Global Energy Monitor

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The Three Seas Initiative's Failing Case For Gas

The Three Seas Initiative (3SI), a twelve-nation regional cooperation forum aimed at boosting the economic development of EU member states in central and Eastern Europe, strongly favors gas over renewable energy, and risks locking in new gas infrastructure beyond 2050. Building out a new generation of gas infrastructure would violate the EU's legal obligation under its Climate Law of a 55% reduction in greenhouse gas emissions by 2030 and net-zero emissions by 2050.

To achieve net-zero emissions by 2050, starting now EU gas consumption must decline sharply, according to scenarios from the European Commission. 3SI's emphasis on promoting gas is also at odds with the net-zero emissions pathway of the International Energy Agency (IEA), which argues that keeping warming below the 1.5°C threshold set by the Paris Agreement would entail sharply cutting gas use in the decades to come.

3SI is at an early stage, with investments just beginning to be made. There is now an opportunity for 3SI political leadership and investments to turn away from gas and focus instead on supporting renewable energy infrastructure. The European Commission's recent 'Fit for 55' package boosts EU ambitions for renewable energy, so there is a need for 3SI to spur much needed new investment for renewables.

The first and only energy investment so far to bear the 3SI stamp was the acquisition in May this year by the Three Seas Initiative Investment Fund of a significant stake in Enery Development, an Austrian solar plant developer. 3SI countries have large potential for renewables, and many of them have met their targets for renewable energy for 2020. With much more ambitious targets for 2030 and 2050, though, there is a need for far more investment in renewable energy, which 3SI can help catalyze.

Funding for energy projects under the Three Seas Initiative

A collaboration involving the EU's twelve central and eastern member states, 3SI aims to stimulate economic growth by developing a north-south infrastructure corridor to improve the region's own cross-border mobility and connectivity, as well as enhancing links to western Europe. The participating countries in 3SI are Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

A key underlying rationale is that 3SI promotion of a range of projects will help to rectify eastern Europe's long-term deficit in infrastructure investments compared to western Europe. 3SI estimates this overall infrastructure investment gap to be €1.15 trillion, and the current total budget for projects across the three sectors under 3SI's purview is €180 billion. The dedicated 3SI investment vehicle, the Three Seas Initiative Investment Fund (3SIIF), aims to raise funds from public sources—at least €5 billion from participating nations, and additional contributions chiefly from EU budgetary sources—to then leverage private sector investments of up to €100 billion. Thus far, nine of the 3SI participating states have provided seed capital of approximately €1 billion, and the US government has also pledged up to €840 million in loans.

Outdated energy solutions dominate the latest list of 3SI priority projects, published at the 6th 3SI Summit in Sofia (July 2021). Of the 38 registered and active energy projects currently presented in the 3SI database, fossil gas projects outnumber renewables projects by more than two to one:

- 18 fossil gas infrastructure projects (pipelines, LNG terminals, a power plant, and a compressor station)
- One unconventional fossil gas extraction project
- One pilot green hydrogen power plant project and one hydrogen research centre project
- Eight renewable energy projects (a solar plant, two wind farms, three smart grids, and two battery storage projects).

The dominant share of gas infrastructure among 3SI projects has been reduced somewhat this year. Since the 1st quarter of 2021, the 3SI priority projects list has seen the addition of a wind farm project, a smart grid project, and a battery storage project, while no new gas projects have been added. These recent renewable energy additions give some credence to sentiments expressed by the foreign ministers of Poland and Romania, who wrote ahead of the recent Sofia summit meeting: "The 3SI is part of our response to the need for developing energy, transport, and digital infrastructure that will be more climate-friendly, fully aligned with the goals of the Paris Agreement and the European Green Deal."

The growing significance of 3SI, both in terms of its potential financial muscle and its geopolitical relevance, is borne out further by the likelihood of direct involvement from Japan and Germany. The US-Germany Climate and Energy Partnership announced in July 2021 is particularly relevant. With no explicit mention of developing gas infrastructure, the bilateral partnership includes an emphasis on mobilizing investment in central and eastern Europe for renewable energy and sustainable hydrogen technologies, with the goal of enabling "swift net-zero transitions."

