

THE THREE SEAS INITIATIVE: AN INTRODUCTION AND ENERGY SECURITY ASSESSMENT

September 5, 2023

Contents

Introduction	1
Organizational Structure	2
Origins and History	2
Precursors.....	2
Contemporary.....	3
Economic Overview	5
Energy Overview	6
A Detailed Look at Energy Security	7
Analysis of Infrastructure Projects	9
Breakdown by funding pathway.....	10
Conclusions and obstacles to future progress on energy security.....	11
Recommendations for Policymakers	13

Introduction

The economic success and political independence of Europe has long been a central point of U.S. foreign policy. These goals have been remarkably well achieved for Western Europe, but for many post-Iron Curtain countries, economic prosperity and security from foreign manipulation can only be half-celebrated.

In the past few years, a new organization has emerged, growing quickly, and poised to become a centerpiece for solutions to this problem. Acknowledging their shared history and contemporary strategic concerns, a large number of central European states have joined together to form the ‘[Three Seas Initiative](#)’ (3SI), an organization coordinating policy on regional issues most crucial to central Europe. Many of the most important political and economic issues for these countries cannot be solved domestically by each state adopting individual policies; instead, they require a regional strategy. 3SI exists to address these types of problems.

In the past few years, the Three Seas Initiative has emerged in Central Europe. It is not just a group of coordinated policies that promote infrastructure but also national and energy security that are key to the region's prosperity.

[The Three Seas Initiative was formally announced in 2015 in a joint declaration by the Polish and Croatian Presidents, and quickly grew to its current size of twelve.](#) The name was selected to invoke early 20th century Polish proposals for a federation of states between the Adriatic, Baltic, and Black Seas; this is one step on a long road of aspirations for central European political unity and cooperation.

The countries currently comprising 3SI are Austria, Bulgaria, Croatia, Czechia (the Czech Republic), Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia (*Figure 1*).



Figure 1. Territorially, 3SI abstractly resembles a three spoked wheel, with the landlocked countries in the center connecting the coastal regions positioned on each of the three seas.

It is important to understand that 3SI is not a competing organization to the European Union; all 3SI member states are also EU members, and 3SI should be considered as a sub-cooperation within the EU. All major 3SI infrastructure projects are funded by entities under direct authority of the European Commission in Brussels. This EU-3SI link was made explicit in 2019 after Ukraine expressed interest in joining 3SI, and the Polish foreign minister declared this impossible as membership was only possible for EU members.

After the 2022 Russian invasion of Ukraine, Central European countries have been the most supportive of expedited EU membership for Ukraine, and elevated Ukraine to the status of ‘partner-participant’: still not an official member of 3SI, but as close a collaborator as possible for a nonmember. This close partnership with Ukraine would make 3SI relevant in the event of large western post-war rebuilding investment in Ukraine.

The next Three Seas annual meeting will be held September 6th-7th, 2023, in Bucharest, Romania. For the first time since its founding, a full new addition is expected to be made to the initiative; Greece likely to be added as a full member and Moldova as partner-participant. This reflects the growing appeal and influence of 3SI as non-members understand the potential 3SI has to affect the economic and security status of their countries. Greece offers expansive access to the Mediterranean; Moldova provides for communication along the 3SI - Ukraine axis.

U.S. policymakers should see the Three Seas Initiative as an important instrument to enhance economic progress and security throughout Central Europe.

Currently, 3SI is experiencing positive trends in its the general economic and energy situation, measured by GDP growth and increases in energy efficiency; however, considering energy security specifically, great challenges still remain. 3SI was deeply affected by Russia's invasion of Ukraine due to its lack of energy infrastructure and extensive dependence on Russian fossil fuel imports; while a multitude of projects with the potential to greatly strengthen regional energy security have been proposed, they are unlikely to be implemented without systemic changes to the political process determining the most high-impact infrastructure financing.

The U.S. must be aware of these issues and its role to play in the energy independence of the Three Seas region by emphasizing the importance of 3SI's geostrategic role diplomatically and supporting a number of relevant policy concerns at home.

Organizational Structure

The Three Seas Initiative exists in two distinct forms:

- *ideologically*, symbolically representing a commonality of values and priorities among Central European nations; and;
- *organizationally*, representing a concrete collaboration of member states.

In this formative period for 3SI, the former is stronger than the latter, with the organizational structure still developing.

There are no permanent employees of 3SI, with any required day-to-day political business of 3SI carried out by senior diplomats serving within their respective countries' foreign ministries. In a recognition of the growing importance of 3SI, there is an office in the Polish foreign ministry whose employees are given full-time responsibility for Poland's 3SI policy.

The first, and most visible, organizational existence of 3SI is the annual summit attended by the heads of state of the participant countries and any invited partner states. The first official summit was held in Dubrovnik, Croatia, in 2016, and the next one will be held September 6th - 7th, 2023 in Bucharest, Romania. At the 2017 summit, the heads of state agreed on establishing a Three Seas Business forum that holds an annual summit concurrent and collocated with the Presidential summit.

At the 2018 summit the heads of state approved the creation of the [Three Seas Initiative Investment Fund](#) with the mission of financing regional infrastructure projects based on 3SI objectives and market signals, aiming to attract private capital. Organizationally, the fund is exclusively advised and managed Amber Infrastructure group, a UK-based infrastructure investment firm.

Origins and History

The Three Seas Initiative is dually both a contemporary and classical idea: while highly publicized as 'new' initiative in its launch less than a decade ago, 3SI has long historical roots in European politics.

Precursors and Conceptual Beginnings

European countries whose territory constituted/constitutes a part of:				
	Polish-Lithuanian Commonwealth (1569 - 1795)	Austro-Hungarian Empire (1867 - 1918)	Intermarium (proposed 1920)	Three Seas Initiative (2015 - present)
Austria	Never	Complete	Never	Complete
Bulgaria	Never	Never	Never	Complete
Croatia	Never	Complete	Complete	Complete
Czechia	Never	Complete	Complete	Complete
Estonia	Partial	Never	Complete	Complete
Hungary	Never	Complete	Complete	Complete
Latvia	Complete	Never	Complete	Complete
Lithuania	Complete	Never	Complete	Complete
Poland	Partial	Partial	Complete	Complete
Romania	Never	Partial	Complete	Complete
Slovakia	Never	Complete	Complete	Complete
Slovenia	Never	Complete	Complete	Complete
Belarus	Complete	Never	Complete	Never
Ukraine	Complete	Partial	Complete	Partner-Participant
Greece	Never	Never	Never	Expected 2023: Complete
Moldova	Partial	Never	Never	Partner-Participant

Energy Policy Research

Table 1: A territorial accounting of historically conceived political unions of central European states

The earliest conception that some type of supranational polity was necessary for Central European self-determination began in the 1800s among exiled Polish nationalists as they were coming to terms with the subjugation and partition of their homeland among the empires of Russia, Prussia, and Austria. For nearly a half millennium encompassing the Late Middle Ages and Early Modern Era, a political union of Poland and Lithuania, officially formalized in 1569 as the Polish-Lithuanian Commonwealth, had ensured Central European national sovereignty as one of the largest and most populous countries in Europe. In contrast to its imperial neighbors, it had been formally constituted (if not always *de facto*) as a coequal union of states, with a proto-democratic political system in which kings were elected, monarchical power was dramatically restricted, and a surprising degree of personal freedoms guaranteed.

