construction of the MidCat (Midi-Catalonia) gas pipeline. Renewed requests are being made to revive the project that has been stopped since 2019, due to French and Spanish energy regulators, who considered it too expensive to invest in one of the MidCat sections, the South Transit Eastern Pyrenees[81]. If made a reality, the MidCat would be connected to another pipeline from Algeria, and it would run from Hostalric (Spain) into France[82].

In the 'opposite direction', meaning towards Portugal, MidCat would allow for future plans of a connection that would run from Barcelona to Sines, via Huelva and Córdoba, linking to mainland Portugal through Badajoz[83]. However, this project, even if approved and fully founded, will take time to build and to get online[84], underlining the urgency of the resolution of problems associated with the construction. To the south of the peninsula, Algeria, Niger, and Nigeria agreed on the construction of the Trans-Saharan Gas Pipeline, transporting 30 billion cubic meters per year. Algeria, Africa's biggest natural gas exporter, has been using the Gaz-Maghreb-Europe to deliver several billion cubic meters per year

[75] European Commission (2020) *Technical Information on Projects of Common Interest*. Available [online]: https://ec.europa.eu/energy/sites/ener/files/technical_document_4th_pci_list.pdf

[76] https://www.iea.org/reports/spain-2021

[77] Eiras, R., Louro, P. and R. Leite (2015) "Programa Segurança Energética. Fundação Luso-Americana. Exportações de GNL dos EUA e África para a Europa: o desafio económico vs o valor da segurança energética", [in] *Research Stream USA Shale Gas 4 Europe*. Policy Paper No. 3, pp. 10-11. [in Portuguese]

[78] https://www.reuters.com/business/energy/frances-macron-says-no-need-new-gas-pipeline-between-spain-france-2022-09-05/

[79] Redes Energéticas Nacionais (2018) *3rd Interconnection between Portugal and Spain*.

[80] European Commission (2018) *Interconnection ES-PT (3rd Interconnection) – 2nd Phase*. Available [online]: http://ec.europa.eu/energy/maps/pci_fiches/pci_5_4_2_en_2017.pdf

[81] Commission de Régulation de l'Energie e Comisión Nacional de los Mercados y la Competencia (2019) *Common Decision of CRE and CNMC concerning the gas interconnection between Spain and France, project of common interest (PCI)*. Available [online]: https://www.cnmc.es/sites/default/files/editor_contenidos/Notas%20de%20prensa/2019/20190122_STEP_ENG.pdf

[82] https://www.euractiv.com/section/energy/news/catalan-leader-confident-gas-pipeline-with-france-will-be-built-this-decade/

[83] Silvestre, R. (2021) "A Importância de Portugal na Independência Energética e Dilema de Segurança da União Europeia", [in] *Nação e Defesa*, No. 158, pp. 7-27. [in Portuguese]

[84] https://www.euractiv.com/section/energy/news/portugal-seeks-to-position-itself-as-europes-new-gateway-for-gas/

to Spain and Portugal[85]. Equally, in the first trip of US President Joe Biden to Europe after the Ukraine attack, a commitment was made to supply an extra 15 billion cubic meters in 2022[86].

The Iberia Peninsula could play a key role in the CEE region due to the time that will take to make the new LNG terminals in Germany (Brunsbüttel and Wilhelmshaven)[87] and a new terminal to be built in Poland (Gdansk)[88] fully operational. This prospect, again, relates to geography, as Portugal and Spain are closer to maritime routes that connect to Africa, the Middle East, and North America, with ports in Sines, Ferrol, Bilbao, Huelva, Cartagena, Valencia, and Barcelona. Currently, the Iberian Peninsula region can import 40 terawatt-hours (TWh) per month but can only consume 30 TWh. The excess gas can then be transported to Europe[89].

CONCLUSIONS

European countries will be affected differently by discontinuing gas imports from Russia. Some member states are not connected to the EU grid (Finland and the Baltic countries) albeit having energy security solutions – for example, via the LNG terminal in Klapeida. In the summer of 2022, the Romanian prime minister stated that the Greece-Bulgaria gas pipeline will enable gas supply to Ukraine and Moldova. As presented above, the Swinoujscie port in Poland ensures the entry of LNG and the transit of gas to the Baltic countries, Slovakia, the Czech Republic.

> A WAY FOR THE EU TO BREAK DECADES' LONG DEPENDENCE ON RUSSIAN ENERGY IS TO SHIFT FROM AN EAST OF THE EU FOCUS AND BET ON THE POTENTIAL OF THE IBERIAN PENINSULA

However, if there is a capability of maintaining and/or reversing the flow of energy (if necessary), it is still an open question. Is it technically possible to have the flow of energy into countries that are currently primarily supplied by Russian gas? If this is something that is a priority for the European Union, it needs to happen quick, with an identification of the technical bottlenecks and how to resolve them. Then, there is the need to have sufficient energy. The purchase of gas, liquified or not, to replenish EU reserves is just the first step. Second, there is the need to distribute it

[85] https://www.reuters.com/business/energy/algeria-niger-nigeria-revive-talks-saharan-gas-pipeline-2022-06-22/

[86] https://www.brusselstimes.com/212690/us-promises-eu-extra-15-billion-cubic-metres-of-gas-this-year

[87] https://www.offshore-energy.biz/germany-to-break-free-from-russian-gas-with-two-lng-terminals/

[88] https://www.reuters.com/business/energy/poland-could-build-second-unit-receive-lng-amid-czech-slovak-interest-2022-05-30/

[89] https://www.bruegel.org/blog-post/can-europe-survive-painlessly-without-russian-gas

across member states. This creates three problems – determining the price at which energy can be bought, and of distribution and operation[90].

Furthermore, there are economic and legal issues: how to manage international energy markets; what the effects will be on poorer countries who also need energy; and what changes regarding consumer behavior by the end-users could happen. Equally, there are political questions. The EU would prefer to act (more) as a block, but there are clear differences in dynamics in various countries with different demands. There is also the need for effective investments to increase renewable energy production capture, grid electrification, and online production of clean hydrogen to be applied where it can bring more benefits: heavy transportation, hard-to-decarbonize industry, and energy storage.

A way for the EU to break decades' long dependence on Russian energy (this can be applied to any illiberal and authoritarian regime, like some in the Middle East or in Asia) is to shift from an east of the EU focus and bet on the potential of the Iberian Peninsula. This region can help decrease the pressure regarding energy needs in the western countries of the European Union, and with that also in member states in the Central and Eastern part. These are some of the benefits of changing from a Eurasian dimension to a an Atlantic one. Equally, the peninsula can contribute to a move from polluting sources to clean ones, associated with high-solar-radiation regions, wind occurrence and strength, and sea-coastline-current energy.

These conditions make the case for investments in energy capture in the Iberian Peninsula and an increase in the connectivity to the rest of the continent. That way, there will be bigger cohesion between member states, an improved resilience, sustainable economic growth, and more environmental protection in the European Union. In addition, and importantly, it will mean the end of a source of financing for the Kremlin that is used for offensive posture, with the threatening of EU nation states and of neighboring countries that want to join the European project.

[90] Ibid.

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