GREENPEACE

Floating LNG terminal in Le Havre:

SYMBOL OF A DRIFTING CLIMATE AND ENERGY POLICY

REPORT
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Introduction

In 2022, Russian[1] gas made up to 41% of Europe's energy. When Russia invaded Ukraine it triggered an energy crisis of which the gas industry was all too eager to take advantage.

To replace this Russian gas, European countries, prompted by pressure from the gas industry and lobbyists amid a general sense of panic, have implemented a strategy of diversifying gas supplies by turning mainly to liquefied natural gas (LNG), especially American shale gas.

Gas infrastructure operators, energy traders and gas companies assured European policymakers that the staggering increase in imports of liquefied natural gas was the only solution that could safeguard our energy security for decades to come[2].

Imports of LNG in Europe (including the United Kingdom) duly jumped by 140%[3] in 2022, and massive investments in new supply contracts and new gas infrastructure emerged in an uncoordinated and disproportionate manner. As a consequence of this, Europe is going to be plunged into dependency on American shale gas. By locking itself into fossil gas in the long term, the European Union is going against its own climate commitments and energy transition policies[4].

This European response has strengthened the development of numerous fossil gas export projects. When faced with this market windfall, the United States, in particular, has approved projects that will double the country's liquefied gas export capacity if carried out. Export capacity will reach 439 billion cubic meters (bcm) per year by 2030, with annual emissions (throughout their lifecycle) equivalent to that of 393 million cars[5].

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1 Greenpeace International, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, www.greenpeace.org/static/planet4-international-stateless/2023/04/b48c5661-who-profits-from-war.pdf, (p. 11)

2 Greenpeace International, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, www.greenpeace.org/static/planet4-international-stateless/2023/04/b48c5661-who-profits-from-war.pdf, (p. 25)

3 Greenpeace France, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, cdn.greenpeace.fr/site/uploads/2023/04/A-qui-profite-la-guerre-Resume-en-francais.pdf, (p. 1)

4 The European Union has set itself the target of reducing its greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, with the aim of achieving carbon neutrality by 2050. See: Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), Article 2.

5 Greenpeace International, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, www.greenpeace.org/static/planet4-international-stateless/2023/04/b48c5661-who-profits-from-war.pdf, (p. 3)

The European race for American shale gas runs contrary to climate science. It prompts the extraction of more fossil gas, even though the International Energy Agency (IEA) declared in 2021 that no new fossil projects should see the light of day if we want to limit global warming to 1.5°C. In the context of the war in Ukraine, the European Union has chosen to ignore the climatic and environmental impacts caused by the reorientation of its energy policy, as well as the consequences for the health of people living near gas infrastructure and shale gas extraction sites. This is hypocrisy, at a time when many European states, France included, have banned the hydraulic fracturing extraction techniques involved in shale gas production on their territories.

FRANCE: A U-TURN ON ITS CLIMATE COMMITMENTS

France has truly entered the LNG race. In 2022, the country became the leading global importer of American shale gas by LNG. It would appear that the future energy policy of the EU — and therefore of France — will continue moving in this direction, deepening its dependence on shale gas in the years to come[6].

In February 2022, President Emmanuel Macron gave assurances that within 30 years France would become the first major nation to phase out fossil fuels. In reality, the political and economic decisions that the country is taking in response to a short-term energy crisis is locking us into fossil gas.

One of these contradictory policies to France's climate commitments, is the installation of new fossil infrastructure: the floating LNG terminal in Le Havre (FSRU Cape Ann). The TotalEnergies chartered floating terminal benefited from a special regulatory framework and was hastily approved in August 2022. It is due to be commissioned in September 2023, in Le Havre, for a period of five years. While this terminal is supposed to guarantee "security of supply" in the exceptional circumstances created by Russia's invasion, this overview aims to question how useful it will really be, as well as the various benefits granted to TotalEnergies so that it could be installed. In order to assess whether or not this additional terminal really is essential for the country's energy security, this report compares import data

6 WhiteHouse, Remarks by President Biden and European Commission President Ursula von der Leyen in Joint Press Statement, www.whitehouse.gov/briefing-room/speeches-remarks/2022/03/25/remarks-by-president-biden-and-european-commission-president-ursula-von-der-leyen-in-joint-press-statement/

with consumption data and regasification capacities in France and Europe since the start of the war in Ukraine.

This report is the result of a collaboration with the investigative media outlet Disclose, which published two articles on the dark side of the installation of this floating LNG terminal in Le Havre and another article on its industrial risks.

I. The floating LNG terminal in Le Havre:

A FACILITY WHOSE USEFULNESS REMAINS UNPROVEN

In response to the energy crisis triggered by the invasion of Ukraine, the French government made the decision[7], in just a few months, to install a floating LNG terminal (or floating storage regasification unit, FSRU) in the port of Le Havre. The legal regime governing this facility was ratified by the purchasing power bill[8] in August 2022 — with the aim, according to decision-makers, of ensuring France's energy security[9].

The objective of an FSRU is to receive liquefied natural gas (LNG) and regasify it, in order to inject it into the network in gaseous form. The one in Le Havre will be used to regasify up to five billion cubic meters (bcm) of gas per year and inject it into the French national grid. This could be as much as 7.5 bcm when used at peak consumption times[10].

This FSRU is going to be chartered and operated by a subsidiary of TotalEnergies, TotalEnergies LNG Services France (TELSF). TotalEnergies will benefit from 50% of the terminal's regasification capacities thanks to an exemption obtained from the Energy Regulatory Commission (CRE)[11]; these will be operated by a subsidiary of the company registered in the United Kingdom — TotalEnergies Gas & Power Ltd — whose business consists, in particular, of importing LNG.

7 "Gaz. Elisabeth Borne enterine la créaction d'un terminal méthanier au Havre" (Gas: Elisabeth Borne endorses the creation of an LNG terminal in Le Havre), Paris Normandie, 2022, www.paris-normandie.fr/id319113/article/2022-06-23/gaz-elisabeth-borne-enterine-la-creation-dun-terminal-methanier-au-havre

8 LegiFrance, 2022, Law No. 2022-1158 of August 16, 2022 on emergency measures for the protection of purchasing power (1), www.legifrance.gouv.fr/jorf/id/JORFTEXT000046186723

9 Constitutional Council, The government's observations on the law establishing emergency measures for the protection of purchasing power, 2022, www.conseil-constitutionnel.fr/sites/default/files/as/root/bank_mm/decisions/2022843dc/2022843dc_obs.pdf

10 Public consultation No. 22-12 of November 3, 2022 concerning TotalEnergies LNG Services France's request for an exemption for the Le Havre floating liquefied natural gas terminal

11 Decision No. 2022-302 of the Energy Regulatory Commission of November 24, 2022, advising on the request for an exemption from TotalEnergies LNG Services France for the floating LNG terminal in Le Havre, November 24, 2022

Officially, the LNG imported via this FSRU will come from "Europe's main suppliers", namely the United States, Norway, Algeria, Qatar, Nigeria, Angola, or Egypt[12]. However, given that Russia was France's second largest source of LNG in 2022 (behind the United States)[13], and is one of TotalEnergies' main supply markets[14], it is likely that the terminal will also import LNG from Russia.

The Le Havre terminal was promoted by the authorities, as well as by TotalEnergies, as being a rapid and essential solution to the supply crisis that France was going to suffer from following the cessation of Russian gas deliveries by pipeline. For this reason, the terminal has benefited from an extremely favorable administrative and legal regime, exempting it from having to undergo a genuine environmental study before it is put into operation, and reducing the opportunity for people to voice concerns surrounding its installation. Similarly, the economic framework granted to the terminal through CRE derogations is questionable, because it aims to transform the infrastructure into a commercial operation that will be profitable (and as financially low-risk as possible) for TotalEnergies[15], despite the fact that the company announced record profits[16] in 2022.

It is being claimed by both the French authorities and TotalEnergies that the Le Havre LNG terminal (FSRU) is justified as an essential link in the country's security of supply, and as a major contribution to that of its European neighbors (especially in the area that covers Belgium, the Netherlands, Germany, Italy and Spain)[17].

In order to check whether this terminal really is necessary to supply France, or whether it is in fact expected to contribute to the export of gas to European neighbors, it is necessary to:

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12 Seine-Maritime Prefecture, Press kit, Projet d'installation d'un terminal méthanier flottant dans le port du Havre (Project to install a floating LNG terminal in the port of Le Havre), 2022, www.seine-maritime.gouv.fr/contenu/telechargement/54005/347010/file/DossierPresseM%C3%A9thanierFlottantV2.pdf

13 Institute for Energy Economics and Financial Analysis, IEEFA, ieefa.org/european-lng-tracker

14 International Group of Liquified Natural Gas Importers, GIIGNL, Annual Report 2022, and Data taken from the Bloomberg terminal

15 TotalEnergies LNG Services France, Exemption request file for the floating storage regasification unit (FSRU) in Le Havre

16 "TotalEnergies affiche le bénéfice annuel le plus élevé de son histoire" (TotalEnergies reports the highest annual profit in its history), Les Echos, 2023, www.lesechos.fr/industrie-services/energie-environnement/totalenergies-affiche-le-benefice-annuel-le-plus-eleve-de-son-histoire-1904557

17 TotalEnergies LNG Services France, Exemption request file for the floating storage regasification unit (FSRU) in Le Havre, sent to the Minister for Energy Transition on October 20, 2022: "As shown in the Figure below, the current global gas import capacity (including LNG) within an area incorporating France, Belgium, the Netherlands, Germany, Italy and Spain is 15,508 GWh/d." (p. 9); "The balance between gas supply and demand is therefore just barely being met in the geographical area consisting of the French, Belgian, Dutch, German, Italian and Spanish territories, an area in which France plays a pivotal role." (p. 23)

- understand the current state of France's gas supplies;
- assess the current storage and regasification capacities on the territory;
- analyze current and future consumption in France;
- analyze the LNG reception capacities of our European neighbors.

