

LNG: THE LIQUID PATH TO CLIMATE CHAOS

10 reasons why liquified fossil gas is the wrong choice for Europe

WARNING

'Liquefied Natural Gas' (LNG) has been thrown into the spotlight. The cost of fossil gas has been rising since 2021 and the horrific invasion of Ukraine by Russian troops has forced governments to grapple with how to end Europe's fossil fuel dependency on Russia. Together with the need to get off fossil fuels as soon as possible in order to mitigate the impacts of climate change and keep global warming to below 1.5°C, these realities have created a buzz around LNG. But what is LNG, and why does it matter? This briefing looks to raise the alarm bell around the roll out of LNG across Europe as an attempt to tackle energy security concerns. It will put forward ten key arguments that showcase the host of problems LNG brings.

But first, an explanation of what LNG actually is.

LNG simply refers to fossil gas which is transported not through pipelines in a gaseous form, but which is chilled to minus 162°C in order to be liquefied and transported large distances by ships.

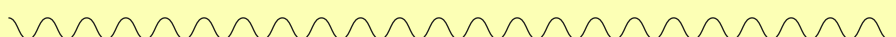
This means that when we talk about LNG in Europe, we are talking about gas that is extracted, converted into liquid form, shipped across an ocean, converted back into gaseous form, then pumped through the European gas grid to eventually heat and cool homes, and power industry activities.

These **LNG imports made up 20.5% of Europe's fossil gas consumption in 2021¹** and with pressure to end imports of Russian gas, governments are looking to LNG from non-Russian sources to meet demand.

Moves to get off Russian gas are necessary and urgent to help end the war in Ukraine by reducing the income Putin has for his war machine. Yet, **we must also be cautious of letting short-term energy supply concerns lock Europe into long-term, costly deals that trap consumers into more dirty fossil fuel infrastructure and energy dependencies in the future.**

Long-term fossil gas use is incompatible with a safe climate and this needs to be the turning point when Europe moves away from fossil fuels once and for all.

This briefing provides counterarguments to the overinflated role that LNG is being positioned to have in Europe's energy future, and shows instead that this is a dangerous distraction from the just energy transition to renewables that is so desperately needed.



LNG WILL NOT FIX EUROPE'S FOSSIL FUEL DEPENDENCY

In an attempt to get off Russian fossil fuels, Europe is looking to import gas from elsewhere. Yet, diversifying LNG sources simply replaces one fossil fuel dependency with another.

Countries like the United States (U.S.), Nigeria, Qatar and Algeria are being suggested as key fossil gas suppliers for Europe. Increased dependency on these countries for energy simply gets the continent hooked on other fossil energy providers rather than bringing energy autonomy to Europe. Moreover, the threat of Europe exporting its energy insecurity to other countries is also a concern - European countries will have to out-bid others to gain access to new gas supplies and contracts, essentially pricing out other countries and placing them in energy precarity instead². Alternatively, a European Union (EU) with decreased fossil gas use, far further along in a phase-out of this fossil fuel, would be in a much better position already today to become energy independent through clean, affordable, and fair solutions - not only reducing energy dependency concerns, but helping mitigate climate change too. Europe needs to move away from LNG altogether, not lock in new supply chains.

Talk of diversification of gas supplies has been high on the EU agenda for years, precisely after the Ukraine-Russia gas crises of 2006, 2009 and the annexation of Crimea in 2014. Yet, despite billions of euros being invested

into more pipelines and LNG import terminals to enable non-Russian gas flows to Europe, **the share of Russian gas in the EU's gas mix has actually increased in the past decade^{3,1}**, and dependency on gas has deepened.

Beyond the pipelines that bring gas into Europe from Russia, Gazprom, Russia's majority state-owned gas corporation, also became one of the most significant LNG suppliers to the EU. With high LNG prices and comparably cheaper supply of both gas and LNG from Russia, Europe has consistently turned to the cheapest available gas source, locking itself into a deep dependency on fossil fuels from a country that sparks war, using fossil fuel profits to fuel it. **The low cost of Russian gas supplies is critical, as it could lock Europe back into these imports in the future as long as Europe remains reliant on LNG.** If Europe reaches out for more LNG in the short-term, it risks enabling a situation in which in the future, cheap Russian gas will flow again or continue to flow into Europe, taking us right back to square one. So far there has been no overall plan or legal arrangement presented to decommission pipelines from Russia or permanently block Russian LNG flows, leaving this possibility open.



POINT 02

NEW LNG WON'T ADDRESS THE ENERGY CRISIS NOW AND WILL DELAY A JUST TRANSITION

Calls for new LNG infrastructure will not start providing gas in the immediate future.

New LNG projects are being presented as a quick fix to the looming gas supply crisis, particularly if either the EU or Russia closes the fossil gas tap. However, **calls for new LNG infrastructure will not start providing gas in the immediate future⁴**. LNG terminals take years to build and become operational. On average, the building of LNG export terminals in the U.S. takes three to five years after the final investment decision⁵. **This timeline does nothing to address Europe's short-term energy constraints, and instead takes us further away from a clean energy transition.** In addition, LNG terminals and pipelines have traditionally, despite priority status and subsidies, been rescheduled and repeatedly delayed^{6,7}, while some have swallowed millions of euros before being shelved^{8,9}. LNG has not proved to be a quick solution to diversifying Europe's fossil gas demand in the past - the same mistake should not be made again.