The national trauma of the loss of this state led Prince Czartoryski, the leader of the Polish government-in-exile, (and notably, who had previously through his close personal friendship with Tsar Alexander I exercised enormous influence over Russia's foreign policy) to warn the governments of Europe that Russia had, by its imperial expansion, had become "a constant threat to Europe," and to advocate for a common association and alliance of Central European nations to aid one another to regain and protect their future independence. While Czartotyski was the first to outline the vision that would become the Three Seas Initiative, any concrete progress on its realization would have to wait until the national groups in question regained their sovereignty.

In the south of the region, an intertwined story played out over the question of Hungarian national sovereignty. Long aligned with but ultimately independent from Austria and her Habsburg kings, an 1848 declaration that Hungary would have her constitution abolished and be subsumed into the empire triggered the Hungarian Revolution of 1848-9 that almost succeeded before being crushed by Russian foreign intervention. Following an eighteen-year period of political and cultural subjugation, domestic instability within Austria allowed Hungarian diplomats to negotiate a compromise in 1867 that restored Hungarian sovereignty in the military and diplomatic alliance of the Austro-Hungarian Empire.

This agreement created a polity without a distinct national identity; Austria and Hungary maintained their own separate parliaments and legislative authority, with the authority of government organizations with jurisdiction over both states high constrained (generally to matters of foreign relations, defense, and national finance). The resulting political union was institutionally gradually expansive, offering more political inclusivity and self-determination for its national groups. By the beginning of the twentieth century, it officially recognized eleven distinct ethnic groups and languages, and was considerably less repressive than its neighboring entities.

The aftermath of the First World War brought about both the end of Austro-Hungary's multinational political project and the opportunity the Poles sought to realize Czarotyski's vision. The Three Seas Initiative finds its substantive father, both as a realizable political objective and of its name, in Józef Piłsudski, who led Poland during this time as the chief military, (and for a time, the de facto political) officer after Polish independence in 1918. Piłsudski articulated the importance of creating an alliance of states termed "*Międzymorze*" (Polish for "in between the seas") or "*Intermarium*" (the Latin equivalent) as the principal long-term objective of Polish foreign policy, believing this sort of a project was critical to Central European independence and the ability to prevent the region's long-term Russian domination.

Piłsudski committed major resources to *Intermarium* during the interwar period, especially by supporting the independence of other central European national groups covertly or directly. However, Poland's most promising opportunity failed after domestic political concerns motivated Polish diplomats to accept far less ambitious terms in the Treaty of Riga (which ended the 1919 Polish Soviet War) and give up on the possibility of an independent Ukrainian state.

The fundamental security concern of *Intermarium* was made clear again by the 1939 German and Soviet occupation of Central Europe. At the time the German High Command greatly feared the military power of

France and England: harboring no short-term desires to invade or sustain war with the West, they were willing to hazard such a conflict for the domination of Central Europe (see Liddell Hart, [The German Generals Talk](#)). Central Europe received no respite from Germany's surrender at the end of the WWII: with the war that began with Western assurances of Poland's independence ending with de facto Soviet domination of the region. National sovereignty was either subsumed into the Soviet Union or run by pro-Soviet puppet governments.

With the 1991 dissolution of the Soviet Union, Central European nationalities regained their autonomy and began taking steps to ensure their regional security. Also in 1991, Poland, Hungary, and Czechoslovakia inaugurated the Visegrád Group, a military alliance acknowledging the shared culture and history of its Central European members. By 2004, all Visegrád members had joined both NATO and the EU, and continue to coordinate within these entities.

In response to the Russian annexation of Crimea, Polish and Romanian presidents inaugurated the [Bucharest Nine](#) (B9) in 2015 (effectively concurrent with 3SI's establishment), a group of NATO members that had previously been under either the USSR's or Warsaw Pact's influence. Whereas the 3SI aims to coordinate Central European states on issues of economic and energy security, the B9 does so on issues of military security. The B9 consists of the Three Seas countries but without Austria, Slovenia, and Croatia.

Three Seas Founding and Contemporary History

The impetus for the modern existence of the Three Seas Initiative began with a 2014 report titled "[Completing Europe](#);" this emerged from a collaboration between the [Atlantic Council](#) and the [Central Europe Energy Partners \(CEEP\)](#), a Brussels-based nonprofit.

CEEP is a research and lobbying association founded and funded by the largest Central European companies involved in the energy sector. Several, and perhaps the most important, of these are state-owned enterprises: e.g., CEEP's current board of three consists of two employees of PSE, Poland's state-owned electric company, and one from PERN S.A., Poland's state-owned oil and natural gas pipeline operator. CEEP's declared primary objective is to influence EU energy and climate policy in line with the views of the enterprises CEEP represents.

Critically, the report maintains the necessity of establishing a "North-South Corridor" of meridional lines of communication in the energy, transportation, and telecommunication dimensions. With respect to energy, the report identified the most important need for this corridor as the construction of natural gas pipelines allowing bidirectional transport of gas among the (future 3SI)

countries, most centrally the ‘Backbone pipeline’ from LNG terminals on the Baltic in Poland to Adriatic LNG terminals on Krk Island, Croatia (See *Figure 2*). (Of great but secondary importance was the linking of European oil and electricity markets.)

In the transport sector, the report advocated the enlargement and modernization of the ports along each of the three seas coupled with the construction of high-capacity modern rail lines linking the ports to each other as well as the interior of Central Europe multimodally to greatly improve freight transport capacity.

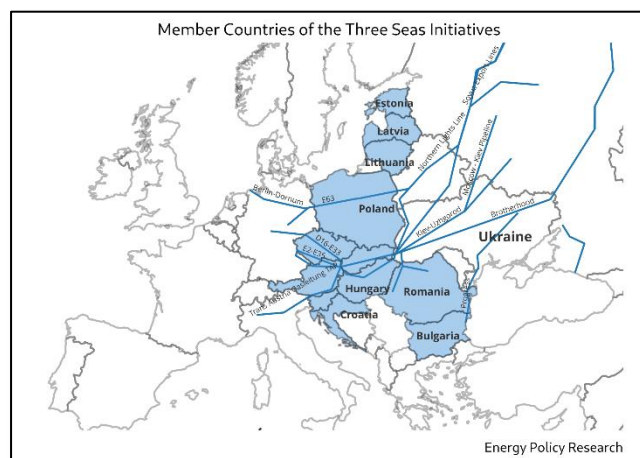


Figure 2: Major natural gas pipelines running through 3SI countries. Note the “East-West axis” orientation; as such it is difficult to transport gas between Poland and Croatia

[The Atlantic Council](#) is focused on Euro-Atlantic integration, emphasizing political and security concerns. However, the jointly produced report was primarily economic in nature. To the degree that the report considered security concerns, it was from the perspective that an economically prosperous and energetically independent Europe gives rise to a more secure world (both for the U.S. and objectively); the report did not place its recommendations in context of the history of aspirational geopolitical coordination in the region. “Completing Europe” focused only on regional infrastructure projects, not long-term geostrategic international cooperation of Central European states.