How does France get its gas?

In 2022, France imported **37.8 bcm** of gas in the form of liquefied natural gas (LNG)[18] and **26.97 bcm** of gas by pipeline[19]. The total amount of gas coming into France last year amounted to 64.77 bcm.

WE CAN THEREFORE DEDUCE THAT FRANCE DEMONSTRATED AN IMPORT CAPACITY OF 64.77 BILLION CUBIC METERS OF GAS IN 2022.

According to data from the Ministry of Ecological Transition, France's import balance, i.e. "the physical inflows of natural gas into the country (at LNG terminals, and at border interconnection points in the transport network for gaseous gas), net of re-exported volumes (gas in transit)"[20], amounts to **47.36 bcm**. We can conclude that the country re-exported **17.41 bcm** in 2022.

French gas imports come mainly from Norway, with a total of 19.53 bcm[21] (mainly coming in by pipeline), followed by the United States and Russia.

18 Greenpeace France calculations based on the sum total of the quantities regasified daily ("daily send-out") declared in the GIE ALSI database: alsi.gie.eu/

19 ENTSOG Transparency Platform, data on physical flow into the EU27, www.entsog.eu/

20 Ministry of Ecological Transition and Territorial Cohesion, Statistical Data and Studies, Natural gas, supply and consumption in France, in TWh HHV, List of variables, 2. Natural gas import balance (in TWh HHV).

21 Ministry of Ecological Transition and Territorial Transition, 2023, www.statistiques.developpement-durable.gouv.fr/catalogue?page=datafile&datafileRid=eec25559-0868-4772-8bb5-eeea602baa27&datafileMillesime=2023-03%20; Natural gas imports from Norway (QIMPNOR_Gaz).

The appeal of U.S. shale gas

The second largest source is gas supplied by the United States — and arrives here in the form of LNG. In 2022, U.S. gas production consisted of more than 90%[22] shale gas and compact reservoir gas, which are extracted by means of hydraulic fracturing. The increase in U.S. LNG imports is a direct consequence of the war in Ukraine and the need to replace Russian gas. In 2022, France imported a total volume of 16.2 bcm of LNG from the United States; in comparison, France imported 4.8 bcm in 2021 (2.5 bcm in 2020, 3.3 in 2019, and 0.5 in 2018)[23].

France became Europe's largest importer of U.S. LNG in 2022. Europe quickly turned to the United States to meet its needs, by importing 69.96 bcm of LNG in 2022[24]. France accounted for 23% of these imports, followed by the United Kingdom (19%) and Spain (17%).

The transformation of Europe into a major export market for U.S. LNG has been a strategic objective for both regions for several years. At the 2018 Energy Council between the United States and the European Commission[25], Jean-Claude Juncker, then President of the European Commission, and then President Donald Trump agreed to strengthen strategic cooperation between the European Union and the United States in the field of energy. As part of this effort, the EU committed to increasing its imports of U.S. LNG to improve the diversification and security of its energy supply.

The threat of halting Russian gas exports to the European Union gave this initiative a boost and, as early as in March 2022, U.S. President Joe Biden[26] announced that an

22 US Energy Information Administration (EIA), Where our natural gas comes from, 2023, www.eia.gov/energyexplained/natural-gas/where-our-natural-gas-comes-from.php. Greenpeace calculations based on the data in the last graph. 31.62 TCF out of 36.47 TCF, or 86.7%.

23 Data from the U.S. Energy Information Administration, U.S. Liquefied Natural Gas Exports by Vessel to France: www.eia.gov/dnav/ng/ng_move_expc_s1_a.htm

24 Data from the U.S. Energy Information Administration, U.S. Natural Gas Exports and Re-Exports by Country: www.eia.gov/dnav/ng/ng_move_expc_s1_a.htm. Greenpeace calculations based on volumes exported to European countries.

25 European Commission, EU-U.S. Joint Statement of 25 July: European Union imports of U.S. Liquefied Natural Gas (LNG) are on the rise, 2018, ec.europa.eu/commission/presscorner/detail/en/IP_18_4920

26 WhiteHouse, Remarks by President Biden and European Commission President Ursula von der Leyen in Joint

additional 15 billion cubic meters (bcm) of U.S. LNG would immediately be redirected and delivered to the EU, followed by an additional 50 bcm between now and 2030.

Press Statement, www.whitehouse.gov/briefing-room/speeches-remarks/2022/03/25/remarks-by-president-biden-and-european-commission-president-ursula-von-der-leyen-in-joint-press-statement/

Russian gas is still coming into France

Historically a major gas supplier to the European Union, Russia significantly reduced its natural gas flows through the Nord Stream gas pipeline in 2022.

In 2021, Europe imported 153 bcm of gas (by pipeline) from Russia, out of a total volume of 373 bcm, i.e. 41% of its imports. Given the consequences of the invasion of Ukraine, and in particular the sabotage of Nord Stream, European imports of Russian gas by pipeline fell to 67 bcm in 2022 and constituted only 19% of total gas imports from Europe[27]. Nevertheless, a large quantity of Russian gas continues to arrive in the form of LNG, and although the overall quantity of Russian imports has fallen, supplies of Russian LNG, mainly from Siberia, have risen by 12%[28].

According to data from the Ministry of Transition[29], 10.58 bcm of Russian gas was imported to France in 2022 compared to 13.42 bcm in 2021. In terms of overall volume, there has been no significant drop in Russian gas imports. Like the European Union[30], France imported more Russian LNG in 2022 than in 2021: 7.43 bcm[31] compared to 4.68 bcm[32].

The Russian gas that arrived in France by pipeline passed through Germany[33]. However in 2022, 1.46 bcm of gas arrived in France via Germany according to data from

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27 Greenpeace International, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, www.greenpeace.org/static/planet4-international-stateless/2023/04/b48c5661-who-profits-from-war.pdf, (p. 21)

28 Institute for Energy Economics and Financial Analysis (IEEFA), European LNG tracker, ieefa.org/europe-an-lng-tracker

29 Ministry of Ecological Transition and Territorial Transition, 2023, www.statistiques.developpement-durable.gouv.fr/catalogue?page=datafile&datafileRid=eec25559-0868-4772-8bb5-eeea602baa27&datafileMillesime=2023-03 ; QIMPRUS_GAZ

30 NB: the data presented come from different sources, enabling us to have orders of magnitude, so as to understand the state of our supplies. As the Ministry's data was not complete, we had to consult data from operators and EU databases.

31 Institute for Energy Economics and Financial Analysis (IEEFA), European LNG tracker, ieefa.org/europe-an-lng-tracker

32 Bloomberg L.P, Bloomberg Terminal, LNG Journeys, Russia to France

33 GRTgaz, Statement on the consequences of the Russia-Ukraine crisis on the gas network in France, www.grtgaz.com/en/medias/news/statement-consequences-russia-ukraine-crisis-gas-network-france

ENTSOG [34]. Moreover, there was an almost total cessation of gas imports from Germany to France starting at the end of August 2022, which corresponds to the time when Nord Stream stopped being used.

This is therefore a negligible quantity to replace, and it is necessary to call into question the usefulness of setting up a new floating terminal (FSRU), since, according to the available data, France is perfectly capable of receiving these volumes of gas via existing facilities.

WE CAN ALREADY IDENTIFY TWO PARADOXES:

1. **While the installation of new LNG import terminals in Europe, such as the floating LNG carrier in Le Havre in France, is promoted as a solution that halts dependency on Russia, this does not seem to have been demonstrated at all by the reality of imports in 2022. Despite Russia's invasion of Ukraine, Russian LNG imports increased in 2022, and there is no guarantee that the terminal in Le Havre will not be used to import LNG from Russia. Indeed, that country still represents an important source of supply for TotalEnergies.**

2. **Only 1.46 bcm[35] of gas came to France from Germany in 2022. Since it's via Germany that Russian gas arriving by pipeline transit is imported, we can determine that the quantities of Russian gas that France imported via Germany in 2022 are very low. It therefore appears that commissioning an additional terminal is not required in order to ensure the security of France's gas supply.**

34 ENTSOG Transparency Platform, www.entsog.eu/, data on physical flow into the EU27

35 ENTSOG Transparency Platform, www.entsog.eu/, data on physical flow into the EU27

The regasification capacities in France are already sufficient

In order to assess whether France is able to absorb the supply that used to arrive via the gas pipeline from Russia, the import data must be put into perspective alongside France's regasification capacities and the rate of use of regasification facilities.

As for LNG import capacities, France already has four onshore LNG terminals:

- **Dunkerque**, which is owned by Fluxys, AXA, Crédit Agricole, IPM and Samsung Asset Management[36], and operated by Gaz-Opale, a subsidiary of Dunkerque LNG and Fluxys[37].
- **Montoir-de-Bretagne**, owned and operated by Elengy[38] (a subsidiary of Engie via GRTgaz).
- **Fos Cavaou**, owned and operated by Fosmax LNG[39] (a subsidiary of Elengy).
- **Fos Tonkin**, owned and operated by Elengy[40].

According to the various sources consulted, France's annual regasification capacities are as follows:

1. According to data from the GLE Investment Database put online by Gas Infrastructure Europe (GIE)[41] (revised in October 2019), which represent European gas operators, in 2022 these terminals had the capacity to regasify 39.5 bcm of gas, especially following expansion work.