Table 1. Three Seas Initiative priority gas projects

Countries	Project name
Austria, Czech Republic, Poland, Croatia, Hungary, Romania, Slovakia	North-South Gas Corridor expansion
Austria, Hungary, Romania, Slovakia, Slovenia	Gas pipeline capacity increase
Bulgaria, Hungary, Romania	Eastring gas pipeline
Bulgaria, Romania, Hungary, Austria	BRUA gas pipeline
Croatia	Gas compressor station
Croatia	Ionic Adriatic pipeline
Croatia	Krk LNG terminal and connected Omišalj-Zlobin gas pipeline
Estonia	Paldiski LNG terminal
Hungary	Gas power plant
Hungary	Unconventional gas extraction project
Hungary, Slovenia	Gas Interconnection pipeline
Latvia	Skulte LNG terminal
Lithuania	Floating Storage Regasification Unit purchase
Poland	Baltic gas pipeline
Poland	Świnoujście LNG terminal expansion
Poland, Lithuania	Gas Interconnection pipeline
Poland, Slovakia	Gas Interconnection pipeline
Poland, Ukraine	Gas Interconnection pipeline

Source: Three Seas Initiative Priority Projects database

Gas project relics from the past

The dominance of gas on the list of 3SI projects, reflecting planning priorities from previous years, is now directly at odds with decarbonization goals. Of the gas projects in the 3SI database, several of the gas pipelines and two of the LNG terminals (in Estonia and Latvia) are remnant projects that have struggled to attract financing for several years, including via the EU's 'Projects of Common Interest' cross-border infrastructure programme. Initially conceived during the Trump presidency, the current 3SI database of energy projects still reflects the priorities of an administration that withdrew from the Paris Agreement and rebranded fossil fuels as 'molecules of freedom.'

Following 3SI's inception in 2016, the first priority projects were agreed to in 2018 at the 3rd 3SI summit in Bucharest. For the Trump administration, which pledged US$1 billion to 3SI, promoting US LNG imports to the region was the overriding consideration. Addressing the 2nd 3SI summit in Warsaw in person, in 2017, President Donald Trump remarked, "We are sitting on massive energy and we are now exporters of energy. So, if one of you need (sic) energy, just give us a call." A message from Trump to the 3SI summit in Bucharest in 2018 further emphasized the centrality of US LNG exports "to this strategically important region."

The Biden Administration has promised a new stance toward climate change, including the goal of reducing domestic greenhouse gas pollution by 50-52 percent from 2005 levels by 2030, and a winding down of US overseas financing for carbon-intensive activities under the U.S. International Climate Finance Plan, announced in April.

However, to date the US has not announced any measures that would serve to realign 3SI away from its current gas-heavy makeup. President Biden told the Sofia Summit in July, "The United States will be your unfailing partner." The US Development Finance Corporation (DFC) has pledged US$300 million in loans to 3SIIF, and the Export-Import Bank of the United States has also announced its intention to supplement DFC's contribution to the overall US$1 billion pledge. Until the US clarifies that its financial support for 3SI will not be directed toward the support of gas projects, DFC funding will effectively serve to implement the Trump-era promotion of US fracked gas in central and eastern Europe, rather than its own climate mitigation goals. For the Biden administration's own goals to be achieved, US influence—both diplomatic and financial—will need to be applied in support of a shift away from gas infrastructure investments and toward renewable energy infrastructure investments.

The growing case against gas in Europe

Gas is the world's fastest-growing fossil fuel, and the continued expansion of gas infrastructure has been touted by the gas industry as a 'bridge' toward decarbonization. However, the arguments for further gas infrastructure investments as a way to support a clean energy transition are no longer persuasive, for several reasons: (1) the clear need to reduce emissions from gas laid out in the latest IEA decarbonization scenarios and EU decarbonization targets; (2) increased estimates of the carbon footprint of gas due to growing evidence of methane leakage across the supply chain, and; (3) clear evidence that the array of existing gas infrastructure in Europe already exceeds the needed amount.