Poland and Croatia found the Atlantic Council report compelling and decided to situate it within the historical context of the last section. In 2015, the presidents of these countries jointly announced the Three Seas Initiative; within a year the Initiative grew to its current membership of twelve.

Furthermore, the Black Sea, while certainly given due consideration in “Completing Europe”, was overwhelmingly dwarfed by the report’s promulgation of the North-South Corridor focused on the connection

between the Baltic and Adriatic Seas. By naming the initiative “Three Seas,” the Polish and Croatian governments also changed its meaning, including Piłsudski’s geopolitical conceptions alongside the Atlantic Council report’s infrastructure focus.

The first summit of the Three Seas Initiative took place on the 25th of August 2016 in Dubrovnik Croatia, inaugurating the initiative and representing the fruition of a long-term vision. In the 2016 concluding joint declaration, the member states begin by stating their “recogn[ition of] the importance of connecting Central and Eastern European economies and infrastructure from North to South in order to complete the single European market, given that so far, most efforts served to connect Europe’s East and West”—effectively quoting the Atlantic Council’s report.

Throughout 2016 and 2017, 3SI’s initial activity was focused on the general priorities and opportunities presented by the organization. At the 2017 summit, the heads of state approved an annual business forum encouraging cooperation of private entities involved in the region; this forum meets each year alongside the presidential summit.

In 2018, the 3SI summit that was held in Bucharest initiated the curation of a list of ‘priority infrastructure projects’ that have been tracked, added to, and updated during subsequent summits. With this list of ongoing and future economic projects, the 2018 summit saw the formation of the Three Seas Initiative Investment Fund (3SIIF), which has grown to over €1.3 billion in commitments as of June 2022.

In the summits since 2018, 3SI members have set about strengthening the institutions set up in previous summits, taking actions encouraging additional participation in the business forum, attracting increased investment in regional projects and the 3SIIF, and forging desired international relationships with non-3SI members whose policies have significant impacts on the region (most notably, the U.S. and Germany).

The presidential summits have also been a place for heads of state and top diplomats to discuss the developing strategic concerns each year: the 2020 summit was virtual and focused on the impacts of COVID-19 on the 3SI region, and the 2022 summit revolved around the security crisis caused by the Russian invasion of Ukraine. In a recognition of the regional alignment in cultural ties and priorities, Ukraine was invited to become a ‘partner-participant’ with 3SI at the 2022 summit.

During the upcoming 2023 summit to be held on September 6th in Bucharest it is expected that the heads of state will invite Greece to become a 3SI member, and Moldova to become a partner-participant.

Economic Situation: Overview

Economic Highlights of the Member Countries of the Three Seas Initiative														
	Area (square miles)	Population (2021)		Economy (2021)					Freight Transport 2021 - Million Metric Tons Kilometers					
		(Millions)	Annualized Growth Rate	GDP PPP in 2017 \$Millions	Annualized Growth Rate	Breakdown			Total	Maritime	Road	Rail	Waterway	Aviation
						Services	Industry	Agriculture						
Austria	32,383.0	9.0	0.7%	487,616.4	0.8%	62.4%	25.8%	0.0%	73,591					
Bulgaria	42,854.9	6.8	-0.7%	168,305.7	2.0%	62.3%	20.9%	4.3%	49,590	25,497	13,267	4,657	5,792	377
Croatia	21,851.0	3.9	-1.0%	123,227.0	1.6%	60.4%	19.8%	2.9%	83,029	69,526	9,302	3,172	841	188
Czechia	30,452.0	10.7	0.2%	429,698.7	1.8%	58.8%	30.3%	1.9%	71,988		55,108	16,326	22	532
Estonia	17,505.0	1.3	0.0%	51,657.0	3.3%	62.5%	23.1%	2.0%	67,353	61,816	3,171	2,124		242
Hungary	35,920.0	9.7	-0.3%	330,200.6	2.7%	57.0%	24.3%	3.4%	43,428		29,726	11,347	1,873	482
Latvia	24,938.0	1.9	-0.9%	60,476.5	2.9%	63.7%	19.9%	4.1%	28,407	14,189	6,417	7,367		434
Lithuania	25,212.0	2.8	-0.8%	110,305.8	3.4%	60.7%	25.3%	3.3%	27,590	3,921	8,725	14,566		378
Poland	124,547.0	37.8	-0.1%	1,322,150.5	3.4%	56.9%	27.9%	2.2%	271,245	25,609	189,780	54,387	54	1,415
Romania	92,046.0	19.2	-0.5%	595,932.3	3.2%	58.2%	27.8%	4.4%	68,154	13,280	26,790	13,625	13,522	937
Slovakia	18,933.0	5.5	0.1%	178,788.1	2.1%	59.1%	28.2%	1.7%	25,787		16,509	8,190	839	249
Slovenia	7,827.0	2.1	0.3%	84,779.8	2.0%	57.7%	28.5%	1.7%	16,671	1,898	9,778	4,937		58
3SI Total	474,468.9	110.8	-0.2%	3,943,138.4	2.6%	58.7%	26.8%	2.5%	826,833	215,736	418,382	162,477	24,449	5,789
Europe Total	1,970,285.0	545.6		24,346,192.8	1.1%	64.7%	23.8%	1.5%	7,944,539	5,264,009	2,078,655	451,619	135,047	15,209
3SI as % of Europe	24.1%	20.3%		16.2%		14.7%	18.2%	26.5%	10.4%	4.1%	20.1%	36.0%	18.1%	38.1%
Ukraine	233,030	40.9	-1.0%	535,642.0	0.42%				n / a	n / a	168,109	16,884	n / a	n / a
Analysis based on IMF, Eurostat, & country-level data												Energy Policy Research		

Analysis based on IMF, Eurostat, & country-level data

Energy Policy Research

Table 2. Summary of 3SI's current economic situation

The historical legacy of Soviet domination and prohibition of private capital investments in Central European countries gave rise to an infrastructure gap persisting through the late twentieth century. With the fall of the Berlin Wall and the unification of Western and Eastern economies, investments in Central Europe were primarily undertaken by Western firms for the purpose of integrating the Central European markets and economic resources with the Western economies. This has led to a 'core-periphery structure' in which there are still limited lines of communication within central Europe limiting 3SI's economic development and output.

Demographics and GDP

The countries of the 3SI occupy 474 thousand square miles of Europe's total 1.9 million, or just over 24%; this is an area equal to three times the size of California. Europe's total population is 545 million, of which 3SI's 111 million is **20.3%**. 3SI's annualized population growth rate for the last ten years has been slightly negative at -0.2% compared with Europe's total of 0.15%,

Disproportionate to these figures, in 2021, 3SI countries together generated just under \$4 trillion in GDP ([IMF data PPP-adjusted in 2017 dollars](#)) growing annually at 2.6% since 2011. This was **16.2%** of Europe's total GDP of \$24.4 trillion (Europe's total GDP grew at a rate of 1.1% during the same period). 3SI's 2021 per capita GDP stood at \$35,600 versus all of Europe's per capita GDP of \$44,600.