2. According to another GIE database (more specifically Gas LNG Europe, LNG Import Terminals Map Database[42], updated in October 2022), France has a regasification

36 Fluxys, Fluxys becomes the main shareholder of the Dunkerque LNG terminal, 2018, www.fluxys.com/en/press-releases/fluxys-group/2018/181030_press_core_shareholder_dunkirk

37 Fluxys, Dunkerque LNG infrastructure, www.fluxys.com/en/about-us/dunkerque-lng/infrastructure

38 Elengy, Our history, www.elengy.com/en/about-us/our-history

39 Elengy, The Fos Cavaou LNG terminal, www.elengy.com/en/our-locations/fos-cavaou-lng-terminal

40 Elengy, The Fos Tonkin LNG terminal, www.elengy.com/en/our-locations/fos-tonkin-lng-terminal

41 Gas infrastructure Europe, GIE, LNG investment database, www.gie.eu/transparency/databases/lng-investment-database/

42 Gas Infrastructure Europe, GIE, LNG database, www.gie.eu/transparency/databases/lng-database/

capacity of 37 bcm of gas.

3. Finally, if we refer to the daily data from the ALSI (Aggregated LNG Storage Inventory) database[43] put online by the GIE and if we add up the daily regasification capacities declared[44] by gas operators in 2022, we arrive at a total regasification capacity for that year of: 46.96 bcm (these maximum capacities are consistent with the ones provided by TotalEnergies regarding the capacities of French terminals in the project document that the company presented to CRE[45]).

The daily capacities declared by gas operators showed that the equivalent of 46.96 bcm of gas could have been regasified in 2022, while the equivalent of 37.8 bcm of gas was imported in the form of LNG into France that year. This indicates that the LNG terminals were not used to their full capacity even during the energy crisis.

According to various operators, new expansion projects are planned in existing French terminals, such as in Fos Cavaou, where GRTgaz is indicating[46] an increase in capacity of 3 bcm in 2024, or in Dunkerque, where it has been indicated that an increase in injection capacities from the Dunkerque LNG terminal is expected soon.

The European Network of Transmission System Operators for Gas (ENTSOG) also includes expansion plans for Montoir and Fos Cavaou in the list[47] of future projects.

The government has not made it clear whether all these expansion projects will take place, but one might wonder whether the Le Havre terminal, which is supposed to last five years, conceals an objective of increasing liquefied natural gas import capacities in France in the longer term — despite the energy situation demonstrating that they are unnecessary.

As for the rate of use of France's regasification terminals, they **do not seem to have reached their maximum capacity in 2022 — and remained underused between**

43 Aggregated LNG Storage Inventory, Alsi-GIE, https://alsi.gie.eu. The Aggregated LNG Storage Inventory (ALSI) is a public platform that makes available aggregate operational data from EU LNG terminals. ALSI includes daily information at facility level, covering all LNG regasification capacity in service in the EU, provided by GIE members, i.e. gas operators (in France: Elengy, Fosmax, Dunkerque LNG).

44 For each terminal, these numbers were obtained by adding up the daily regasification capacity ("declared total reference send-out" (DTRS) or "send out capacity") entered, every day in 2022, in the GIE database (Greenpeace France's calculations).

45 TotalEnergies LNG Services France, Exemption request file for the floating storage regasification unit (FSRU) in Le Havre, application submitted on October 20, 2022

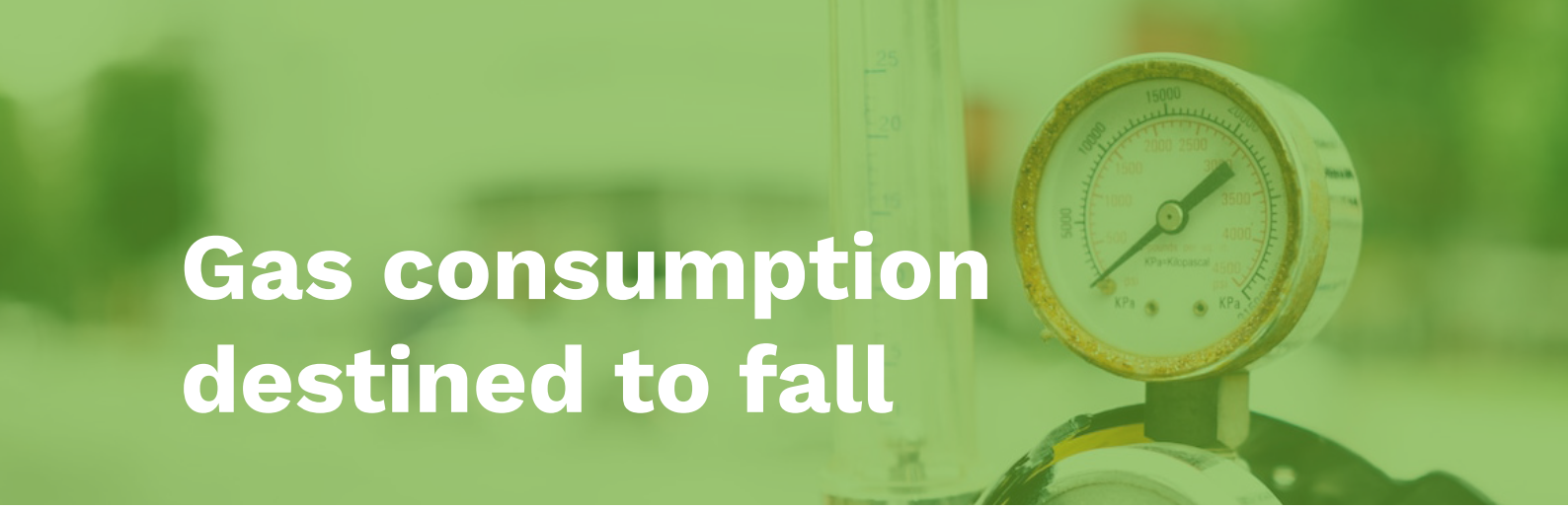
46 GRTgaz, GRTgaz notes an interruption to physical flows between France and Germany, www.grtgaz.com/en/medias/news/grtgaz-notes-interruption-physical-flows-between-france-and-germany

47 ENTSOG, TYNDP 2022 List of projects – LNG, www.entsog.eu/sites/default/files/2022-11/TYNDP%202022%20List%20of%20projects-%20update%20after%20adhoc%20collection.xlsx

January and the end of May 2023 — according to the data reported[48] on a daily basis by gas operators.

If France really suffered from a gas supply crisis in 2022 that was severe enough to justify the new floating terminal in Le Havre, it's surprising that the capacities of existing terminals, particularly the ones at Dunkerque and Fos Tonkin, were underutilized.

48 Aggregated LNG Storage Inventory, Alsi-GIE, https://alsi.gie.eu/. For each terminal, these daily rates of use were obtained by taking the sum of the quantities regasified each day ("send out") as a ratio of the daily regasification capacities ("declared total reference send-out" (DTRS) or "send out capacity") entered, every day in 2022, and from January 1 to May 31, 2023, in the GIE database.



Gas consumption destined to fall

In order to determine whether France is in a energy security crisis, it is necessary to look at how much gas is consumed compared to the quantity that can be imported at the moment (i.e., as shown above, 64.77 bcm without exports and 47.36 bcm after exports in 2022).

In 2022, according to MTE data[49], the amount of gas consumed in France was **43.57 bcm**, compared to **48.29 bcm** in 2021. Meaning that gas consumption fell by **9.7%** in 2022 when compared to 2021. The largest share of gas consumption is made up of residential, closely followed by industry.

This decrease can be attributed to a reduction in consumption due to "sobriety efforts", as well as to relatively high winter temperatures. It should also be remembered that the winter of 2022-2023 was marked by significant levels of unavailability of the French nuclear fleet.

All the consumption scenarios consulted (Perspectives Gaz 2020[50], ADEME/CRE[51]) are based on a reduction in gas consumption in the years to come. This reduction is made necessary by France's climate commitments.

In addition, the Member States of the European Union renewed the voluntary target of reducing gas consumption by 15% by March 2024, a goal that could become mandatory against the backdrop of energy stress[52].

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49 Ministry of Ecological Transition and Territorial Transition, Total natural gas consumption, 2023, www.statistiques.developpement-durable.gouv.fr/catalogue?page=datafile&datafileRid=eec25559-0868-4772-8bb5-eeea-602baa27&datafileMillesime=2023-03

50 Perspectives Gaz 2020 report (2020 - 2030) prepared by gas network operators (GRDF, GRTgaz, Térega and SPEGNN), www.grtgaz.com/sites/default/files/2021-06/Rapport-perspectives-gaz-2020.pdf

51 Energy Regulatory Commission (CRE), Avenir des infrastructures gazières aux horizons 2030 et 2050, dans un contexte d'atteinte de la neutralité carbone (Future of gas infrastructures by 2030 and 2050, in the context of achieving carbon neutrality), 2023, www.cre.fr/content/download/27073/file/Rapport%20avenir%20des%20infras%20gazi%C3%A8res.pdf

52 European Commission, Member states agree to extend voluntary 15% gas demand reduction target, 2023, www.consilium.europa.eu/en/press/press-releases/2023/03/28/member-states-agree-to-extend-voluntary-15-gas-demand-reduction-target/

Short- and long-term trends and prospects show a fall in gas consumption and that our import capacities could already meet this demand.

There is another element that enables us to question whether the risk of a shortage is real: at the end of winter 2023, gas stocks in France had already reached a level that was higher than the average for the same period in 2017-2021, and higher than in 2022 — as shown by GRTgaz's data[53].