From a climate perspective, the window for gas consumption is closing, as starkly underlined by the IEA's Net Zero by 2050 report, which identifies the efforts required to limit global warming to 1.5°C. That goal will be undermined if new gas extraction and infrastructure buildout goes ahead. Under its Net Zero Emissions (NZE) scenario, the IEA sees global gas demand rising through 2025, then shrinking to 8% below 2019 levels by 2030. By 2050, global

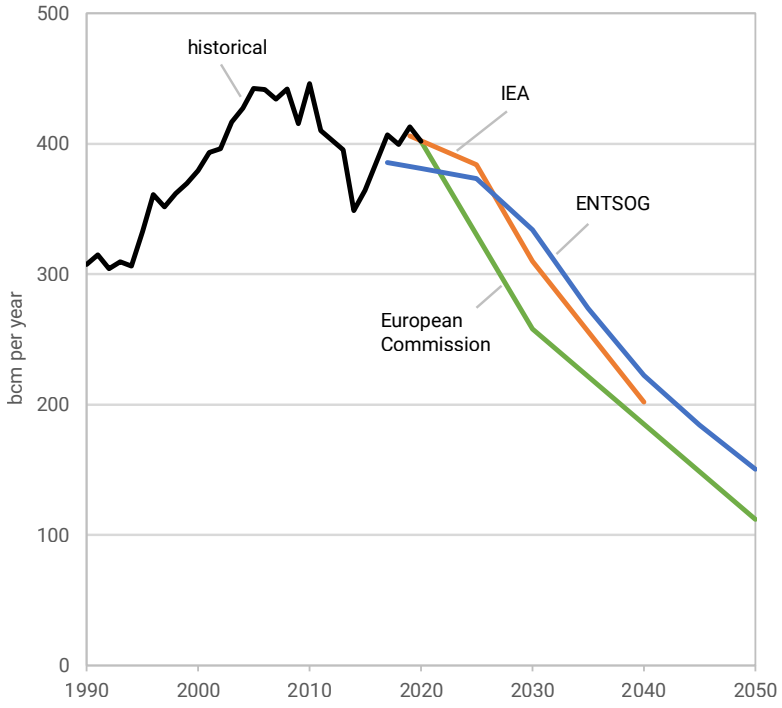
gas consumption has to be 55% lower than today. Between 2020 and 2050, the IEA states that "natural gas traded as LNG falls by 60% and trade by pipeline falls by 65%." "Given the rapid decline of fossil fuels," the report adds, "significant investment in new oil and gas pipelines are not needed in the NZE."

The IEA's timeline for this shift away from fossil fuels includes a milestone for advanced economies to achieve net-zero emissions electricity by 2035. EU member states—including 3SI participants—are also facing legal obligations that conflict with further expansions in gas infrastructure. Under the European Climate Law approved in June, the EU as a whole must cut emissions by 55% by 2030, from 1990 levels, and reduce them to zero by 2050. The implications for gas consumption to achieve the interim 2030 target have been laid out by the European Commission: it will need to decline 36% from 2020 to 2030 across the EU (Figure 1). Low-emission scenarios from the IEA and the European Network of Transmission System Operators for Gas conform closely with the Commission about the need for a sharp decline in EU gas consumption.

Increasing attention, particularly in Europe, is also now being placed on the widespread leakage of methane taking place across gas supply chains from wellhead to end user. As the main component of gas, methane has 82.5 times the warming power of CO_2 over 20 years, or 30 times the warming power of CO_2 over 100 years, according to the latest IPCC report. Extensive methane leakage has typically been associated with the gas systems of the US and Russia. And in seven EU member states, thermographic fieldwork carried out this year by the Clean Air Task Force (CATF) captured 271 methane leakage incidents at more than 150 oil and gas sites. At over 90% of the sites visited in the Czech Republic, Hungary, Poland, Romania – all 3SI countries – and Italy, CATF's infrared camera detected methane leakages.