All of this totals billions of euros being spent on fossil fuels. **Each euro spent on fossil gas means a euro less for the transition to renewables.** EU consumers, and taxpayer money, such as funds in the EU's Connecting Europe Facility, available in the EU Recovery plan or through the EU's Cohesion policy, would be much better spent on clean, fair, affordable solutions that genuinely deliver energy security and sovereignty for Europe, as well as helping mitigate climate change. Further, **each percent of energy saving achieved can help cut EU gas imports by 2.6%¹⁰**. This is gas the EU will "never" have to import anymore!

HYDROGEN IS ALSO NOT A SOLUTION

The discussion around LNG infrastructure inevitably brings with it the mention of hydrogen. Many decision makers claim that LNG terminals and gas pipelines can easily be used for hydrogen at a later stage, attempting to address the concern that a fossil gas build-out will create costly stranded assets in the future when we are meant to be running only on clean energy.

The concept of "hydrogen-ready" pipes and terminals is however misleading. Not only does this terminology give legitimacy to the gas industry to keep expanding fossil gas activities, then fossil gas fuelled hydrogen activities, and then eventually renewable fed hydrogen activities... but experts claim that turning an LNG import terminal into a hydrogen receiving terminal is likely impossible^{11,12}. Further, while it is technically possible to adapt fossil gas pipelines to transport hydrogen,

this endeavour risks failure in many cases. Hydrogen is a much smaller molecule with different pressure and material requirements, and if the gas pipes aren't built accordingly, the hydrogen can easily leak. Additionally, the locations of green hydrogen generation and consumption likely differ greatly from locations where fossil gas is extracted and consumed today, making a direct infrastructure switch unlikely. Plus, there will probably be a far smaller number of hydrogen consumers in the future, resulting in an oversized infrastructure system if the current gas grid were to be replaced with hydrogen.

A hydrogen future is widely supported by the fossil gas industry¹³ and comes with a host of uncertainties. It must not be used as an excuse to supersize Europe's gas grid with pipes and terminals that have little to no use for hydrogen in the future.

MORE LNG MEANS A LOCK-IN TO FOSSIL GAS AND MORE FOSSIL FUEL INFRASTRUCTURE

Viewing LNG as a mid- or even long-term solution, and listening to advice from the fossil fuel industry chorus calling for LNG¹⁴, risks unleashing a veritable cascade of costly fossil infrastructure lock-in.

Banking on more LNG will be used to justify a build-out of export infrastructure¹⁵ in the form of both pipelines and liquefaction terminals, as well as import infrastructure in the form of floating and onshore LNG regasification terminals. The fossil gas transport industry has already started calling for an increase of pipeline capacities across the EU to transport the gas imported as LNG (e.g. in the case of the MidCat pipeline¹⁶). Reverse flow projects to transport gas from the West of Europe, where most LNG terminals are currently located, to the East of Europe are also being promoted by the industry. Building this infrastructure is not only very costly, but is also likely to take years before becoming operational, with actual need for it being more than questionable.

The 2022 Europe Gas Tracker Report⁷ identifies 26 proposed LNG import terminals adding a capacity of over 100 billion cubic metres of LNG annually. This estimate doesn't even include plans for some floating terminals which have been rumoured. Several LNG projects in Germany like Brunsbüttel LNG and Wilhelmshaven LNG, Italy with Porto Empedocle LNG, or Poland with the expansion of Swinoujscie LNG terminal and the construction of the new Gdansk LNG, or Eemshaven LNG in the Netherlands have either been pulled out from dusty shelves or newly proposed in the past months. With more political will

to move Europe away from Russian gas and together with EU climate commitments, it is clear that **overall EU fossil gas demand must and will inevitably decline**⁷. A host of fossil gas infrastructure built now will lock Europeans to volatile gas prices and force them to pay the bill for a super-sized grid even more expensive to operate and maintain.

Beyond the calls for new infrastructure, there have also been calls to increase LNG imports to Europe through new contractual agreements with suppliers - bringing increased LNG imports from current providers, or bringing in new LNG supplies to Europe. Yet, new LNG deals that lock us into long-term contracts must be seriously questioned. **A decision to treat Europe's current energy insecurity with large amounts of LNG risks creating dangerous long-term lock-ins.** In order to make it attractive to expand LNG capacities, **suppliers might negotiate supply contracts for a duration of 10 or even 20 to 25 years**¹⁷ and a multi-billion gas supply bill. Fossil gas proponent Gas Infrastructure Europe (GIE) for example, was quick to launch a call for long-term LNG contracts¹⁴ to take advantage of Europe's current energy insecurity. However, even before the energy price scandal, LNG was more expensive than pipeline fossil gas, and the cost of a lock-in to fossil fuels through the construction of LNG import terminals and pipelines will increase

this bill considerably. A lock-in of fossil gas now means a pathway for even more fossil fuel infrastructure in the future, a move that would be completely incompatible with Europe's climate commitments and the United Nations Paris Agreement.



Talking about the revival of a fossil project, dead and buried years ago by territorial mobilization and environmental activism is one of the worst nightmares of any climate activist. MidCat, a gas pipeline that would link Catalonia and the French Midi, is not a solution in the short term, as its development would take between 3 to 6 years, and in the best case scenario in 2025 it would be capable of transporting less than 5% of the current demand for Russian gas, and 2.2% of the total gas demand in the EU. Also green hydrogen - which the industry promises will be flowing through MidCat in the future, cannot become a false pretext that strengthens the role of fossil gas and investment in more unnecessary infrastructure.