The data put online by the Ministry clearly corroborate the notion that the gas stocks in France are positive. If we look at the gas storage data from the past few years (gaseous form and LNG) in France, we arrive at the following volumes at the end of each respective year: in 2020: 10.4 bcm (101.645 TWh); in 2021: 8.54 bcm (83.394 TWh) and in 2022: 12.53 bcm (122.439 TWh)[54] – i.e. a level of filling close to 100%.

These figures prove that the gas inventory situation in France at the end of 2022 was more favorable than at the end of 2021 and 2020. This was without a floating LNG terminal in Le Havre and despite the war in Ukraine.

53 GRTgaz, Client Rendez-Vous 2023, www.grtgaz.com/sites/default/files/2023-04/rendez-vous-clients-2023_0.pdf

54 Ministry of Ecological Transition and Territorial Transition, Useful stocks (gaseous gas + LNG) at the end of the month, 2023, www.statistiques.developpement-durable.gouv.fr/catalogue?page=datafile&datafileRid=eec25559-0868-4772-8bb5-eeea602baa27&datafileMillesime=2023-03

The European solidarity argument does not hold up

Based on the various data consulted, there is no demonstrated need to invest in the floating liquefied natural gas terminal in Le Havre (FSRU) to respond to the energy crisis. Based on the analysis of our import capacities, our regasification capacities, the rate of use of our facilities, our storage capacities, and our decreasing consumption, France is currently fully capable of meeting the country's energy needs during the energy crisis and has no need for additional infrastructure.

France is also trying to justify the commissioning of this terminal by stressing the need to meet the energy needs of its European neighbors like Germany. However, as we demonstrated in Greenpeace International's April 2023 report[55] "Who Profits From War: How Gas Corporations Capitalise on War in Ukraine", European countries are developing their own gas capacities and infrastructure on a massive scale. This will lock these countries into fossil gas over the long term, a move that completely contradicts the climate commitments and the objective of phasing out fossil gas by 2035.

Eight liquefied gas terminals are under construction in Europe and 38 others have been proposed. These installations of new terminals, or extensions of existing terminals, are particularly relevant to France's European neighbors.

The case of Germany is unparalleled: the country is going to put into service six FSRU[56], [57], [58], [59], [60] between 2022 and 2023, and will allow them to have a new capacity of 36 bcm/year at the end of 2023[61] and to add 49.3 bcm/year of additional capacities by 2026 by

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55 Greenpeace France, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, cdn.greenpeace.fr/site/uploads/2023/04/A-qui-profite-la-guerre-Resume-en-francais.pdf (p. 21)

56 Bundesregierung, Political Declaration Franco-German Solidarity, 2022, www.bundesregierung.de/resource/blob/975228/2145790/cab95eaf6ef9e1a50baabb873766dafd/2022-11-25energiesolidaritaet-dt-fr-data.pdf?download=1

57 Global Energy Monitor, Europe Gas Crisis 2022 — LNG Project Announcements, Proposals and Developments, 2023, docs.google.com/spreadsheets/d/1IuA0Bh4zZHl6S6qfKgrxmizfZpc62pd-ay1dz5VD634/edit#gid=1559584149

58 UNIPER, FSRU for Germany's first LNG terminal reaches Wilhelmshaven, 2022, www.uniper.energy/news/fsru-for-germanys-first-lng-terminal-reaches-wilhelmshaven

59 "Deutsche ReGas launches Germany's second LNG import terminal", LNGprime, 2023, lngprime.com/europe/deutsche-regas-launches-germanys-second-lng-import-terminal/70830/

60 "Germany's Third LNG Import Terminal Receives First LNG Tanker", The Maritime Executive, 2023, maritime-executive.com/article/germany-s-third-lng-import-terminal-receives-first-lng-tanker

61 Global Energy Monitor, Europe Gas Crisis 2022 — LNG Project Announcements, Proposals and Developments,

means of extensions and terrestrial terminals.

These new LNG import capacities are in addition to gas imported by pipeline from Norway (48.58 bcm[62] in 2022) and the Netherlands (25.7 bcm[63]). Germany would therefore have a stable supply of 110.3 bcm at the end of 2023 — an amount that is more than 20 bcm higher than its 86.75 bcm[64] consumption at the end of 2022. In addition to these gas quantities, there is the production of biogas, the fall in expected consumption and the fact that Belgium is expected to continue exporting gas to Germany, as the country has also developed an overcapacity of LNG[65]. Germany should therefore be able to satisfy its own demand, and even export considerable quantities to its eastern European neighbors. According to the German Federal Network Agency, as of January 6, 2023, stocks were filled to an "abnormally high" level[66].

The evolution of German capacities was not at all taken into account in France's decision to install the FSRU in Le Havre, because even TotalEnergies[67] considered that Germany had no LNG import capacity in its request to CRE.

European countries are set to increase liquefied gas import capacities by 227[68] billion cubic meters per year in the coming years, a move that is equivalent to doubling the current LNG import capacity.

This development of infrastructure in Europe seems irrational. European decision-makers, blinded by the panic created by the Russian invasion of Ukraine and fearing for Europe's security of supply, have outsourced the analysis of energy market forecasts to gas operators, who are pushing for new terminals to be constructed, and for their construction to be sped up. Reports that European LNG terminals are operating at full capacity in 2022 overestimate the real rate at which these terminals are used[69].

2023, docs.google.com/spreadsheets/d/1IuA0Bh4zZHl6S6qfKgrxmizfZpc62pd-ay1dz5VD634/edit#gid=1559584149

62 Bundesnetzagentur, Gasimporte, www.bundesnetzagentur.de/DE/Gasversorgung/aktuelle_gasversorgung/_svg/Gasimporte/Gasimporte.html;jsessionid=F4E72CDF731FD8353D449FCE08FF5E46

63 *Ibid.*

64 "Germany's gas consumption and imports declined in 2022", EnerData, 2023, www.enerdata.net/publications/daily-energy-news/germanys-gas-consumption-and-imports-declined-2022.html

65 Institute for Energy Economics and Financial Analysis, IEEFA, https://ieefa.org/european-lng-tracker

66 Bundesregierung, Bundesnetzagentur veröffentlicht Zahlen zur Gasversorgung, 2022, www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/DE/2023/20230106_RueckblickGasversorgung.html

67 TotalEnergies LNG Services France, Exemption request file for the floating storage regasification unit (FSRU) in Le Havre, p. 10

68 Global Energy Monitor, *When is enough, enough?*, 2022, globalenergymonitor.org/wp-content/uploads/2022/12/GEM-EU-LNG-Briefing-2022.pdf

69 Greenpeace International, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, www.greenpeace.org/static/planet4-international-stateless/2023/04/b48c5661-who-profits-from-war.pdf

The reasons given by the French government to justify the commissioning of a new LNG terminal chartered by TotalEnergies in Le Havre for the next five years do not seem to correspond to France's energy needs either, or to the needs of our European neighbors, who are in the process of locking themselves into extra capacities that are significantly oversized.

It is also important to note that, after having frequently explained the need for the Le Havre terminal by citing the need to respond to the cessation of Russian gas imports[70], the French authorities ended up trying to justify its implementation by citing the risk that the Franpipe gas pipeline[71], which connects France to Norway, might become unavailable. This argument is unfounded and the 5 bcm of gas from the floating LNG terminal in Le Havre will not make it possible to offset the 20 bcm received from Norway.

The floating LNG terminal in Le Havre is supposed to have a temporary, five year lifespan, while this argument associated with the Franpipe gas pipeline appears to be a longer-term vision in the event of an incident.

This argument is being used by the government when there is absolutely no proven reason to fear that this gas pipeline will become unavailable. As seen above, France has a significant excess of natural gas supply to meet its consumption, so a short-term interruption to supplies from the gas pipeline would not have a major impact. There is no reason to expect longer downtime and even if it does happen, France could get supplies from its European neighbors.

70 Constitutional Council, Presentation of the outcome of the public meeting on the future floating LNG terminal in Le Havre (Prefect of Seine-Maritime), 2022, www.conseil-constitutionnel.fr/sites/default/files/as/root/bank_mm/decisions/2022843dc/2022843dc_obs.pdf

71 LegiFrance, Order of March 13, 2023 setting the objectives of commissioning, maintaining in operation and liquefied natural gas treatment capacities for the project to install a floating LNG terminal in the port of Le Havre led by TotalEnergies LNG Services France, www.legifrance.gouv.fr/jorf/id/JORFTEXT000047311008

Summary

Based on the analysis of the various data, we can conclude that our import capacity amounts to 64.77 bcm (whilst France exported around 17.41 bcm in 2022) and a consumption of up to 43.57 bcm in 2022. Although French gas consumption should have decreased considerably in 2022, this will only constitute a fraction of the changes needed to reduce gas consumption, taking into account climate issues and the various scenarios studied.

The various data consulted show that France has sufficient regasification capacities and a sufficient rate of use, with the French stocks in a situation that appears very favorable at this stage in terms of being prepared for the winter of 2023-2024.

It looks as though France has adequate leeway to meet its needs and is not in a supply crisis that would justify the installation of a floating LNG terminal in Le Havre. Additionally, France's European neighbors are also over developing regasification capacities and do not seem to need the commissioning of an FSRU that will receive 5 bcm of LNG to ensure their supplies.