While methane leakage in the energy sector is not currently regulated by the EU, the European Commission adopted a Methane Strategy in October 2020. Proposed EU laws, not expected to take effect before 2023, are being lined up to compel oil and gas companies to monitor and report methane emissions and to repair leaks. Already the ramifications of this

Figure 1. Low-emissions scenarios for EU27 Gas Consumption



Sources: Historical data: European Commission 2021. Projections: European Commission, the average of three net-zero scenarios that achieve 55% reductions by 2030 (European Commission 2020); IEA: Sustainable Development Scenario (IEA 2020); ENTSOG: Average of two low-emissions scenarios in the Ten Year Network Development Plan 2020 (ENTSOG and ENTSO-E 2020), adjusted to represent EU-27 (excluding the United Kingdom).

tougher EU stance on methane are being felt, particularly in the case of LNG imports. In November 2020, the French government reportedly asked energy company Engie to back out of a US$7 billion, 20-year gas supply deal with NextDecade and its proposed Rio Grande LNG Terminal in Texas, due to concerns about high methane emissions. On the export side, in July 2021 the provincial government of Quebec cancelled the C$14 billion Energie Saguenay LNG Terminal, which its promoters had touted as the cleanest in the world, specifically because the company had not demonstrated the project would bring about a reduction in greenhouse gas emissions, as required under provincial statute. The Canadian terminal's LNG had been destined for import into Germany.

Global Energy Monitor's April 2021 assessment of EU gas pipelines and LNG terminals found that building all the gas infrastructure currently in pre-construction or construction phases would add an estimated 222 bcm/y of net gas import capacity into the EU – an increase of 35%. Such a buildout is not needed, given current overcapacity and the EU's legally mandated goal of a rapid reduction in gas consumption by 2030 and beyond. The 3SI priority gas projects are very much part of this proposed gas buildout that is unnecessary and endangers the climate.

Zombie projects

Most of the gas projects under consideration in the 3SI nations are artifacts of fossil-oriented energy plans that are now in contradiction with national goals. For example, the current national energy and climate planning of Austria, Croatia, the Czech Republic, and Hungary aims to reduce gas consumption by 2030. Nonetheless, these countries are persisting with spending plans involving the potential investment of billions of euros in new gas infrastructure, as described in a December 2020 report commissioned by the Hungarian government into Danube Region countries.

The report authors' interpretation of the "astoundingly long" list of gas projects planned for implementation by 2030 is that long-standing gas projects linger on planning lists as legacies of previous failed efforts to tap European public financing. The chances are, the report observes, that the countries will not ultimately commit to these investments. The tendency for zombie projects to persist in the planning process has relevance for various major gas infrastructure proposals present in the 3SI Priority Projects list.

One of these gas projects—the BRUA gas pipeline, designed to transport gas between Bulgaria, Romania, Hungary and Austria—is estimated to cost €14.55 billion, according to the 3SI website. Since 2014 the project has received over half a billion euros in the shape of EU grants and loans from the European Investment Bank and the European Bank for Reconstruction and Development. Yet BRUA remains unutilized. The 479-kilometer Phase 1 section has been completed but is idle, and the project operator, Transgaz, has started charging Romanian consumers for costs incurred for the pipeline despite it remaining empty. Phase 2 was cancelled in April 2020. Phase 3 is still proposed, but uncertainty over the extraction of Black Sea gas to supply the pipeline hangs over the project as a whole, with major investor ExxonMobil still mulling an exit due to protracted delays.

Similar uncertainty prevails with the Eastring gas pipeline, listed as a €2 billion investment on the 3SI project list. Proposed to run from Slovakia to the Bulgarian-Turkish border via Hungary and Romania, the pipeline appears to be indefinitely postponed despite having received EU grant money for feasibility studies in 2016.