Freight Transport

Regional freight transport is an important proxy of 3SI economic activity. Lagging considerably behind Europe, total 3SI freight transport was 827 thousand million metric ton-kilometers, or **10.4%** of the total Europe-wide amount of 7,945 thousand million metric ton-kilometers (mtkms).

The maritime freight situation is particularly striking; despite having 2.2 thousand miles of coastal front (the combined distance between the extreme points of each sea-facing country's coastline), 2021 3SI maritime freight is only 215 thousand mtkms, or 4.1% of Europe's total. European maritime freight is dominated by established ports in Western Europe such as Rotterdam (434 thousand mts), Antwerp (215 thousand mts), Hamburg (111.2 thousand mts), and Algeciras (83 thousand mts). By comparison, key 3SI ports of Constanta Romania, Gdansk Poland, Klaipėda Lithuania, and Tallin Estonia moved 49.9, 45.0, 41.4, and 22.3 thousand mts, respectively.

Service/Industry/Agriculture Breakdown

3SI's economy is broken down into 59% services, 27% industrial, and 2.5% agricultural. This compares to the output of the total of Europe broken that is 65% services, 24% industrial, and 1.5% agricultural. Of Europe's total, 26.5% of Europe's agriculture, 18.2% of its industrial output, and 14.7% were from 3SI members.

Energy Situation: Overview

In addition to the prohibition of private capital investments, the Soviet period in Central Europe also brought with it a regional energy strategy heavily influenced by the directions of “Five-Year” Plans. Energy prices in planned economies were chosen based upon preexisting targets of the central plan, and potential increases in efficiency caused by technological development or different allocations of resources generally had little effect on policy. Thus, there was limited opportunity for investments in new energy infrastructure, and heavy reliance on traditional hydrocarbons. This has left 3SI with a legacy of hydrocarbon usage and lack of modern energy infrastructure, significantly impacting the 3SI energy situation.

Hydrocarbon usage

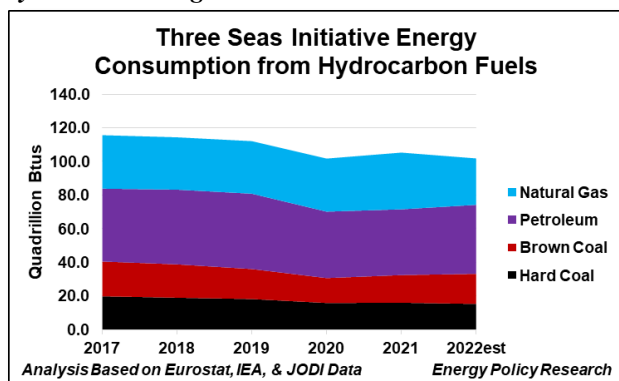


Figure 3. Declining hydrocarbon use of 3SI countries. The portion of the energy mix made up from coal is significantly higher than the rest of Europe.

Hydrocarbons still dominate 3SI’s energy demand (Figure 3), but to varying degrees in comparison to Europe. Data on European natural gas consumption over the last 10 years shows that on average 3SI consumed 7 billion cubic feet per day (BCF/d), 16% of Europe’s total gas usage of 45 BCF/d, in line with population. Of Europe’s average 11.5 MB/d (million barrels per day) of crude oil demand, 3SI’s is 1.6 MB/d, or 14.3%.

3SI’s coal usage presents a different picture. Average 3SI annual hard coal demand is 5.1 million mts, or 73.3% of Europe’s total. Brown coal demand by 3SI countries is 12.4 million mts annually, or 40% of Europe’s total. In large part, this is due to Poland’s sizeable hard coal production.

Critically, overall 3SI hydrocarbon consumption is on the decline despite increasing economic growth; since 2017, total 3SI hydrocarbon demand has declined at an annualized rate of 2.5%. Each category — hard coal, brown coal, crude oil, and natural gas — has shown declines in this period; but hard coal usage, in particular, has declined at a rate of over 5%.

Electricity

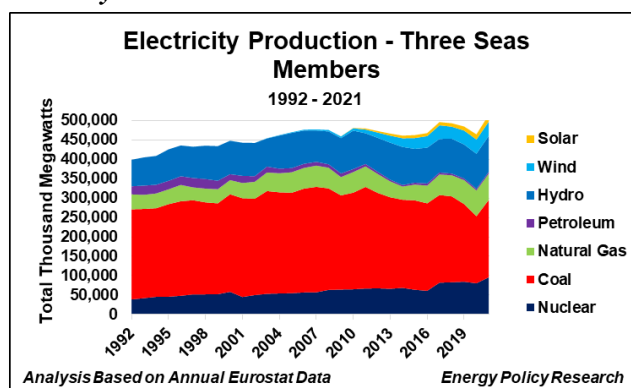


Figure 4. Electricity production of 3SI members. Note the recent increases in nuclear and intermittent renewables, paired with a decreasing (but still extremely large) reliance on coal.

3SI countries produced 515.2 million megawatts in 2021 (Figure 4), or 19.3% of Europe’s total of 2,674 million megawatts. The resource mix used to generate this was 52.8% hydrocarbons (coal, natural gas, and petroleum liquids), 18.6% nuclear, 18% hydroelectric, and 10.5% intermittent renewables (wind and solar). By comparison, the rest of Europe’s energy mix consisted of 34.5% hydrocarbons, 29.5% nuclear, 13.6% hydropower, and 23% intermittent renewables.

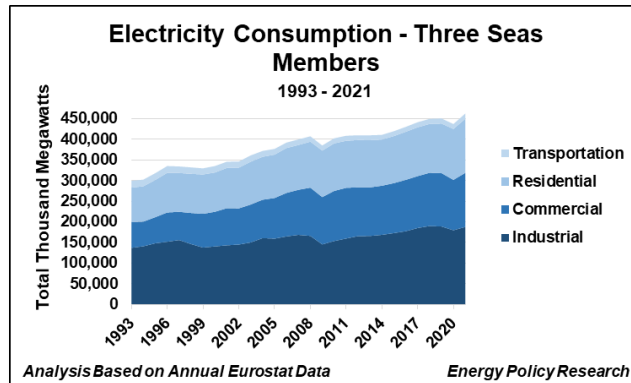


Figure 5. 3SI electricity consumption by sector. Planned economies are typically more industrial-focused: the most energy intensive sector; perhaps as a result industrial energy demand is still higher than the rest of Europe.

Ten-year total 3SI electricity demand (Figure 5) grew at an annualized rate of 1.3% through 2021. In the rest of Europe, electricity demand declined in the same period at a rate of 0.2%. 3SI sectoral electricity usage is dominated by industrial demand at 40.6% of total with another 57% used for commercial and residential requirements. In the rest of Europe, industrial, commercial, and residential demand is broken down at 37.6%, 28.7%, and 31.3%, respectively, of the total.

Energy Security: A Detailed Look

Energy security is typically described in three dimensions: acceptability, affordability, and availability

Acceptability

Acceptability is further broken down into environmental impact and efficiency. The data in the previous section can be used to summarize situation with respect to the fossil fuel component of environmental impact: 3SI's hugely disproportionate coal usage and smaller reliance on nuclear, wind, and solar in leads to higher rates of hydrocarbon usage than the rest of Europe, however this usage is rapidly declining, even while experiencing periods of sustained economic growth.