MARINA GROS BRETO
Ecologistas en Acción





POINT 04

LNG IS BAD FOR THE CLIMATE

The climate is changing as a result of human extraction and exploitation of the planet for its resources. The latest IPCC report demands rapid global emissions reductions in this decade in order to avoid exacerbated climate change¹⁸ and this means completely reimagining current energy systems to plan a just transition that takes the world away from fossil fuels.

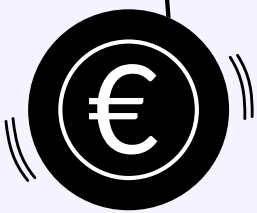
LNG is fossil gas, and gas in all its forms is made of methane, a dangerous greenhouse gas that is 86 times more damaging than carbon dioxide over a timescale of 20 years¹⁹. And if that's not bad enough, gas also releases carbon dioxide when combusted, contributing to long-term pollution of the planet²⁰. In January 2022 alone, Europe imported 8.1 million tonnes of LNG, leading to emissions worth 46 million tonnes of carbon dioxide which is the equivalent of a year of emissions from 10.5 coal fired power plants^{21,22}.

LNG is particularly bad for the climate due to its long, complex supply chain, which means more opportunities to leak these dangerous greenhouse gases. The liquefaction process is considered to be the part of the process most prone to methane leaks and emissions, followed closely by LNG carrier transport²³. Additionally, because a lot of LNG imports to Europe carry fracked gas - one of the most polluting and harmful ways to extract gas - this makes LNG

especially polluting. Recent infrared images actually showed methane being released from supposedly 'green' LNG ships²⁴, supporting recent findings that methane leakage is much worse than previously suspected²⁵, or severely underreported like in the Gulf States - where Europe is looking for potential new LNG supplies²⁶. Investing in more LNG now, means increasing Europe's share of dangerous greenhouse gas emissions, supporting the exact opposite to what we need to mitigate catastrophic climate change.

Moreover, governments are ill-equipped to deal with these methane emissions. There is still very little knowledge about the sheer size of the problem - methane emissions are regularly found to be underestimated and the IEA found that energy related methane emissions are 70% higher than reported²⁷. If unchecked, LNG will continue to make Europe culpable for dangerous greenhouse gas emissions we are not even aware of today.

POINT 05



LNG DOESN'T SERVE THE ENERGY POOR

From 2019 to 2021 the EU wholesale price of fossil gas increased on average by over 400%²⁸. In the same period the wholesale cost of electricity went up by 200% on average because Europe's electricity markets are priced on the basis of their most expensive power source.

This spike in cost came as a result of several factors that were supply, COVID-19, and weather related. What it meant was **huge bills for energy consumers across the continent, and the poorest in Europe feel this volatile pricing the most, as their energy bills tend to make up the largest proportion of their monthly outgoings²⁹**. For those vulnerable households left to pay the price for Europe's fossil fuel addiction, protections like a ban on disconnections, windfall taxes and an energy price cap are crucial steps to shield these groups in the short-term³⁰.

New LNG infrastructure will do nothing to tackle the rising cost of energy for consumers in Europe right now. Yet, the gas industry is trying to sell fossil gas as a solution to energy poverty, rolling out fossil gas boilers in homes, **locking people into fossil fuel infrastructure for at least 15-20 years**. With a regressive Emission Trading Scheme to buildings and transport proposed, and with renewables becoming increasingly more affordable, this could mean poor households are literally left to pay the price for our energy transition. The gas industry has neglected to protect the energy poor in the past and looks set to actually make things worse for the energy vulnerable

by locking them into yet more fossil gas. **A mad-dash for LNG could legitimise the gas industry's attempts to lock the energy poor into fossil fuels**, serving no one but the industries bottom line. The transition to clean, fair and affordable energy must be just; this means leaving no one behind as we transform our energy systems for the benefit of both people and the planet.

Moreover, Europe was already failing to meet the energy needs of its citizens before this price surge. **Gas has proven to be an unreliable, and expensive source of energy, and therefore is not meeting the energy needs of Europeans**. In 2019, it was estimated that 1 in 4 households, that's over 50 million individuals in Europe, could not afford to adequately heat, cool, or light their homes³¹, a figure set to drastically increase with new price constraints. Meanwhile the EU and UK's fossil gas supply bill amounted to €75-100 billion every year³². And the EU gas import bill in 2021 alone amounted to over €120 billion, up from under €40 billion in the year 2020¹. This means hundreds of billions flowing to the fossil fuel industry for gas imports, instead of paying for solutions that prioritise the energy poor and a just energy transition.



It has never been clearer: our fossil fuel dominated energy system has failed people and planet. LNG does nothing but slow down real solutions to tackle energy poverty such as subsidised renovations and renewable schemes which are desperately needed across Europe. It's time to shift power (literally) to the people, away from fossil gas giants to subsidise renewables for those living in energy poverty. This will change the narrative from passive victims locked into fossil fuels to active consumers of clean, affordable energy.

MARTHA MYERS
Energy Poverty Campaigner,
Friends of the Earth Europe



POINT 06

LNG WILL CONTINUE TO BRING SOARING PROFITS TO THE FOSSIL FUEL INDUSTRY

The rise in the cost of gas, and subsequently electricity, has put millions across Europe under significant financial strain. However, not everyone in Europe is struggling, some are profiting. Namely the fossil fuel industry and energy providers.