Two proposed LNG import terminals at Paldiski in Estonia and Skulte in Latvia also feature as 3SI priority projects, despite having twice failed to be designated as "projects of common interest" by the

European Commission. One of the justifications for the Paldiski LNG Terminal on the 3SI project database is that "an LNG terminal located in the southern [Lithuanian] border of the future regional gas market would not be able to satisfy the needs of the northern part of the regional gas market." This refers to the existing Klaipėda LNG terminal in Lithuania which imports gas from Norway as well as fracked gas from the US. The need for additional import capacity to serve the Baltic region via the proposed terminals in Estonia and Latvia is questionable. The Klaipėda terminal is persistently underutilized, and the three Baltic states are seeing declining demand for gas, more than in any other region in Europe.

Without a rethink and a clean out of the 3SI priority projects list in line with up-to-date climate change priorities and realistic project rationales, there is a risk that the initiative's boosting of beleaguered gas projects could still see them being built. And if they are built, they would lock in significant greenhouse gas emissions over the coming decades. As it is, these gas projects which are clinging on for potential 3SI support are a distraction from the low-carbon energy infrastructure of the future.

Opportunities for renewable energy

Spending on 3SI infrastructure projects is projected to pick up and increase in the second half of 2021. Whether this will result in a greater emphasis being placed on renewable energy projects remains to be seen. However, following initial 3SIIF investments in the Polish rail sector and Estonian data centres in early 2021, the sealing of the investment vehicle's first energy sector finance deal in May may be an important precursor of changing 3SI energy sector priorities.

3SIIF made a 'significant' equity investment in the Vienna-based renewable energy company Enery Development. The undisclosed capital increase is intended to allow Enery to realise its solar development portfolio of over 2 gigawatts in Romania, Bulgaria, the Czech Republic, Slovakia, and Austria, a clearly beneficial, multi-border investment. Other than being the first 3SI-backed energy sector deal, the additional significance of the Enery investment lies in the fact that this deal had not featured in the 3SI priority projects database prior to its surprise announcement. It may, therefore, point to alternative, renewable energy sector funding priorities at Amber Infrastructure Group, the London-based investment adviser to 3SIIF.

Opportunities abound for renewable energy infrastructure development in central and eastern Europe. Offshore wind development, currently being ramped up by Poland in the Baltic Sea, can be extended to 3SI's other two seas, the Adriatic Sea and Black Sea. Expansion of grid and interconnector infrastructure in the EU, and particularly in the 3SI region, is especially needed to move energy from solar panels and wind turbines to end users. A recent report from WindEurope concluded that the EU as a whole should increase its investments in grids from its current €40 billion per year to between €66 billion and €80 billion per year. WindEurope has also called for greater investments in interconnectors so that EU member states can easily exchange varying flows of renewable electricity. 3SI has the opportunity to deliver here and help bring about sustainable, regional and EU-wide renewable energy security.

Redirecting 3SI away from gas infrastructure and toward infrastructure that will support renewables will require political leadership and investment support. The latest data and country-level energy planning show that the region's renewable energy potential now lies at a crossroads.

Eurostat statistics up to the end of 2019 show that all 3SI countries, with the exception of Poland and Slovakia, have hit or exceeded their 2020 targets under the EU's Renewable Energy Directive for the