While the government is touting the temporary nature of the floating LNG terminal in Le Havre as a plus point, GRTgaz already seems to be looking into possible ways of extending LNG import capacities in France well beyond the 5 years in question. According to GRTgaz's ten-year plan for 2022-2031[72], the company plans to develop:

- an LNG terminal at Antifer to eventually replace the FSRU in Le Havre,
- a second FSRU in Antifer to complement the FSRU in Le Havre,
- another LNG terminal, in addition to the FSRU in Le Havre.

These projects represent a potential investment of 1.6 billion euros, despite the urgent need to move away from fossil fuels and invest in the energy transition.

It is therefore right to pose the question of why France hastily made this decision, which does not seem to be essential to the security of supply.

To better understand this political choice, it is important to consider who the government surrounds itself with when making decisions, and to examine the influence of gas lobbyists like TotalEnergies.

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72 GRTgaz, Ten-year Development Plan 2022-23, 2023, www.grtgaz.com/sites/default/files/2023-04/Plan-Decennal-de-Developpement-2022-2031.pdf (page 62)

II. Who profits from crime?

TOTALENERGIES IS MAKING STRATEGIC MOVES

Europe's LNG frenzy has been promoted by the gas industry and the gas lobby.

As early as February 2022, the month in which Russia invaded Ukraine, gas operators implemented a "shock doctrine[73]" strategy, with a new narrative that presented liquefied natural gas as a miracle solution, thereby effecting a shift from gas that is useful for the "energy transition" to gas that is essential to "energy security". They cynically took advantage of the war to frighten governments like France into massively investing in gas imports and the development of gas infrastructure.

To gain understanding of these operators' interests, we looked at the case of TotalEnergies in France.

In its declaration of interests for the year 2022[74], TotalEnergies confirms that it has had talks with the Prime Minister and the ministries of the Environment, Energy and the Sea to influence the purchasing power bill to *encourage the simplifying of procedures in order to accelerate the production of a floating LNG terminal in Le Havre, given the severity of the energy crisis.*

The aim is to demonstrate that the company had a vested interest in the French government taking the decision to install a new floating LNG terminal in Le Havre, even though its usefulness in terms of security of supply does not seem to have been proven. The FSRU in Le Havre, which the company has chartered, can be linked to TotalEnergies' LNG strategy.

TotalEnergies is one of the major players in this industry; according to its own

73 Greenpeace France, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, cdn.greenpeace.fr/site/uploads/2023/04/A-qui-profite-la-guerre-Resume-en-francais.pdf, (p. 5)

74 High Authority for Transparency in Public Life (HATVP), Organization sheet: TotalEnergies, www.hatvp.fr/fiche-organisation/?organisation=542051180##

statements, it is the second largest LNG player in the world[75]. The company has a presence throughout the entire LNG chain:

1. **Upstream:** involved in operations to extract shale gas by hydraulic fracturing, such as the Barnett Shale project in the[76] United States, which is considered a carbon bomb[77];

2. **In liquefaction:** holds stakes in liquefaction plants located in the main production areas, such as Yamal in Russia and in the United States, where TotalEnergies owns 16.6% of the Cameron LNG liquefaction and export terminal and where it plans to participate in the expansion project for this terminal, Cameron LNG 2[78].

3. **In transport,** with a fleet of LNG carriers (two FSRUs, one of which is the Cape Ann, due to be commissioned in Le Havre) as well as rights of passage at regasification terminals in Europe[79].

4. **In regasification,** with shares in several European terminals. In 2022, TotalEnergies had an annual regasification capacity of around 20 bcm in the European Union[80] (i.e. nearly half of France's gas consumption). Since the start of the war in Ukraine, TotalEnergies' regasification capabilities have been supplemented by the FSRU delivered to Germany (the Lubmin terminal)[81]. The company has also reserved 50% of the regasification capacity of the FSRU Cape Ann in Le Havre.

5. **In trading:** the company is the 3rd largest seller of LNG in the world[82]. In addition

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75 TotalEnergies, TotalEnergies, an integrated player in the LNG chain totalenergies.com/infographics/totalenergies-integrated-player-lng-chain

76 TotalEnergies, A world-class integrated LNG portfolio, 2022, totalenergies.com/system/files/documents/2022-09/TotalEnergies_2022_Strategy_and_Outlook_LNG_focus_presentation.pdf

77 Kjell Kühne, Nils Bartsch, Ryan Driskell Tate, Julia Higson, André Habet, Carbon Bombs — Mapping key fossil fuel projects, ELSEVIER — Energy policy, Volume 166, 07/2022, 11295, www.sciencedirect.com/science/article/pii/S0301421522001756#appsec1

78 TotalEnergies, United States: Launch of Cameron LNG Expansion to Increase Liquefied Natural Gas Production, 2022, totalenergies.com/media/news/press-releases/united-states-launch-cameron-lng-expansion-increase-liquefied-natural-gas

79 TotalEnergies, Total Closes the acquisition of Engie's Upstream LNG Business And Becomes World #2 LNG Player, 2018, totalenergies.com/media/news/press-releases/total-closes-acquisition-engies-upstream-lng-business-and-becomes-world-2-lng-player

80 International Group of Liquified Natural Gas Importers, GIIGNL, Annual Report 2022, giignl.org/document/giignl-2022-annual-report/

81 TotalEnergies, Commissioning of the floating LNG regasification unit delivered by TotalEnergies to Lubmin terminal in Germany, 2023, corporate.totalenergies.no/news-overview/commissioning-floating-lng-regasification-unit-delivered-totalenergies-lubmin-terminal

82 TotalEnergies, Natural gas, fueling the transition totalenergies.com/company/identity/multi-energy-offer/natural-gaz

to the terminals at which Total holds shares, the company is also acquiring large volumes of gas from LNG projects where it does not have assets (especially in the United States), in order to sell them on to industrial firms or energy companies at a high price.

6. And finally, **in distribution** to end customers.

An LNG growth strategy that started before the war in Ukraine

TotalEnergies' positioning on the LNG market goes back several years. Total took over Engie's LNG activities in 2018 — and in particular, its shares in the Cameron LNG export terminal[83] — a move that coincides with the strengthening of cooperation between the EU and the United States for American LNG exports to Europe. It is clear that TotalEnergies had identified the potential of LNG and its opportunities, and it has a vested interest in seeing U.S. LNG exports increase and reach Europe.

In 2022, the United States exported 56.81 bcm of LNG to the EU[84], accounting for more than 42%[85] of LNG imports into the European Union and becoming the largest LNG exporter to Europe.

Europe has become the largest LNG market to the United States and **France has become the world's largest importer of American LNG,** accounting for 43% of French LNG imports in 2022, with 16.2 bcm[86] .

The boom of the U.S. LNG market is all the more relevant in terms of understanding the profits made by TotalEnergies in 2022 and the factors motivating them to continue down this path.

83 TotalEnergies, Total Closes the acquisition of Engie's Upstream LNG Business And Becomes World #2 LNG Player, 2018, totalenergies.com/media/news/press-releases/total-closes-acquisition-engies-upstream-lng-business-and-becomes-world-2-lng-player

84 Natural Gas Converter. Greenpeace calculations based on IEA data: this is 2005895 mmcf. Conversion made using the converter from Natural Gas Intelligence: www.naturalgasintel.com/natural-gas-converter/

85 Aggregated LNG Storage Inventory, Alsi-GIE. Total quantity of LNG regasified and sent to the European Union gas network (excluding the United Kingdom) in 2022: 134.6 bcm of LNG. Greenpeace calculations based on Gas Infrastructure Europe's ALSI database: alsi.gie.eu/

86 Greenpeace calculations based on IEA data: this is 571399 mmcf. Conversion made using the converter from Natural Gas Intelligence: www.naturalgasintel.com/natural-gas-converter/

Profiting from the crisis: Billions in profits thanks to LNG

According to Fatih Birol, head of the International Energy Agency (IEA), the global oil and gas industry has made stratospheric profits in this year of crisis: 4000 billion U.S. dollars (3680 billion euros) in 2022[87].

The six largest oil and gas companies in the world (BP, Chevron, Equinor, Exxon, Shell, TotalEnergies) alone made 192 billion euros in profits[88], 94 billion of which[89] was redistributed to shareholders in the form of dividends and share repurchases.

In 2022, TotalEnergies achieved a turnover[90] of nearly $281 billion[91] with a profit of nearly $20.5 billion[92] (meaning that the company's profits rose by 28% compared to 2021). This increase is mainly due to the growth of its "gas, renewable energies and electricity" sector, whose profits increased by nearly 95% between 2021 and 2022, reaching nearly 11 billion euros[93].

TotalEnergies even states in its 2022 annual report[94] that the adjusted net operating income of the iGRP [Integrated Gas, Renewables & Power] sector stood at $12,144 million [12 billion] in the year 2022, up 95% in the course of one year, **thanks to its integrated LNG portfolio and, in particular, its regasification capabilities in Europe, which enabled it to take advantage of the favorable price environment,** and thanks to

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87 "Oil and Gas Industry Earned $4 Trillion Last Year, says IEA Chief", Reuters, 2023, www.reuters.com/business/energy/oil-gas-industry-earned-4-trillion-last-year-says-iea-chief-2023-02-14/

88 "TotalEnergies, Shell... les principaux groupes pétroliers ont dégagé des bénéfices records en 2022" (TotalEnergies, Shell... the main oil groups generated record profits in 2022), BFM Business, 2023, www.bfmtv.com/economie/entreprises/energie/total-energies-shell-les-principaux-groupes-petroliers-ont-degage-des-benefices-records-en-2022_AD-202302080394.html

89 Global Witness, Crisis year 2022 brought 134 billion in excess profit to the west five largest oil and gas companies, 2023, www.globalwitness.org/en/campaigns/fossil-gas/crisis-year-2022-brought-134-billion-in-excess-profit-to-the-wests-five-largest-oil-and-gas-companies

90 TotalEnergies, Universal Registration Document 2022, totalenergies.com/sites/g/files/nytnzq121/files/documents/2023-03/TotalEnergies_URD_2022_EN.pdf (pp. 414-415)

91 *Ibid* page 414

92 *Ibid* page 414

93 Value entered by Total: $12 billion. Conversion of dollars into euros carried out on 05/04/2023.
1 USD = 0.90740 EUR.

94 TotalEnergies, Universal Registration Document 2022, totalenergies.com/sites/g/files/nytnzq121/files/documents/2023-03/TotalEnergies_URD_2022_EN.pdf, (p. 67)

the growth of the Integrated Power business.