The varying supply constraints have made gas a hot commodity, and that has pushed the prices up, resulting in **major profits for the fossil fuel industry**. Between July and September 2021, as gas prices started to rise, the top 20 gas producers in the world took in profits of \$65 billion³³. In the U.S. it's predicted that the upstream oil and gas industry could collect a windfall between \$37 and \$126 billion in 2022 alone³⁴.

And that's just the profits that come as a direct result of the rising price of fossil gas. **The industry will continue to profit if governments prescribe more gas infrastructure as a solution to the current energy challenges**. If industry can lock governments into long-term supply contracts, they can ensure financing for their dirty fossil fuels for years to come. Notably, with the current strain on energy supplies, the

cost of fossil gas has gone up worldwide, and countries will help drive up the costs further as they bid to access this limited resource - all the while making it more profitable for the industry.

The fossil fuel industry lied about the contribution they made to climate change^{35,36} delaying the transition to real solutions, and they continue to delay, distract and water down policy in Europe that seeks to deliver a green energy transition¹³. Continued profits in the fossil fuel sector means continued support for an energy system that is fuelling the climate crisis. Europe is not taking climate action seriously if it allows the fossil fuel industry to get mega-rich right now, and takes decisions to ensure it will continue to profit in the future. All the while, the climate crisis worsens, and a liveable future gets further out of reach.

POINT 07



LNG BOOSTS FRACKING: A DISASTER FOR OUR HEALTH & ENVIRONMENT



Fossil gas can be extracted in two ways. The first is referred to as conventional extraction and this involves pumping gas out of natural wells under the rock or in the seabed. The second form of extraction is often called unconventional, it is even more environmentally (and climate) damaging and mainly known as fracking.

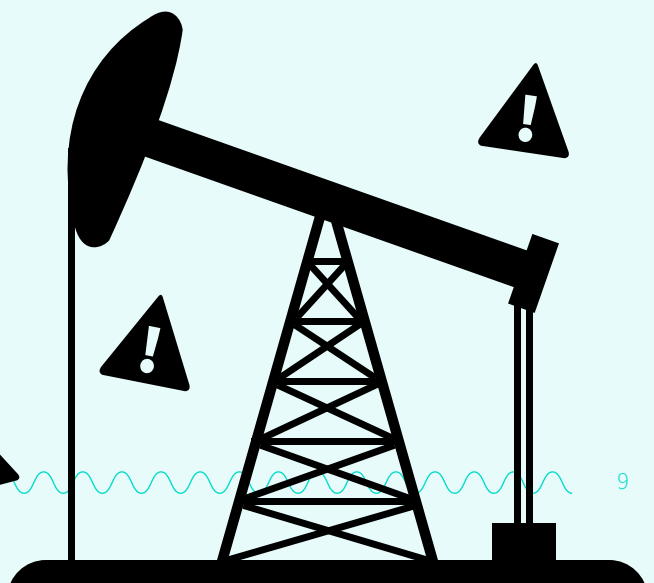
Fracking is a brutal, destructive extraction method that involves injecting large amounts of water mixed with chemicals into geological formations. Research shows that **fracking contaminates water, pollutes air, threatens public health, causes earthquakes, harms local economies and decreases property values**³⁷. Fracking and gas infrastructure disproportionately impacts lower income communities as well as Communities of colour³⁸ and indigenous groups³⁹. Chemicals - including “forever-chemicals” used in the fracking process⁴⁰ have been proven to cause serious health impacts in affected communities, ranging from headaches, nausea, asthma, pneumonia or skin problems to cancers or birth defects⁴¹. Much of the imported LNG coming into Europe is fracked gas - a disaster for the climate as well as our health and the environment.

The U.S. is currently Europe's main supplier of LNG, and with leaders of both the EU and U.S. confirming in a joint statement their intent to ship an additional 50 billion cubic metres of LNG to Europe by 2030⁴², the role of U.S. LNG is set to become even more important in the coming years - an alarming reality given that U.S. LNG exported to Europe is almost entirely fracked gas⁴³. **Locking in imports of damaging LNG makes Europe an accomplice to a system that inflicts harm to communities and destroys the environment elsewhere to meet a hunger for fossil fuels in Europe.**



The Biden Administration and the EU are preparing to give the fossil fuel industry a greenlight to transform the Gulf Coast into a ‘sacrifice zone’ for fracked gas. In Port Arthur, Texas, and other Gulf Coast cities, we’ve suffered decades of pollution, with extreme health risks of cancer, heart and lung diseases. We bear the burden, and receive no benefits; no jobs, business or enhanced quality of life. We will fight back, we will no longer be sacrificed to big oil and gas.

JOHN BEARD, PORT ARTHUR
Community Action Network





POINT 08


LNG FUELS CONFLICT

The connections between fossil fuels and war have been made abundantly clear to Europe in light of the Russian invasion of Ukraine. With Russia providing 40% of Europe's imported gas, that is a significant amount of money going into the pockets of a regime that is raging a war against Ukraine.

Because Europe is so dependent on Russia for gas, it has put EU governments in a difficult position - how can they end gas imports to help squeeze Russia financially in an act that could help end the war sooner rather than later while also meeting the energy needs of Europeans? Fossil fuels have proven to lie at the heart of this conflict and this is unfortunately not the only example of the role dirty energy plays in fuelling violence.