This can be partially explained by increases in energy efficiency, the other subdimension of acceptability. One way of measuring efficiency is to divide the total amount of energy that has been consumed by total inflation-adjusted GDP.

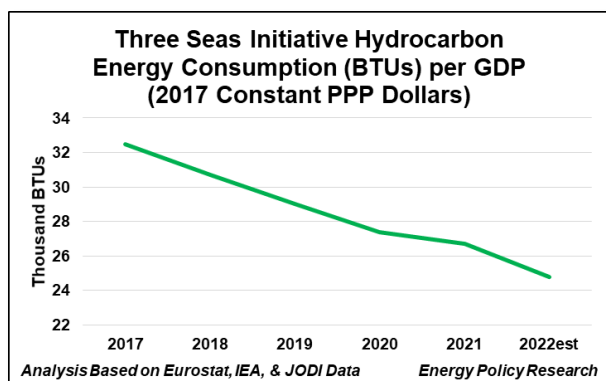


Figure 6. The hydrocarbon portion of 3SI's energy intensity since 2017. Total energy intensity is expected to be similar.

Using annual primary energy consumption data as compiled by Eurostat and PPP (purchasing power parity) GDP time-series compiled by the IMF in 2017 dollars, 3SI energy efficiency improved in the period from 2017 to 2022 at an annualized rate of 5.3% (See Figure 6, above).

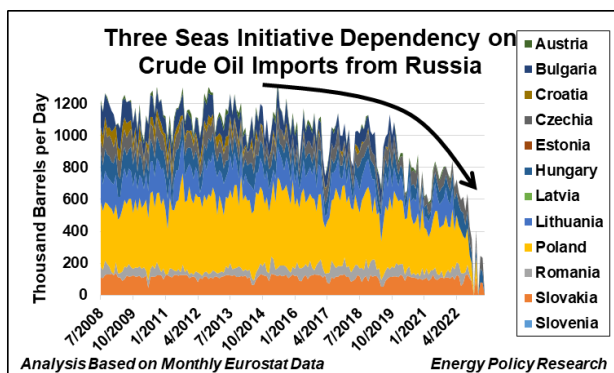


Figure 8. 3SI imports of Russian oil dropped quickly to zero in 2022

Affordability

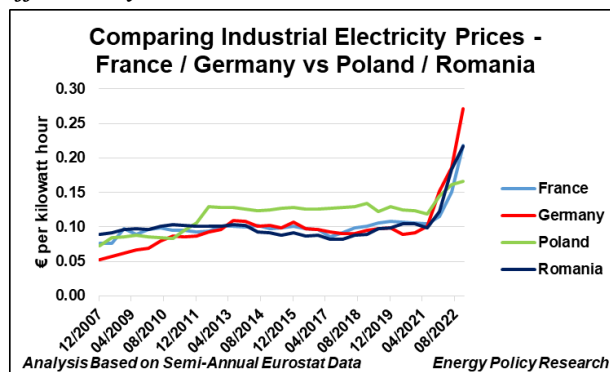


Figure 7. Industrial energy prices in the two largest EU economies (Germany and France) and the two largest 3SI economies (Poland and Romania). While slightly higher in Poland, all prices were similar and, until Russia's invasion of Ukraine, stable.

One proxy of energy costs can be Europe's industrial electricity prices. While stable from 2007 through 2021, European industrial prices spiked in 2022 with Russia's escalation of its war against Ukraine. As can be seen in Figure 7, the impact was felt both in Western European countries France and Germany, and 3SI members of Romania and Poland. The difference in severity of impact may be due to varying levels of the electricity mix coming from oil and natural gas imports. Overall, this has led to a recessionary impact across Europe.

Availability

Availability is further broken down into import dependency/diversity. Three Seas countries have two key resource dependencies: oil and natural gas. With respect to both, the 3SI region has been particularly vulnerable to Russia's energy supply dominance given the maze of east-west pipelines that had been put into place in the 1980s and the limited alternatives available (see Figure 2 on page 4).

Critically, Russia via Gazprom violated European rules by not allowing other suppliers to use its pipelines and reservoirs. There were several times that the EU challenged this and required Gazprom to abide. [In 2018, the European Commission ruled that all extensive bi-lateral contracts with Gazprom should be terminated by 2049. In 2019, the European Parliament passed legislation that required pipeline ownership transiting the EU to be separated from ownership of gas supply.](#) Still, Gazprom circumvented the ruling. Russia's 2022 escalation of its war with Ukraine provided motivation for severing Europe's dependency on Russia's hydrocarbons.

The global nature of the oil market made diversification achievable, with 3SI almost immediately eliminating Russian crude oil imports, completely doing so by December 2022 (Figure 8, opposite).

terminals, 3SI accounted for at most 1 BCF/d of those imports, even though it is 3SI countries that are most dependent on Russian gas. The EU countries that continue to import prewar levels of Russian gas, relying on Russia for almost the entirety of their gas mix, are generally those in the landlocked center of the 3SI region: e.g., Austria, Hungary, Slovakia, and Slovenia.

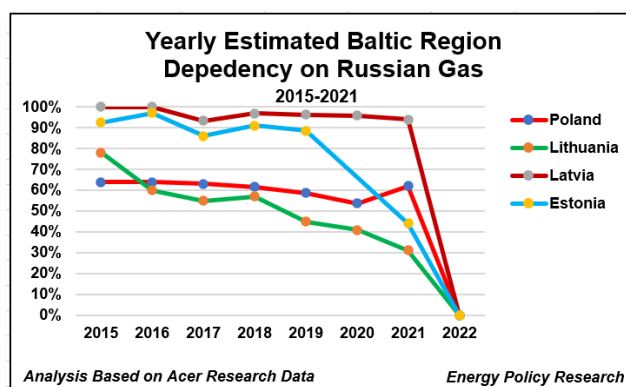


Figure 11. Decreases in Lithuanian and Estonian imports prior to 2022 is due to Lithuania's 2015 opening of the first LNG terminal in the region. Poland was not able to sufficiently access these imports until the completion of the GIPL 3SI priority project.

The case of Poland and Baltic states is instructive, as it shows the crucially important role 3SI can play for the energy security of the region if it used properly. Of the three coastal regions, before 2022 the Baltic had the highest percentage of their natural gas mix sourced from Russia. In 2021, support for Ukraine after the invasion made Poland the first country shut from Russian gas in the opening salvo of Russian energy blackmail. However, judicious and perceptive Polish policy in funding several expensive 3SI priority projects directly out of the national purse back in 2019 saw new regional gas infrastructure come online just as demand started to peak, allowing Poland and each of the Baltic states to completely eliminate Russian gas imports from a high initial level of dependency and establish much greater energy security (*Figure 11*, above).