TotalEnergies is fully backing the assumption that its regasification capabilities in Europe allows it to make major profits at a time when gas prices are particularly high largely due to the invasion of Ukraine.

TotalEnergies: LNG and the war in Ukraine are bringing in big yields

TotalEnergies is the 3rd largest seller of LNG in the world. The company sells LNG under medium- and long-term contracts for specific customers (or even markets). Through its trading activity, TotalEnergies also sells significant volumes of LNG on the spot market, intended for unspecified markets, which go to the highest bidder, and allow the company to achieve significant margins.

To understand these margins, all you have to do is analyze the U.S. LNG market that has invaded Europe. The price of the LNG traded and purchased in the United States is lower than the price[95] of gas in Europe, where prices increased by 200% in 2022.

For example, cargo from a tanker leaving the United States during the summer of 2022 could be purchased at a low price of around 55.31 million euros[96], then resold in Europe at full price for around 254 million euros[97]. Under these circumstances, traders like TotalEnergies have been able to make up to 200 million euros in profits for each cargo of LNG.

It is this privileged position on the part of traders that explains, in particular, TotalEnergies' record profits during this year of crisis. The corporation has taken advantage of the global increase in gas prices as well as the characteristics of the U.S. LNG market — whose flexibility ensures that gas will go to the highest bidder.

In addition to the volumes of gas sold on the spot market, the contracts held by TotalEnergies and other French companies (Engie in particular, but also EDF) with American sellers are long-term contracts, with an average duration of 15 to 20 years.

Knowing that nearly 35%[98] of TotalEnergies' long-term LNG supply contracts are for gas

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95 NB: US price of LNG indexed to the Henry Hub Index, the benchmark for gas prices in the United States. In Europe, the price of gas is indexed to the higher Amsterdam TTF index.

96 "US natural gas exports to Europe surge amid energy crisis, leading to trader profits", Business Insider, 2022, markets.businessinsider.com/news/commodities/us-natural-gas-exports-europe-surge-energy-crisis-trader-profits-2022-8. Cost of 60 million USD, converted by Greenpeace International into EUR on 03/29/2023.

97 *Ibid.* Cost of 275 USD.

98 Greenpeace France calculations based on data in the GIIGNL Annual Report, 2022. Corroborated with infor-

from the United States, more than 90% of whose production in 2022 was accounted for by shale gas and compact reservoir gas. The company has eight long-term contracts with a volume equivalent to 14.96 bcm of gas from the[99] United States. A peculiar feature of these American contracts is that they are almost all intended for an unspecified market, allowing Total to sell their capacity to the highest bidder. Since Total declared that it sold more LNG in 2022 — the equivalent of 65.4 bcm of gas[100] — than the company had fixed purchase volumes[101], this means that Total also purchased supplies on the spot market, where large quantities come from the United States.

TotalEnergies made the largest profit in its history in 2022[102], in large part thanks to soaring gas and oil prices. The LNG boom, especially the boom in America, and the high sales prices in Europe, a consequence of the war in Ukraine, have greatly contributed to these figures.

The TotalEnergies Board of Directors even emphasized the relevance of the multinational having adopted a strong growth strategy in LNG, so as to position itself in the world's top 3, as an important factor explaining the 2022 results[103]. In 2022, TotalEnergies shares increased by 31.41%[104], generating an additional 35.8 billion euros for its shareholders. In addition to the strong growth in share value, TotalEnergies paid out 9.6 billion euros in dividends[105] and bought back 7.4 billion euros' worth of shares[106].

TotalEnergies is being encouraged by its board of directors to pursue this fossil gas growth strategy, without any intention of renouncing the expansion in order to meet the challenges of the renewable energy transition required to address the climate crisis, and without any consideration for the inflation issues that are having an impact

mation published by TotalEnergies, as well as the information present in the Bloomberg terminal. Total's procurement contracts in Yemen were excluded from the calculation as they were suspended.

99 11 million tons of LNG. 1 Mt of LNG = approximately 1.36 bcm of gas.

100 48.1 Mt of LNG. TotalEnergies Universal Registration Document 2022, p. 6. Conversion: 1 Mt LNG = 1.36 bcm of gas.

101 Volume of purchase contracts in effect in 2023: 32.4 Mt of LNG without contracts from Yemen, or 44.06 bcm of gas.

102 "TotalEnergies dégage le meilleur bénéfice de son histoire: 20,5 milliards de $" (TotalEnergies is making the highest profit in its history: $20.5 billion), La Dépêche, 2023, www.ladepeche.fr/2023/02/09/totalenergies-degage-le-meilleur-benefice-de-son-histoire-205-milliards-de-10985299.php

103 TotalEnergies, TotalEnergies Universal Registration Document 2022, totalenergies.com/sites/g/files/nytnzq121/files/documents/2023-03/TotalEnergies_URD_2022_EN.pdf , (p. 387)

104 TotalEnergies, TotalEnergies Universal Registration Document 2022, totalenergies.com/sites/g/files/nytnzq121/files/documents/2023-03/TotalEnergies_URD_2022_EN.pdf , (p. 384)

105 $9.986 billion paid to the shareholders of the parent company and $0.536 billion paid to non-controlling interests. That's 10.52 billion dollars. Conversion of dollars into euros carried out on 05/04/2023. 1 USD = 0.90740 EUR.

106 TotalEnergies Universal Registration Document 2022, totalenergies.com/sites/g/files/nytnzq121/files/documents/2023-03/TotalEnergies_URD_2022_EN.pdf, (p. 391)

on French citizens.

This LNG strategy has important consequences beyond Europe, because the long-term contracts signed by European companies such as TotalEnergies are contributing to the boom in the development of LNG export terminals in the United States, by providing a rationale for their construction or expansion[107]. Several new LNG export terminals in the United States are likely to be given the green light in 2023, and the decision on whether to invest in the construction or expansion of gas infrastructure is often linked to supply contracts signed in order to ensure long-term profitability.

This strategy on the part of French companies like TotalEnergies is locking us into gas in the long term, and these companies have a vested interest in encouraging the LNG frenzy in Europe over the decades to come.

TOTALENERGIES IS BANKING ON AN INCREASE IN SHALE GAS EXPORTS

Not only are the "advance" contracts held by TotalEnergies at these terminals contributing to their construction — but TotalEnergies is itself being active in the development of these projects, whose impact is disastrous for the climate and could be fatal for the populace in many areas[108].

TotalEnergies owns 16.6% of **Cameron LNG**, one of America's main export terminals. In 2022, the company signed a memorandum of understanding with Sempra Infrastructure, Mitsui & Co. Ltd. and Japan LNG Investment for the expansion of Cameron LNG **(Cameron LNG 2)**[109], which is scheduled to be commissioned in 2025. The final investment decision for this project is scheduled for 2023[110].
TotalEnergies announced that it would be participating in the development of the **Rio**

107 Greenpeace International, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, www.greenpeace.org/static/planet4-international-stateless/2023/04/b48c5661-who-profits-from-war.pdf, (p. 37)

108 Longxiang Li, Francesca Dominici, Annelise J. Blomberg, Falco J. Bargagli-Stoffi, Joel D. Schwartz, Brent A. Coull, John D. Spengler, Yaguang Wei, Joy Lawrence & Petro Koutrakis, Exposure to unconventional oil and gas development and all-cause mortality and medicare beneficiaries, Nature, Nature Energy 7, 2022, 177-185, www.nature.com/articles/s41560-021-00970-y

109 TotalEnergies, United States: Launch of Cameron LNG Expansion to Increase Liquefied Natural Gas Production, 2022, totalenergies.com/media/news/press-releases/united-states-launch-cameron-lng-expansion-increase-liquefied-natural-gas

110 "Sempra eyes Cameron LNG expansion FID in 2023", LNGPrime, 2022, lngprime.com/americas/sempra-eyes-cameron-lng-expansion-fid-in-2023/50815/

Grande LNG[111] terminal, a NextDecade project denounced by a wide range of NGOs[112].

TotalEnergies is participating, alongside Sempra, in the development of the **Energia Costa Azul** terminal in Mexico, whose purpose is going to be to export American gas[113]. Similarly, Total announced in 2022 that it was taking a stake in a project by Sempra that is under development, Vista Pacifico LNG, located on the west coast of Mexico. Vista Pacifico also plans to re-export American gas in the form of LNG[114].