LNG terminals and gas pipelines have played a role in fuelling unrest, human rights abuses, violence and even war. Foreign financing of gas infrastructure is responsible for endorsing corrupt governance and abhorrent working conditions in other countries, and


has been doing this for decades. For example, Qatar, which was the world's and Europe's largest LNG supplier, has a track record of human rights abuses and a worrying lack of transparency on the impacts of the large-scale gas extraction being carried out in the country⁴⁴. In Mozambique there was a surge in violent attacks on communities inhabiting the region mapped out for LNG infrastructure, people were displaced, women abused and abducted, and extremist armed groups became prevalent - many communities believe the gas industry to be responsible⁴⁵. The result has been increased violence and instability in the area, and a highly securitised military presence in the region⁴⁶.



It is increasingly evident that the construction of an LNG terminal and gas extraction in Cyprus has fuelled conflict in the Eastern Mediterranean. Turkey, Greece, Israel, Egypt, and Cyprus' claims over offshore natural gas deposits in the Mediterranean Sea have led to naval standoffs between Greece and Turkey — including a “mini-collision”⁴⁷ between ships in 2020. We have been anxiously watching warships around our waters brought by the exploration and exploitation of fossil gas. We were promised peace and stability, but instead reality confirms threats and conflict. What's more, the LNG terminal in Cyprus (connecting the 'EastMed' pipeline) will be built in the traditionally Turkish Cypriot village Mari. A village that was already displaced and that intimately knows the dangers of being used as a site for the storage of dangerous materials, as it was the site of a deadly explosion that killed 13 Greek Cypriots in 2011. This is egregious environmental racism which undermines future cooperation, sets the stage for future conflict, and continues to defer peace for our island.

JOSEF BORAEI & NIKOLAS MICHAEL

Climate Activists from AVL I initiative in Cyprus



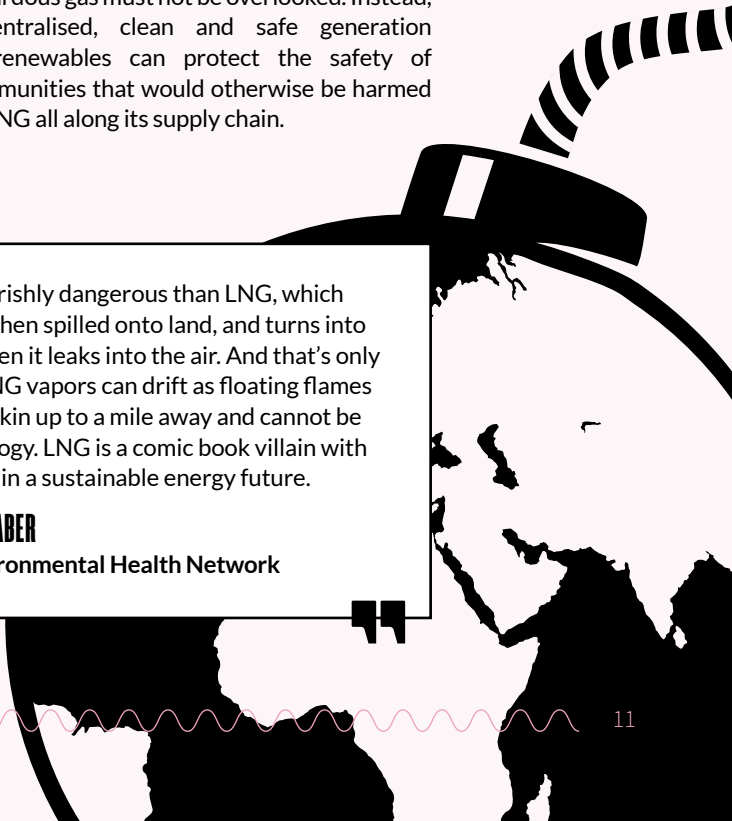
LNG IS DANGEROUS

**The Compendium of Scientific, Medical, and Media Findings
Demonstrating Risks and Harms of Fracking states that “LNG facilities
create acute security, public safety, and climate threats”³⁹.**

While the Compendium mainly describes hazards linked to export terminals, with dramatic potential effects on those affected in supply countries, LNG shipped to Europe in vessels and regasified in import terminals also comes with considerable safety risks. “If ignited at the source, LNG vapours can become flaming “pool fires” that burn hotter than other fuels and cannot be extinguished. LNG fires burn hot enough to cause second-degree burns on exposed skin up to a mile away. LNG facilities pose significant risks to nearby population centers and have been identified as potential terrorist targets.”³⁹ In addition, the European Commission’s Joint Research Centre assesses a number of accidents at LNG facilities and studies on incidents, finding that “[a]cross these studies, experts have generally agreed that LNG remains a high hazard substance”⁴⁸. In the past decades, several serious accidents directly related to LNG occurred at LNG terminals. For example, an accident in 2014 at an LNG storage plant in the U.S. (Washington state) led to a number of workers injured, hundreds of people evacuated and heavy items catapulted several hundreds of metres in a forceful explosion⁴⁹.

An accident at an LNG terminal in Algeria in 2004 killed 27 and injured 74⁵⁰. Many times, things go right with LNG, but in many of the incidents where something went wrong, the consequences were disastrous.