Daily European LNG Imports by Receiving Region:
06/21/2021 through 07/31/2023

Legend for European Imports:

- Eastern Europe (HR, PL, & LT)
- NW Europe (GB, FR, NL & BE)
- Iberia (ES & PT)
- Med (FR, IT, & GR)

U.S. Natural Gas Exports-LNG by Destination Country
Country - 05/22/2018 to 05/31/2023

Legend for U.S. Exports:

- Croatia
- Poland
- Lithuania

Figure 10. An accounting of LNG imports to Europe in the period before and after Russia's invasion of Ukraine. Left: Compared to the rest of Europe, 3SI's LNG imports were tiny. Right: Just after Russian gas was cut off, 3SI's LNG imports more than doubled.

Analysis of 3SI Infrastructure Projects

The Three Seas Initiative aims to find a solution to the problems discussed in the previous section through a coordinated strategy of regional infrastructure investment. [As such, beginning in 2018 they have curated a list of “Priority Projects”, giving annual accountings on progress towards 3SI’s concrete objectives.](#)

Unfortunately for policymakers who might want to use this resource to predict the future evolution of 3SI, the list lacks the uniform organization necessary for basic analysis of its contents to be useful. Projects whose budgets number in the thousands of euros are listed next to (and counted equally with) those numbering in the billions, and the precise meaning of 3SI’s assessment of a project reporting “activity reported” or “substantial progress” varies wildly.

Considering this, EPRINC has undertaken a detailed independent study of the 3SI Priority Projects and assessed the opportunities/challenges 3SI will face in the near future. In the following analysis, priority projects are evaluated along three dimensions: bankability, geography of beneficiaries, and budget size. Progress is primarily measured by the amount of secured funding. (Throughout the following analysis, the [TEN-T corridor](#) upgrades are excluded due to its separate funding process and because it’s €71.7 billion of preapproved funding—nearly equal to the total sum of all other project budgets—obscures all else. Inactive projects are also excluded.)

Bankability

Bankable projects are defined as those in which it is relatively straightforward for funding parties to recoup costs, and, with respectively contained risk, generate a sufficient return on investment to make the project competitive in capital markets. The bankability of 3SI’s priority projects were each assessed as clear, possible, or unlikely. As a percentage of all priority projects, 11% (0.9% by budget) were assessed as clearly bankable, 15% (3.3% by budget) as possibly bankable, and 74% (95.8% by budget) were assessed as unlikely to be bankable.

Geography of Beneficiaries

Naturally, any particular Priority Project will not benefit all 3SI citizens equally. Projects were divided by the geographical concentration of the beneficiaries relative to the location of investment into three categories: non-geolocated, national, and multinational.

In non-geolocated projects, an investment at one moment in space and time affords benefits throughout 3SI countries irrespective of their proximity to the investment; examples would be data collection and tracking projects or many of the various digital projects—the productive output of these investments would be information, which can be shared and used anywhere.

By contrast, in national and multinational priority projects, the beneficiaries of a project and geographically linked with the sites of investment. In national projects, the preponderance of investment and (consequently) beneficiaries are to be geographically located inside one country; in multinational projects investment is required and resulting beneficiaries will be spread regionally throughout multiple countries.

As a percentage of all priority projects, 16% (0% by budget) were non-geolocated, 54% (8% by budget) were national, and 30% (92% by budget) were multinational.

Budget Size

The size of 3SI priority projects was assessed in multiple ways. 29% of 3SI projects had no published budget making analysis impossible. In terms of objective measures, budgeted projects were divided arithmetically into categories of small—less than €100 million— (36% of budgeted projects), medium—€100-to-500 million— (32% of budgeted projects), and large—over €500 million euros— (32% of budgeted project). Logarithmically, the projects were distributed as follows (*Figure 12*).

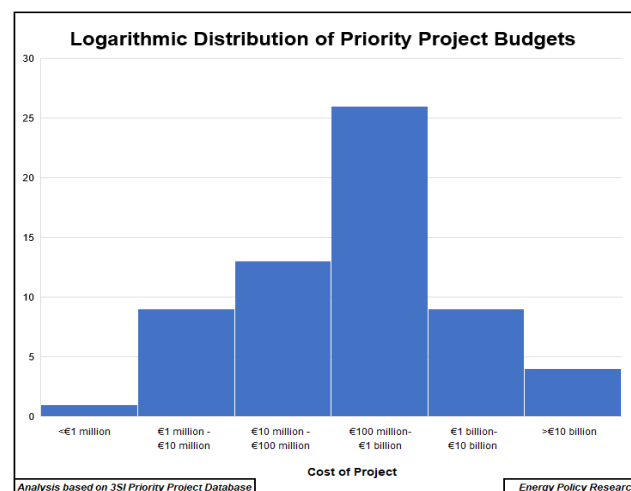


Figure 12. The four projects in the far-right bucket with values over €10 billion account for around two-thirds of all proposed budget for 3SI projects.

In addition, projects were assessed relative to the GDP of the proposing state(s). Countries were unlikely to assign significant national funding to Projects in excess of 0.2% of GDP; consequently, Projects were divided by this line as ‘nationally affordable’ and ‘not nationally affordable.’

Paths to Financing: a categorization of Priority Projects

Priority Project Types	Average Budget (millions of €)	# of Projects	# of Projects w/ Budget Provided	# of Projects w/ at least 1% funding	Total Proposed Budget	% share of all project budgets	Total Funding Secured (millions of €)	% share of all secured funding	Total % Secured
Digital	€ 32.3	9	5	2	€ 161.4	0%	€ 103.3	0%	64%
Category ii: Non-geolocated	€ 3.5	5	2	0	€ 7.0	0%	€ -	0%	0%
Category iii: National	€ 51.5	4	3	2	€ 154.4	0%	€ 103.3	0%	67%
Energy	€ 891.0	36	28	8	€ 24,949.2	26%	€ 3,316.0	10%	13%
Category i: Bankable	€ 184.2	12	10	2	€ 1,841.6	2%	€ 160.5	0%	9%
Category ii: Non-geolocated	€ 10.0	1	1	0	€ 10.0	0%	€ -	0%	0%
Category iii: National	€ 257.6	11	8	1	€ 2,060.4	2%	€ 25.0	0%	1%
Category iv: Large Multinational	€ 2,337.5	12	9	5	€ 21,037.2	22%	€ 3,130.5	10%	15%
Transport	€ 2,333.1	44	30	19	€ 69,992.0	74%	€ 29,518.4	90%	42%
Category i: Bankable	€ 418.9	6	4	3	€ 1,675.5	2%	€ 1,150.5	3%	69%
Category ii: Non-geolocated	€ 21.7	2	1	1	€ 21.7	0%	€ 21.7	0%	100%
Category iii: National	€ 162.9	21	13	5	€ 2,117.3	2%	€ 80.4	0%	4%
Category iv: Large Multinational	€ 5,514.8	15	12	10	€ 66,177.5	70%	€ 28,265.8	86%	43%
Grand Total	€ 1,509,565	89	63	29	€ 95,102.6	100%	€ 32,937.8	100%	35%

Analysis based on 3SI Priority Project Database

Energy Policy Research

Table 3: A breakdown of priority projects by sector and funding pathways.

The most important obstacle to a project's realization is whether or not it can secure financing. Based on the previous dimensions, EPRINC proposed the following four categories of priority projects by their likely paths to receiving funding.