111 TotalEnergies, United States: TotalEnergies Strengthens its Position in LNG by Partnering with GIP and NextDecade on a new LNG project in Texas 2023, totalenergies.com/media/news/press-releases/united-states-totalenergies-strengthens-its-position-lng-partnering-gip

112 "Controversial Texas shale gas project sparks interest of French energy companies", Le Monde, 2023, www.lemonde.fr/en/united-states/article/2023/04/04/controversial-texas-shale-gas-project-sparks-interest-of-french-energy-companies_6021718_133.html

113 TotalEnergies, Mexico: Total closes its participation in the Energia Costa Azul LNG export project, 2020, totalenergies.com/media/news/communiques-presse/total-enters-the-eca-lng-project

114 TotalEnergies, TotalEnergies and Sempra expand north american strategic alliance for the development of LNG exports and renewables, 2022, totalenergies.com/media/news/press-releases/totalenergies-and-sempra-expand-north-american-strategic-alliance

Locking into gas and investments in toxic assets

In its net-zero emissions scenario aligned with 1.5 °C, the International Energy Agency (IEA) forecasts that American LNG exports must reach their peak in 2025 — at less than 125 bcm — and then gradually decline[115]. The capacities of LNG export terminals in the United States are already at odds with these forecasts — not to mention the projects under development (construction and expansion).

The recently signed 15- to 20-year gas contracts go directly against European legislation, which stipulates that a 35% reduction in gas demand must be achieved by 2035[116].

These numerous projects would prove to be useless because, if we stick to the IEA's carbon neutrality models, LNG demand will not increase at the same rate as the new LNG facilities that would get built. Investments in new infrastructure in the United States could prove to be toxic assets.

115 International Energy Agency (IEA), Net Zero by 2050, A roadmap for the Global Energy Sector, October 2021, iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapforth-eGlobalEnergySector_CORR.pdf , Figure 4.17, (p. 175)

116 European Commission, European Climate Law, ec.europa.eu/clima/eu-action/european-green-deal/europe-an-climate-law_en

American shale gas and Russian LNG: TotalEnergies and France are having it both ways

Despite the shock of Russia's invasion of Ukraine, TotalEnergies was the only major Western player not to declare that it wanted to withdraw from the country[117]. TotalEnergies has decided to maintain its stakes in several Russian gas projects that contributed to the record profits recorded in 2022.

TotalEnergies owns 20% of Yamal LNG, which manages the Yamal T-T4 liquefaction plant, alongside Novatek, among others (50.1%), and which provides it with 20% of the gas extracted and exported there. TotalEnergies confirms that 72% of Yamal LNG's 2022 production was destined for Europe — the official line being that this was to continue to be able to supply Europe[118].

The company is also still a 10% shareholder in Arctic LNG, although the French company has decided that it will no longer count the proven reserves of Arctic LNG 2 in its accounts, nor contribute capital to this project[119].

TotalEnergies is also a 19.4% shareholder in the Russian company Novatek (although in December 2022, the company withdrew its representatives from the board of directors and announced that it would no longer enter the value of this stake in its accounts)[120].

TotalEnergies has several LNG purchase contracts with Russian companies[121]:

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117 "TotalEnergies in Russia: France must stop turning a blind eye", Le Monde, 2022, www.lemonde.fr/en/opinion/article/2022/08/25/totalenergies-in-russia-france-must-stop-turning-a-blind-eye_5994694_23.html

118 TotalEnergies, Answers to written questions, GA 2023, 2023, totalenergies.com/sites/g/files/nytnzq121/files/documents/2023-06/AG2023_Reponses_aux_questions_ecrites_3.pdf

119 "Russie : 'début de repli' pour TotalEnergies, qui déprécie ses actifs sur le projet Arctic LNG 2" (Russia: 'Start of a downturn' for TotalEnergies, which is depreciating its assets on the Arctic LNG 2 project), Challenges, 2022, www.challenges.fr/economie/russie-debut-de-repli-pour-totalenergies-qui-deprecie-ses-actifs-sur-le-projet-arctic-lng-2_811065

120 TotalEnergie, Russia: TotalEnergies decides to withdraw its directors from Novatek and will no longer acuity account for its stakes in Novatek and record 3,7 b$ impairment in Q4, 2022, totalenergies.com/media/news/press-releases/russia-totalenergies-decides-withdraw-its-directors-novatek-and-will-no

121 International Group of Liquified Natural Gas Importers, GIIGNL, Annual Report 2022. Corroborated with data from the Bloomberg terminal on TotalEnergies' LNG purchase/sale contracts. The contract quantities, expressed in Mt of LNG, have been converted into equivalent volumes of natural gas.

- Contract with **Yamal LNG** (Russia) for the purchase of the equivalent of 5.44 bcm of gas from Sabetta, from 2018 to 2032[122].
- Contract with **Novatek** to buy the equivalent of 1.36 bcm of gas between 2018 and 2041, which comes from Yamal LNG[123]. This is a contract inherited from Engie for **transshipment[124] in Montoir** (continuing to ensure a transshipment contract, i.e. for gas that is not intended for French consumption, is all the more scandalous[125] because it is a commercially-driven move and not one that is guided by the need to supply Europe, contrary to Patrick Pouyanné's justifications[126]).
- Future contract with **Arctic LNG 2**[127] (Russia) to purchase the equivalent of 2.72 bcm of gas from 2023 for 20 years (despite the international situation, Arctic LNG 2 must still be commissioned at the end of 2023[128]).

In Russia, a notable operator of the LNG transshipment business is **Arctic Transshipment LLC**, a subsidiary of Novatek, in which TotalEnergies still has a 10% stake[129].

Given the increase in energy prices, its various investments in Russia and Russian LNG constitute a major financial windfall for TotalEnergies[130]. The company received $1.5 billion in dividends related to Novatek and Yamal in 2022, according to Le Point[131].

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122 *Ibid.*

123 International Group of Liquified Natural Gas Importers, GIIGNL, Annual Report 2022. Corroborated with data from the Bloomberg terminal on TotalEnergies' LNG purchase/sale contracts.

124 "Montoir va transborder du gaz provenant de Yamal LNG" (Montoir is going to transship gas from Yamal LNG), Mer et Marine, 2015,
www.meretmarine.com/fr/vie-portuaire/montoir-va-transborder-du-gaz-provenant-de-yamal-lng
NB: transshipment makes it possible to transfer quantities of LNG between two LNG vessels using direct connections between the two vessels, without mixing or storing the LNG. This process makes it possible to distribute cargoes to multiple destinations.

125 Institute for Energy Economics and Financial Analysis, IEEFA, ieefa.org/european-lng-tracker

126 "TotalEnergies poursuit son retrait de Russie" (TotalEnergies continues its withdrawal from Russia), Les Echos, 2022, www.lesechos.fr/industrie-services/energie-environnement/totalenergies-poursuit-son-retrait-de-russie-1887669

127 International Group of Liquified Natural Gas Importers, GIIGNL, Annual Report 2022. Corroborated with data from the Bloomberg terminal on TotalEnergies' LNG purchase/sale contracts.

128 "Novatek plans to launch Arctic LNG 2 this year", Warsaw Institute, 2023, warsawinstitute.org/novatek-plans-to-launch-arctic-lng-2-this-year/

129 "TotalEnergies continues to hold stakes in Russia's LNH linked business", UpstreamOnline, 2023, www.upstreamonline.com/politics/totalenergies-continues-to-hold-stake-in-russia-s-lng-linked-business/2-1-1412210

130 "TotalEnergies se retire du géant gazier russe Novatek au prix de 3,7 milliards de dollars de dépréciation" (TotalEnergies withdraws from the Russian gas giant Novatek at the price of 3.7 billion dollars in depreciation), Le Figaro, 2022, www.lefigaro.fr/societes/totalenergies-se-retire-du-geant-gazier-russe-novatek-au-prix-de-3-7-milliards-de-dollars-de-depreciation-20221209

131 "TotalEnergies a dégagé en 2022 le meilleur bénéfice de son histoire" (TotalEnergies generated the best profit in its history in 2022), Le Point, 2023, www.lepoint.fr/societe/totalenergies-a-degage-en-2022-le-meilleur-benefice-de-son-histoire-08-02-2023-2507994_23.php

Despite the strong demands made by civil society in France and abroad, urging TotalEnergies to withdraw from Russia in solidarity with the Ukrainian people, the company, through its CEO Patrick Pouyanné, has always kept to its policy of maintaining its gas activities in Russia. The company argues that it is still respecting all the sanctions implemented by the EU, since in fact, the EU still authorizes the importing of Russian gas to this day. Given the record profits these imports are generating, it is obvious that the company is not about to give up, despite the human and environmental costs involved.

The French government is complicit and is turning a blind eye to TotalEnergies' actions and condemning us to a two-fold penalty: increasing supplies of both American shale gas and Russian LNG.

Summary

A large share of TotalEnergies' profits is linked to LNG, and particularly to U.S. LNG. Given its strategic positioning across the entire chain, the multinational is one of the first companies to be benefiting from the explosion in gas costs and the boom in imports of American shale gas in France and Europe.

As the oil and gas company itself assures us[132], it is the leading player in Europe in terms of regasification capacity. The more the demand for LNG the more the price grows, the more lucrative the situation is for TotalEnergies, which can sell its gas at a profitable margin in Europe.

TotalEnergies has a vested interest in urging decision-makers to pursue a policy that aims to massively increase LNG imports, and to consider LNG as a pillar of French and European energy policy for decades to come.

This explains why the company favors setting up an FSRU in Le Havre, for which it has reserved 50% of the capacity. The facility will most likely receive American shale gas, given the TotalEnergies company's areas of interest, available volumes and long-term contracts with the United States.