The hazards associated with LNG are particularly dangerous when plans for new LNG import terminals are proposed near or in densely populated areas, such as the Bratislava LNG terminal⁵¹. This proposal would require LNG vessels to pass close to several major cities when supplying the terminal with gas via waterways. Particularly in the context of discussions around accelerated construction of LNG import infrastructure across Europe and countries rushing to revive shelved LNG terminal plans, safety considerations and the implications of centralised fossil fuel import infrastructure, aggregating large amounts of a hazardous gas must not be overlooked. Instead, decentralised, clean and safe generation of renewables can protect the safety of communities that would otherwise be harmed by LNG all along its supply chain.



It’s hard to imagine a fossil fuel more nightmarishly dangerous than LNG, which explodes when spilled into water, asphyxiates when spilled onto land, and turns into odorless clouds that flash-freeze human flesh when it leaks into the air. And that’s only if it never catches fire. If ignited at the source, LNG vapors can drift as floating flames that burn hot enough to singe exposed human skin up to a mile away and cannot be extinguished by any known fire-fighting technology. LNG is a comic book villain with many evil superpowers and no role to play in a sustainable energy future.

SANDRA STEINGRABER

PhD, Senior Scientist, Science and Environmental Health Network



LNG IS A DISTRACTION – PROVEN SOLUTIONS EXIST TO GET OFF GAS

New research suggests that we can get off Russian gas by 2025 without the need for any new infrastructure⁵², which makes you wonder just how fast we could get away from the rest of the gas if governments mobilised the money and resources right now?

With more political will to mobilise the money needed to fund the transition, we could deliver on the European Green Deal targets even faster than imagined.

We need to start by pouring investments into renewables like solar, wind, go all in for direct electrification and renewable heat through heat pumps. This will not only make renewables more affordable, but will help to get them rolled out across the continent at the pace needed to kick our fossil fuel addiction. A large share of fossil gas imports today are used for space and water heating, both for residential and commercial use. For these energy needs, there are ready, clean solutions at hand. What's more, electrifying these uses will significantly reduce overall energy demand for heating⁵³ and boost resilience, efficiency, affordability and autonomy. Imagine if we switched out LNG ships from the U.S. with "boatloads of high-efficiency electrical appliances and heat pumps [for] Europe" and "wind turbines, PV electrical components and battery storage systems," as U.S. scientists suggest⁵³, at least to address short-term bottlenecks. **Renewables will deliver energy independence for Europe, and with community energy initiatives, can place the power of energy generation directly into the**

hands of citizens. Plus, as an important added bonus, they don't fry the planet.

Europe can reduce the amount of energy needed by drastically improving the building stock and rolling out energy efficiency measures – this will help manage the increased demand for renewables, and also improve living quality for many Europeans. Renovations can help to make our energy usage more efficient, helping to drive down the need for fossil fuels in the short and long-term, and helping with the transition to clean energy. This will have to go hand in hand with demand reduction, as we start to think smarter about our energy needs, and seriously clean up our energy waste.

We can shake up our energy systems. A just transition is possible, in which **the rich do not have to keep getting richer, and the poor do not have to keep getting poorer**. It requires bold government action and an engaged and energised civil society. But it is possible, the pathway exists, and the resources and capital are out there.



Prioritising local citizen and community ownership of renewable energy production and supply is not just about social innovation but also a matter of security of supply. Ecopower, a citizen-owned and controlled energy community energy supplier in the Belgian region of Flanders, shows us what is possible. It supplies 2% of all households in Flanders and offers the cheapest supply of electricity in the region. Why? Because the cooperative, and hence its members, own all the local renewable energy they need to supply their electricity needs. Interestingly, Ecopower just turned 30 years old. Why is that significant? Because we are just under 30 years until 2050.

We need to be prioritising more Ecopowers in Europe, not new LNG bridges to nowhere.