Category i: Clearly Bankable Projects

Projects that are clearly bankable can be divided into two subcategories: small-budget and medium-to-large budget. Small-budget bankable projects are likely to be implemented regardless of any involvement for a 3SI-associated organization: private investors are already incentivized to finance the project. However, national governments can help by providing the right tax incentives in order to favor those projects determined to be of general 3SI regional interest.

Medium-to-large budget projects may require capital in excessive of what private investment can provide, and a larger coordination of funds is needed. The existence for these projects is the reason organizations such as the [Three Seas Initiative Investment Fund \(3SIIF\)](#) and the [European Investment Bank \(EIB\)](#) were formed. Within a requirement of bankability for all financed projects, 3SIIF and EIB are principally guided in their investment decisions by stated 3SI and EU policy objectives. Both raise capital from private investors in the market; additionally, 3SIIF has substantial direct investments from state-owned banks and funds.

Category ii: Non-geolocated Projects

At present, there is no clear method for funding non-geolocated projects. Of the eight projects listed in this category, four have listed a budget and only one has received funding. The median budget is miniscule at €7.25 million. The one project receiving funding was exceptional in nature (aside from its budget, it could arguably be placed in *category iv*), and received its funding similarly exceptionally.

The primary obstacle to funding these projects, despite their exceptionally small budgets, is the lack of clarity as to which entity should be responsible for its funding; all nations benefit from them similarly. This problem could potentially be addressed by 3SI having a budget composed of member-state contributions as a percentage of GDP; such contributions would be practically imperceptible from the point of view of state governments.

Category iii: National Projects

Projects (in view of *Category i*, assumed not clearly nonbankable) primarily benefitting a single nation have an obvious candidate financier: that nation's government. A subcategory emerges considering projects that are not nationally affordable.

For projects not nationally affordable but primarily benefiting a single nation, other factors come into play. Intermediate levels of bankability and creative financing structures can reduce the intensity of expenditure required by the national government. In many cases, supranational organizations are the only possibility if they can be convinced the project aligns with general regional objectives.

Category iv: Large Multinational Projects

These form the core of the investment required in the Three Seas Initiative; projects that no one national entity can fund by itself. Instead, substantial funding must be sourced from a supranational organization committed to achieving regional objectives.

For 3SI, almost all non-national funding for *category iv* projects has been provided by the [Connecting Europe Facility \(CEF\)](#), an organization commissioned in 2014 by the European Commission for the purpose of "Connecting Europe," authorized to supply up to 85% of a project's funding. (The funding not directly listed as CEF largely has come from the [Cohesion Fund](#), an EU fund targeting less well economically developed EU countries and administered by various organizations, including CEF. All

3SI members meet the eligibility criteria of the Cohesion fund.) Therefore, the criteria CEF uses to assess whether a Priority Project merits funding essentially determines the status of the *category iv* projects and has enormous impacts on the future of the 3SI region.

Based on the above discussion, the status of priority projects based on sector and category can be calculated, assessed the percentage of funding secured. This is presented in *Table 3*, at the top of the previous page.

Analytical Conclusions regarding 3SI's Priority Projects

1. Overall progress on the financing of 3SI projects is at 35% but unevenly distributed. The digital sector is 67% funded, the energy sector 13%, and the transport sector 42%. **Clearly, energy projects are systemically underfunded.**
2. Table 3 shows a complete list of project areas where 3SI is struggling to secure financing and progress:
 - a. Non-geolocated digital projects
Proposed explanation for deficiency:
 Lack of clarity as to which governmental entity is to fund the cost of a regional good
 - b. National transport projects
Proposed explanation for deficiency:
 CEF and other supranational organizations not willing to fund national transport projects without regional benefit; nonbankable projects require large and expensive commitment from national governments
 - c. All categories of energy projects
Proposed explanation for deficiency:
 This is the subject of the next section.
3. In the aggregate, the investment required for 3SI projects (92%) is primarily concentrated in large multinational projects in the transport (70%) and energy (22%) sectors. In terms of capital requirements, digital projects were irrelevant.
4. So far, all 3SI priority project funding has been allocated 90% to transport projects, and 10% to energy projects, in contrast to a total requested allocation of funds of 74% transport, 26% energy. **Proportional to requested budgets, energy sector projects have received three times less funding than the rest of 3SI projects.**
5. In terms of progress on priority projects, 3SI is on track to address many of its transport and economic challenges, however it is **unlikely to make progress on addressing its many and profound energy security issues.**

Obstacles to progress on Energy Security

The previous discussion indicates that there is a sustainable gap in the funding of 3SI projects aiming to increase the energy security of the region through every funding path, but that the overwhelmingly most important contributing category is large multinational projects, responsible for around 85% of the total budget all energy projects. *Table 4* (on top of the next page) lists them and provides information and funding status.

Besides the two last projects, which deal with substantial interconnection between national electric grids, all of the projects in this section are natural gas pipelines. These natural gas pipeline projects face two unique obstacles not shared by other largescale interconnection projects—a good opposing example is roads—: lack of modularity and political hesitancy based on climate concerns.

Obstacle #1: Modularity

The [Via Carpathia Highway](#) provides a good example of modularity. As one of the largest 3SI transport projects, it is projected to run from Lithuania to Bulgaria by way of Poland, Slovakia, Hungary and Romania.

Via Carpathia currently has secured 86% of its requested budget of €18.6 billion; at present, this number only represents the sections of the highway in Poland, Romania, and Slovakia. Despite Lithuania, Hungary, and Bulgaria having not yet even proposed their sections as active priority projects, the Polish and Romanian sections have been almost fully funded. This is because the project is modular: even without the complete participation of other countries, completion of a national subsection of a project will afford benefits to the citizens of that country; these will only increase when all countries link their sections. This factor encourages investment in subsections of the large budget, and the total project gets realized piece by piece. (In fact, the encouragement is strong enough that Poland funded its section of the project entirely out of the national budget, exceeding the amount EPRINC's analysis was generally 'nationally affordable'.)

By contrast, a natural gas pipeline links geographically remote producing centers with diffused consuming areas. There is no benefit for two regions that lack and require natural gas to build a section of the pipeline; without the full pipeline constructed, no benefit will be accrued to constituencies. Thus, for lengthy pipeline projects a complete FID (final investment decision) must be made: with these sorts of high-cost decisions, supranational financing organizations will be more risk-averse.

However, this obstacle is not insurmountable: with enough capital and detailed consideration into options, a financing entity must eventually come to a decision if they appreciate the cost of inaction. This demonstrates the importance of the next obstacle.

Obstacle #2: Climate Concerns

As previously described, almost all *category iv* funding comes from the CEF. As such, CEF's natural gas policies have large impacts on the funding status of these major energy security projects.

When [CEF](#) was created by the European Commission in 2014, it was first administered by [the Innovation and Networks Executive Agency \(INEA\)](#). The INEA's assessment of its role in energy sector emphasized energy security as well as providing a smooth transition to renewable sources, explicitly [stating](#) that Europe required investments of "at least €70 billion in gas."