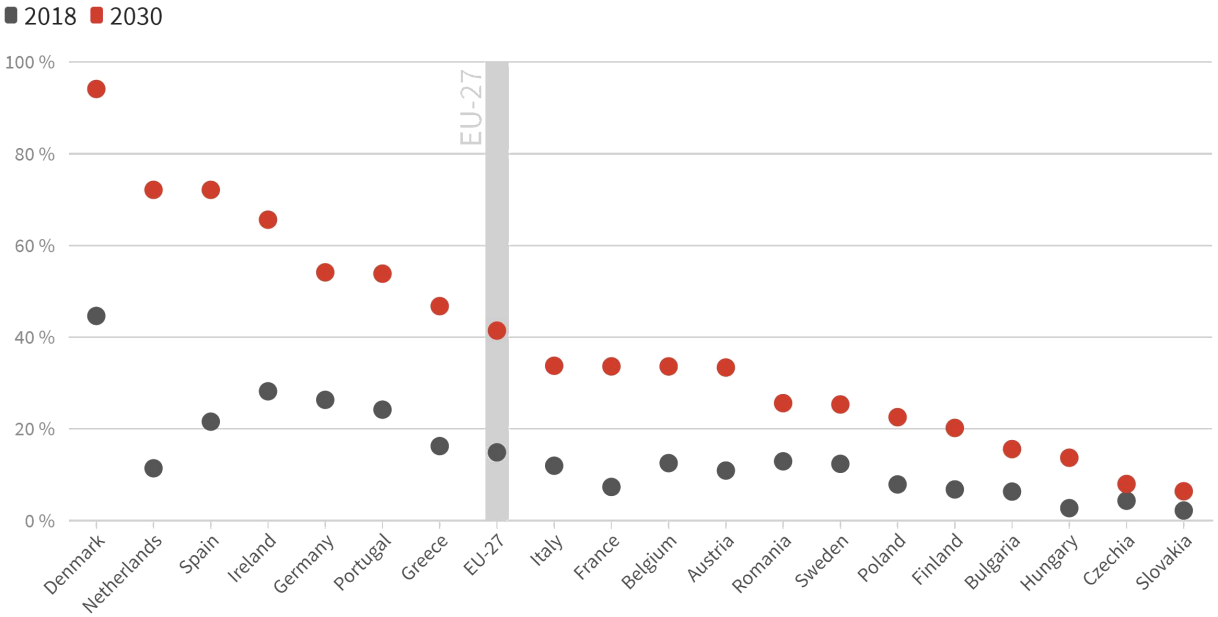
share of renewable energies in gross final energy consumption. Although most of the targets for the central and eastern European member states were set below the EU average of 20%, the evidence suggests that renewable energy rollout in these countries has been advancing. The forthcoming challenge, requiring both substantial further investment and decisive policy support, will be for the 3SI states to contribute to meeting the stiffer 2030 renewables target which the European Commission now views as essential to deliver a 55% reduction in EU greenhouse gas emissions. The EU-wide renewables target under the 2030 Energy and Climate Framework is currently 32%, and the Commission's recently published 'Fit for 55' proposals seek to further raise the 2030 target to 40%.

Analysis of EU member state National Energy & Climate Plans (NECPs) by the energy think tank Ember has found that plans for deploying renewables-based power through 2030 in central and eastern European are largely lagging behind the rest of the EU. Wind or solar energy are now the cheapest options for electricity generation across most countries in the world. And yet, unambitious planning in central and eastern Europe is on track to keep electricity derived from clean sources a minor element in the energy mix of most of the 3SI countries.

Looking into the individual NECPs, Ember found this lack of ambition to be most acute in Bulgaria, the Czech Republic, and Romania. These 3SI countries show a slowdown in the deployment of renewable electricity through 2030. Over the same period, other 3SI countries are proposing to scale up their deployment of renewables. With the costs of wind and solar energy expected to continue falling sharply over the next decades, a greater 3SI emphasis now on renewable energy investments would be a shrewd way to ensure that the region—and its people and businesses—does not get left behind.

There is an opportunity for the political and funding influence of all 3SI partners to have a major positive impact in line with EU and overall global

Figure 2. Wind and solar remain a minor part of the electricity mix in 2030 across eastern Europe



Source: Ember, "Vision or Division? What NECPs tell us about the EU power sector in 2030," November 9, 2020.

climate goals—both to catalyse far greater renewables deployment in currently unambitious country planning, and to support those countries which are foreseeing renewables growth in their energy planning. Without a significant shift away from the promotion of gas investments, though, the currently marginal 3SI planned support for renewable energy will be insufficient, amounting to little more than building castles in the sand.

About Global Energy Monitor

Global Energy Monitor is a nonprofit research organization developing information on fossil fuel projects worldwide. GEM data is used by the International Energy Agency (IEA), OECD Environment Directorate, UN Environment Programme, U.S. Treasury Department, World Bank, Economist Intelligence Unit, and Bloomberg New Energy Finance. GEM data is also licensed by Bloomberg LP and UBS Evidence Lab.