JOSH ROBERTS

Senior Policy Advisor at REScoop.eu



END NOTES

- 1** Quarterly report on European gas markets (Q4 2021), European Commission, 2022. https://energy.ec.europa.eu/system/files/2022-04/Quarterly%20report%20on%20European%20gas%20markets_Q4%202021.pdf
- 2** There's not enough gas to go around, Seb Kennedy, Energy Flux, 2022. <https://www.energyflux.news/p/theres-not-enough-gas-to-go-around?s=r>
- 3** Presentation on European Gas Demand & Source of Supply, Gazprom, 2017. <https://www.entsog.eu/sites/default/files/entsog-migration/publications/Events/2017/tyndp/2017.12.07%20Presentation%20ENTSOG.pdf>
- 4** LNG Regasification Terminal Construction, ESF Investment Group. <https://esfcompany.com/en/services/lng-regasification-terminals/lng-regasification-terminal-construction/>
- 5** How Long Does it Take to Build an LNG Export Terminal in the United States? Global Energy Monitor, 2022. <https://globalenergymonitor.org/wp-content/uploads/2022/04/GEM-Briefing-LNG-Terminal-Development-Timelines.pdf>
- 6** Consolidated report on the progress of electricity and gas Projects of Common Interest, ACER, 2021. https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/2021_ACER%20Consolidated%20Report%20on%20the%20progress%20of%20electricity%20and%20gas%20Projects%20of%20Common%20Interest.pdf
- 7** Europe Gas Tracker Report, Global Energy Monitor, 2022. https://globalenergymonitor.org/wp-content/uploads/2022/04/EUGasReport2022_final.pdf
- 8** El Musel: The regasification plant in hibernation due to excessive gas infrastructure, Gas: los excesos de un sistema que pagas en la factura, ElDiario & Ballena Blanca. https://especiales.eldiario.es/los_excesos_del_gas/pagina2.html
- 9** New blow for Irish LNG as plans shelved for floating terminal at Cork, S&P Global Commodity Insights, 2021. <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/natural-gas/011421-new-blow-for-irish-lng-as-plans-shelved-for-floating-terminal-at-cork>
- 10** Energy Efficiency and its contribution to energy security and the 2030 Framework for climate and energy policy, European Commission, 2014. https://ec.europa.eu/energy/sites/ener/files/documents/2014_eec_communication_adopted_0.pdf
- 11** Tweet by Keith D Patch, independent engineer, 2022. "Hydrogen liquefaction in a natgas liquefaction plant is technically impossible." <https://twitter.com/KeithDPatch/status/1501550997046448134>
- 12** High need for gas grid transformation to wean Europe off Russian supply – researchers, Clean Energy Wire, 2022. <https://www.cleanenergywire.org/news/high-need-gas-grid-transformation-wean-europe-russian-supply-researchers>
- 13** The Hydrogen Hype: Gas industry fairy tale or climate horror story? Corporate Europe Observatory, Food & Water Action Europe, Re:Common, 2020. https://www.foodandwatereurope.org/wp-content/uploads/2020/12/HydrogenHype_Report2020.pdf
- 14** Event recording: Eurogas "Let's meet" April 2022, see intervention from Gas Infrastructure Europe at 44:50. <https://eurogas.org/event/eurogas-lets-meet-repowereu-where-should-the-gas-sector-be-going/>
- 15** Dangerous Gibbstown LNG Project Isn't Dead Yet, Food & Water Watch, 2022. <https://www.foodandwaterwatch.org/2022/04/05/dangerous-gibbstown-lng-project-isnt-dead-yet/>
- 16** Spain's Gas Pipeline Operator Calls for New Link With France, Bloomberg, 2022. <https://www.bloomberg.com/news/articles/2022-04-05/spain-s-gas-pipeline-operator-calls-for-new-link-with-france>
- 17** The Global LNG Market and Long-Term Contracts – A Barrier to Net-Zero 2050, Energy Tracker, 2022. <https://energytracker.asia/the-global-lng-market-and-long-term-contracts-a-barrier-to-net-zero-2050/#:~:text=Covid%2D19%20Pandemic%20and%20the%20LNG%20Industry&text=Today%2C%20the%20norm%20for%20long,contract%20length%20isn%27t%20everything>
- 18** IPCC Sixth Assessment Report, 2022. <https://www.ipcc.ch/report/ar6/wg3/>
- 19** A bridge to nowhere: methane emissions and the greenhouse gas footprint of natural gas, Robert W Howarth, Cornell University, 2014. http://www.eeb.cornell.edu/howarth/publications/Howarth_2014_ESE_methane_emissions.pdf
- 20** Carbon Dioxide Emissions Coefficients, US Energy Information Administration, 2021. https://www.eia.gov/environment/emissions/co2_vol_mass.php
- 21** Infographic - LNG imports and emissions, Food & Water Action Europe, 2022. <https://twitter.com/FoodWaterEurope/status/1508822909481103365>
- 22** Zahl der Woche / 8,1 Millionen Tonnen LNG wurden im Januar 2022 nach Europa importiert, BDEW Bundesverband der Energie- und Wasserwirtschaft, 2022. <https://www.bdew.de/presse/presseinformationen/zahl-der-woche-81-millionen-tonnen-lng/#:~:text=Im%20Januar%202022%20haben%20die,davon%2026%20in%20der%20EU>
- 23** Life cycle greenhouse gas perspective on exporting liquefied natural gas from the United States, National Energy Technology Laboratory, 2019. <https://www.energy.gov/sites/prod/files/2019/09/f66/2019%20NETL%20LCA-GHG%20Report.pdf>
- 24** Methane escaping from 'green' gas-powered ships fuelling climate crisis – Investigation, Transport & Environment, 2021. <https://www.transportenvironment.org/discover/methane-escaping-from-green-gas-powered-ships-fuelling-climate-crisis-investigation/>
- 25** Exclusive: Gas infrastructure across Europe leaking planet-warming methane, Reuters, 2022. <https://www.reuters.com/business/environment/exclusive-gas-infrastructure-across-europe-leaking-planet-warming-methane-video-2021-06-24/>
- 26** How Earth observations are informing national greenhouse gas inventories, Climate Home News, 2022. <https://www.climatechangenews.com/2022/04/20/how-earth-observations-are-informing-national-greenhouse-gas-inventories/>
- 27** Methane emissions from the energy sector are 70% higher than official figures, International Energy Agency, 2022. <https://www.iea.org/news/methane-emissions-from-the-energy-sector-are-70-higher-than-official-figures>
- 28** Communication: Tackling rising energy prices: a toolbox for action and support, European Commission, 2021. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0660&from=EN>
- 29** People living in poverty 'hit harder by gas and electricity bills', new data shows, The Independent, 2021. <https://www.independent.co.uk/news/uk/home-news/energy-bills-poverty-labour-data-b1944464.html>
- 30** Civil society response to the gas price crisis, several NGOs, 2022. https://righttoenergy.org/wp-content/uploads/2022/03/Gas-crisis_-_Civil-Society-Response.pdf