In 2021, the European Commission dissolved the INEA, replacing it with the [Climate, Infrastructure, and Environment Executive Agency \(CINEA\)](#) promoting an entirely different [objective](#) for CEF's energy agenda: "A connected, modern, secure and smart energy infrastructure will be key in delivering the European Green Deal... [as] an enabler at achieving the Union's decarbonization objectives." The European Green Deal is an aggressive set of policies adopted by the European Commission in line with [IEA "Net Zero by 2050 report"](#) that prescribed no new investment in oil and gas beside those already approved by 2021. There is no mention of gas throughout their site, except when describing the previous investments as made by INEA's CEF.

This 2021 administrative change has the potential of eliminating any future possibility of energy security for 3SI if the CINEA's policies become permanent. Already, the practical effects of an undue attachment to the IEA "Net Zero" scenario have led to a lack of investment of energy infrastructure, leading to weakening of energy security and independence of several European states just ahead of the crisis caused by Russia's invasion of Ukraine.

A major report recently released by EPRINC, ["A Critical Assessment of the IEA's Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields"](#), highlighted the problems likely to emerge from a too strict adherence to the IEA's pathway. As several governments move uncritically towards implementing its policy recommendations, the practical challenges incurred will have to be added to and compared with those predicted in the report. The analysis presented here suggests that the continued Central European reliance on Russian energy, even in the wake of its brutal war to destroy a European democracy, may already be one of them.

List of Category iv (Large Multinational) Energy Projects									
	Project	Type	Proposing countries	Budget (millions of €)	% of total	Funding (millions of €)	% of total	Percent Secured	Funding Sources
1	Romania-Hungary gas interconnector expansion (ROHU)	Pipeline	Hungary	?	0%	€ -	0%	0%	
2	Bulgaria-Romania-Hungary-Austria pipeline (BRUA)	Pipeline	Romania	€ 14,550.0	69%	€ -	0%	0%	
3	Bulgaria-Hungary-Romania-Slovakia pipeline (Eastring)	Pipeline	Slovakia	€ 2,060.0	10%	€ -	0%	0%	
4	Hungary and Slovakia gas interconnector expansion	Pipeline	Hungary	?	0%	€ -	0%	0%	
5	Hungary- Slovenia-Italy pipeline (HUSIT)	Pipeline	Hungary & Slovenia	€ 84.5 (only Slovenian part)	0%	€ -	0%	0%	
6	Ionic Adriatic Pipeline (IAP) Croatia-Bosnia-Montenegro-Albania	Pipeline	Croatia	€ 600.0	3%	€ -	0%	0%	
7	Polish new regional gas energy security infrastructure (Baltic Pipe, LNG terminal, interconnectors to Ukraine and Slovakia)	Pipeline	Poland	€ 1,563.0	7%	€ 1,563.0	50%	100%	National: CEF (roughly 2:1)
8	Gas interconnector Poland-Lithuania (GIPL)	Pipeline	Lithuania & Poland	€ 466.1	2%	€ 466.1	15%	100%	CEF: national (roughly 3:1)
9	Integrating Baltic States' electricity networks with European networks	Electric Grid	Lithuania, Latvia & Estonia	€ 1,625.0	8%	€ 1,625.0	34%	65%	CEF (100%)
10	Integrating Croatian and Slovenian Electric Grids (SINRCO.GRID)	Electric Grid	Croatia & Slovenia	€ 88.6	0%	€ 45.2	1%	51%	CEF (100%)
Total				€ 21,037.2	100%	€ 3,130.5	100%	15%	
Analysis based on 3SI Priority Project Database									
Energy Policy Research									

Table 4: List of the priority projects with crucial importance for 3SI's energy security. Most remain unfunded, with no clear future path to financing.

The Case of Poland and the Baltics

Poland understood early the importance of energy security, moving quickly on planning and then investing significant portions of its national budget into energy security projects before the more natural gas-friendly CEF could get involved (see [Table 4](#), project 7). [The Baltic Pipe](#) and new regional LNG terminals came online the same year as Russia's invasion of Ukraine, and they have played a huge role in countering the economic chaos Russia tried to impose.

Polish leadership in the Baltic region, aided by Poland's powerful economic geography—Poland's size makes it responsible for the bulk of multinational infrastructure projects in region and affords influence as to their implementation—has led to widespread regional energy security for the Baltic states. CEF funded projects in Lithuania, Latvia, and Estonia linked with Polish-led projects, and the region successfully linked their combined gas infrastructure.

The result of this leadership is that Poland and the Baltic states are responsible for 99% of the secured energy infrastructure funding in this category, and today enjoy a position of significantly increased energy security relative to their pre-3SI position.

In an environment with the current natural gas-averse CEF, it is unclear whether other 3SI countries will be able to achieve the same level of results. Without clear leadership and an understanding of the importance of the energy security element of 3SI's role, it seems unlikely.

Conclusions, Considerations, and Recommendations for U.S. Policy Makers

3SI presents policymakers with a myriad of issues and possibilities, these include but are not limited to:

1. The need to **restructure 3SI's priorities beyond infrastructure to include regional national and energy security: 3SI has both geostrategic and infrastructure dimensions**. While 3SI is an entity organized for the purposes of economic development primarily through infrastructure projects, Russia's escalated war against Ukraine along with threatened incursions from Belarus against Poland have focused 3SI regional national security needs. Furthermore, Russia's PMC Wagner Group's late June 2023 mutiny and subsequent assassination of its key leadership has elevated concerns regarding Russia's own political stability and economic challenges.
2. Supporting priority #1, the need to accelerate the development of energy resources: **the EU's strict emphasis on Net Zero has significantly worsened the energy security of the landlocked 3SI region**, as the newly administered CEF has deemphasized and refused to fund any new gas projects. While 3SI countries have improved energy security on the dimensions of acceptability (by rapidly becoming more energy-efficient) and diversifying natural gas requirements away from Russia to Norwegian pipeline gas and LNG imports, energy continues to be costly.; accelerating the development of Poland's nuclear power projects and developing regional hydrocarbon endowments such as the ones located in the Black Sea would continue the trajectory of regional economic development, sustainability, while minimizing energy import dependence;
3. The need to accelerate the scale and pace and of project funding and implementations: while there is an ambitious list of over ninety projects, the pace of completion has been slow with only four small-scale projects completed, another fifteen in progress; and only around a third of projects have received a single euro in funding
4. **Consider the potential Ukraine and, expected after 2023, Moldova, possess as 3SI partners:** both countries, combined, are contiguous with four 3SI countries; in addition, Ukraine's large territory, long Black Sea coastline and related ports, agricultural endowment, technological human capital, and access to potential onshore and offshore hydrocarbon resources would be an asset to 3SI; Ukraine will be in need of major infrastructure over the next few years; **coordinating with Ukraine on rebuilding could substantially benefit all 3SI members** by linking Ukrainian territory and resources with the three seas network
5. **The importance of U.S. LNG exports in meeting 3SI emergency security demands;** after Russia cut off natural gas exports, coastal three seas regions were able to avoid economic turmoil by tripling U.S. LNG imports. Where possibly, preserving U.S. ability to rapidly ramp up production when needed significantly increases energy security in areas with access to LNG terminals.

Matthew Sawoski, Senior Research Analyst
Max Pyziur, Research Director