- 31** Power to the people: Upholding the right to clean, affordable energy for all in the EU, Right to Energy Coalition. <https://righttoenergy.org/wp-content/uploads/2019/02/ep-report-18.02.19.pdf>
- 32** Gas fact sheet, ACER, 2021. <https://www.acer.europa.eu/gas-factsheet#:~:text=The%20EU%20gas%20network%20is,compressor%20and%20pressure%20reduction%20stations>
- 33** Top fossil fuel companies made \$65 billion while consumers hit by gas price crisis, Global Witness, 2021. <https://www.globalwitness.org/en/campaigns/fossil-gas/big-gas-profits/>
- 34** U.S. Oil and Gas Companies Set to Make Tens of Billions More from Wartime Oil Prices in 2022, Oil Change International, Global Witness, Greenpeace, 2022. <https://priceofoil.org/content/uploads/2022/03/oil-profits-march-2022.pdf>
- 35** #ExxonKnew, campaign page. <https://exxonknew.org/>
- 36** ShellKnew, DeSmog. <https://www.desmog.com/shellknew/>
- 37** The urgent case for a ban on fracking, Food & Water Action Europe, 2015. <https://www.foodandwatereurope.org/wp-content/uploads/2017/09/EuropeUrgentBanFrackingFeb2015.pdf>
- 38** Racial And Economic Justice Are Integral To The Fight For Our Climate, Food & Water Watch, 2021. <https://www.foodandwaterwatch.org/2021/09/10/racial-and-economic-justice-are-integral-to-the-fight-for-our-climate/>
- 39** The Threat of Fracked Gas Exports in the Rio Grande Valley, The Architectural League NY <https://archleague.org/article/brownsville-fracked-gas-exports/>
- 40** Fracking with “forever chemicals”, Physicians for Social Responsibility, 2021. <https://www.psr.org/blog/resource/fracking-with-forever-chemicals/>
- 41** Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction) - 7th edition, Concerned Health Professionals of NY and Physicians for Social Responsibility, 2020. <https://www.psr.org/wp-content/uploads/2020/12/fracking-science-compendium-7>.
- 42** Joint Statement between the United States and the European Commission on European Energy Security, 2022. <https://www.whitehouse.gov/briefing-room/statements-releases/2022/03/25/joint-statement-between-the-united-states-and-the-european-commission-on-european-energy-security/>
- 43** Natural gas explained. Where our natural gas comes from, US Energy Information Administration, 2022. <https://www.eia.gov/energyexplained/natural-gas/where-our-natural-gas-comes-from.php>
- 44** World Report 2022 - Qatar, Human Rights Watch 2022. <https://www.hrw.org/world-report/2022/country-chapters/qatar>
- 45** Gas in Mozambique. A windfall for the industry, a curse for the country, Friends of the Earth International, Les Amis de la Terre France, Ja! Friends of the Earth Mozambique, 2020. https://www.foei.org/wp-content/uploads/2021/05/Gas-in-Mozambique_Friends-of-the-Earth_Executive-Summary_English.pdf
- 46** The impacts of the LNG industry in Cabo Delgado, Mozambique, Ja! Friends of the Earth Mozambique, 2020. https://www.banktrack.org/download/the_impacts_of_the_lng_industry_in_cabo_delgado_mozambique/impacts_of_lng_in_mozambique_by_ja.pdf
- 47** Greek, Turkish warships in ‘mini collision’ Ankara calls provocative, Reuters, 2020. <https://www.reuters.com/article/us-greece-turkey-warships/greek-turkish-warships-in-mini-collision-ankara-calls-provocative-idUSKCN25A161>
- 48** Chemical Accident Prevention & Preparedness - Learning from incidents involving liquefied natural gas (LNG) on fixed sites, Minerva - European Commission, 2020. https://minerva.jrc.ec.europa.eu/en/shorturl/minerva/13_mahb_bulletin_no13lngv1
- 49** The Storage and Transportation of LNG: What Could Go Wrong? Delaware Currents, 2021. <https://delawarecurrents.org/2021/03/11/the-storage-and-transportation-of-lng-what-could-go-wrong/>
- 50** Liquefied Natural Gas (LNG) Infrastructure Security: Issues for Congress, Congressional Research Service, 2008. <https://www.hsdl.org/?view&did=486464>
- 51** Bratislava port to get its own €40 million LNG terminal, Euractiv, 2021. https://www.euractiv.com/section/politics/short_news/bratislava-port-to-get-its-own-e40-million-lng-terminal/
- 52** EU can stop Russian gas imports by 2025, Ember, E3G, Bellona and RAP, 2022. <https://www.raponline.org/knowledge-center/eu-can-stop-russian-gas-imports-by-2025/>
- 53** LNG exports will add to climate change, The Hill, 2022. <https://thehill.com/opinion/energy-environment/3271511-lng-exports-will-add-to-climate-change/>

Resources in red are key background reading for gas and LNG in general.

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Friends of the Earth Europe

Eilidh Robb

Fossil Gas Campaigner

eilidh.rob主@foeeurope.org

www.friendsoftheearth.eu



Food & Water Action Europe

Frida Kieninger

Director of EU Affairs

fkieninger@fweurope.org

www.foodandwatereurope.org