When we decipher TotalEnergies' intentions, some of the financial exemptions granted in connection with the establishment of the FSRU in Le Havre start to look even more scandalous. TotalEnergies actively lobbied[133] to enable the installation of the floating LNG terminal in Le Havre, by holding talks with the Prime Minister and the ministries of the Environment, Energy and the Sea. The oil and gas company sought to influence the purchasing power bill. The statements it made to HATVP read, *"to encourage the simplifying of procedures in order to accelerate the production of a floating LNG terminal in Le Havre, given the severity of the energy crisis."* The company also declared a lobbying action to HATVP *(Following the conflict in Ukraine, raising the French authorities' awareness of LNG supply issues and solutions, in strict compliance with European rules and sanctions)* — this shows that the company quickly sought to take advantage of the consequences of the war in Ukraine to promote LNG to the government.

132 TotalEnergies on Linkedin, Total Green Gases LNG, 2023, www.linkedin.com/posts/totalenergies-green-gases-lng_gnl-activity-7041365117514477570-yV4B?utm_source=share&utm_medium=member_desktop

133 For all citations in this paragraph: High Authority for Transparency in Public Life (HATVP), Directory of interest representatives, TOTALENERGIES SE sheet, Activities, www.hatvp.fr/fiche-organisation/?organisation=542051180##

These analyses show that TotalEnergies has strongly encouraged the French government to promote an energy policy that aims to depend on LNG in the coming years, not only through the commissioning of the FSRU in Le Havre, but other LNG facilities that support TotalEnergies' strategy. The rush to install a new point of entry for fossil energy on French territory perfectly illustrates the inconsistency of the decisions made by France, at a time when it has committed to phase out fossils and is prohibiting extraction by hydraulic fracturing on its territory.

Conclusion

The argument put forward by the French government to justify the state-facilitated installation of the Le Havre LNG terminal (FSRU Cape Ann) — namely the need to secure the energy supply to France and its European neighbors during the energy crisis does not hold up, as demonstrated in this note, and the associated measures run contrary to France's climate and environmental commitments[134].

The LNG terminal in Le Havre is a clear manifestation of the inconsistency of France's energy policy choices and is indicative of how the government makes its decisions, choosing to listen to gas lobbyists rather than climate science. The main beneficiaries of France's energy policy are gas operators and lobbyists such as TotalEnergies, which will be able to continue to make profits at the expense of the climate and communities for many years to come.

By encouraging shale gas production in the United States, France is accepting its indifference to the consequences of its energy policy for the climate and for the public health of the local communities residing near extraction sites[135]. This is a hypocritical, if not cynical, attitude, since the state banned the hydraulic fracturing technique on its own territory back in 2011.

According to the research conducted by Greenpeace France and Disclose, presented and summarized in this note and articles (article on the dark side of the installation of the floating LNG terminal in Le Havre and its industrial risks), there is no indication that the FSRU Cape Ann terminal is necessary in order to maintain energy supplies to France or its neighbors; in fact, the opposite is true. The government must be held accountable for choosing to install this infrastructure, and must demonstrate, with clearly sourced data, that it genuinely was the best option available. If it cannot do this, the directive of March 13, 2023 relating to the commissioning of the FSRU Cape Ann in Le Havre, and its continued operation for the next five years, should be canceled. The directive in question is also the subject of an application for annulment by France Nature Environnement Normandie, filed on April 15, 2023 with the Rouen Administrative Court[136].

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134 Public life, Statement by Mr. Emmanuel Macron, President of the Republic, on energy policy, in Belfort, February 10, 2022, www.vie-publique.fr/discours/283773-emmanuel-macron-10022022-politique-de-lenergie

135 Timothy Q. Donaghy, Noel Healy, Charles Y. Jiang, Colette Pichon Battle, "Fossil Fuel racism in the United States: How phasing out coal, oil, and gas can protect communities", Energy Research and social science, Volume 100, 103104, 2023, www.sciencedirect.com/science/article/pii/S2214629623001640

136 "Le Havre. Un nouveau recours contre le terminal méthanier flottant" (Le Havre: A new remedy against the floating LNG terminal), 76 actu, 2023 actu.fr/normandie/le-havre_76351/le-havre-un-nouveau-recours-contre-le-

Recommendations

Greenpeace wishes to remind readers that only an energy transition policy that adopts a long-term vision will be able to ensure true energy sovereignty for France and consistency with its climatic and environmental commitments. To this end, Greenpeace recommends the following:

- Make a genuine commitment to ending the process of fossil expansion and never again encourage, directly or indirectly, the development of new fossil fuel extraction projects, the opening of new oil or gas fields, or the development of existing projects that are incompatible with the 1.5°C climate objective and/or that pose risks to people and to biodiversity.
- Stop making decisions based on the advice of the oil and gas lobbies, and keep the representatives of these lobbies,[137] such as TotalEnergies, out of political decision-making circles.
- Structure energy policy around savings measures that will enable us to reduce energy consumption.
- Set binding and permanent targets for reducing the demand for gas[138].
- Ensure that energy efficiency is achieved, in particular through the renovation and thermal insulation of buildings, so as to save energy, and make massive investments in the development of renewable energies.
- Commit to phasing out fossil gas permanently by 2035 (and, as part of this, to phasing out liquefied natural gas by 2030) and ensure that political decision-making is in line with this commitment; the installation or extension of fossil infrastructure is in breach of this commitment.
- Reject all new gas infrastructure, such as the floating LNG terminal in Le Havre (FSRU Cape Ann), and any new expansion of existing fixed terminals that will lock us into fossil gas via long-term contracts and jeopardize our chances of meeting the climate commitments made by France and Europe.
- Be consistent on the issue of shale gas extraction (banning shale gas extraction in France but importing it from other countries, without taking into consideration the impacts on the climate, the environment and the health of the people living in those

terminal-methanier-flottant_59064666.html

137 Fossil Free Politics, A Gastastorophic mistake, 2022, www.fossilfreepolitics.org/news-resources/a-gastastrophic-mistake

138 "We call on TotalEnergies shareholders to vote against the firm's climate strategy", Le Monde, 2023, www.lemonde.fr/en/opinion/article/2023/05/07/we-call-on-totalenergies-shareholders-to-vote-against-the-firm-s-climate-strategy_6025797_23.html
(NB: As the IPCC scientists explain very well in this forum, energy demand should not be confused with needs: the current demand for energy in no way corresponds to needs alone; this is attested to by the debates about private jets.)

countries, is unacceptable).

- Finally, impose annual targets on large companies for reducing their greenhouse gas emissions and prohibit dividends from climate-cidal companies; strengthen the due diligence obligations of large companies with regard to the environment and the protection of human rights and fundamental freedoms; and tax the profits of fossil companies like TotalEnergies, so that investments for the energy transition are not passed on to citizens, especially the most vulnerable and low-income parts of society, and the rest of the economy.

In addition to these recommendations at the national level, Greenpeace is making demands at the European and international levels, and France has a role to play in these too. A full list of these recommendations is available in the Greenpeace report "Who Profits From War: How Gas Corporations Capitalise on War in Ukraine"[139].

139 Greenpeace France, Who Profits From War: How Gas Corporations Capitalise on War in Ukraine, 2023, cdn.greenpeace.fr/site/uploads/2023/04/A-qui-profite-la-guerre-Resume-en-francais.pdf, (p. 18)

Methodology

DETAILS ON THE METHODOLOGY OF GAS VOLUME DATA

Global framework

As part of the drafting of this report, Greenpeace France extracted data from numerous specialized sources and databases, in order to carry out the calculations on which the analyses presented are based.

In order to offer greater clarity to the reader, the choice was made to use the same unit throughout to express data relating to gas volumes. Thus, volumes are expressed throughout the report in billion cubic meters (m3), or bcm.

These data often correspond to the result of conversions or equivalencies, since, depending on the sources consulted, the units used for fossil gas (in the gaseous state) are often units of energy, and the ones used for LNG are units of mass (more details below).

The numbers thus obtained have been rounded to the nearest tenth or hundredth, depending on the level of detail required.

ENTSOG data

Data on gas flows (incoming and outgoing) between France and its neighbors come from the transparency platform of the European Network of Transmission System Operators for Gas (ENTSOG). They are provided by the transmission system operators of the various European countries, including GRTgaz.

These data are given in units of energy (KWh, GWh, TWh).

The converter from Gasunie, a Dutch gas infrastructure and transport company, was used for the relevant conversions: unit-converter.gasunie.nl/

GIE data

The data relating to regasification and LNG storage come from the GIE (Gas Infrastructure Europe) ALSI (Aggregated LNG Storage Inventory) transparency platform, which brings together gas infrastructure operators in Europe. They are supplied by gas infrastructure operators, including Elengy, Dunkerque LNG and Fosmax LNG, in various European countries.

These data are given in units of energy (KWh, GWh, TWh).

In particular, these data were used to calculate the rate of use of European and French LNG terminals. To do this, the data relating to the quantities regasified each day ("send out") during the study period, as well as those relating to the daily regasification capacities ("declared total reference send-out" (DTRS) or "send out capacity") entered daily during of the study period were added. The rate of use was obtained by taking the "send out" figure as a ratio of the "declared total reference send-out".

The converter from Gasunie, a Dutch gas infrastructure and transport company, was used for the relevant conversions: unit-converter.gasunie.nl/

Data from the Ministry of Ecological Transition and Territorial Cohesion (MTE)

Some of the data relating to the French energy situation (gas consumption, gas imports by country, balance by country) come from the "Natural gas, supply and consumption in France" dataset published online by the MTE Data and Statistical Studies service.

These data are shown in units of energy (TWh).

The converter from Gasunie, a Dutch gas infrastructure and transport company, was used for the relevant conversions: unit-converter.gasunie.nl/

EIA data

The data on gas exports from the United States to Europe, as well as the volumes of gas (and shale gas) produced in the United States, come from the U.S. Energy Information Administration's (EIA's) "Natural gas" databases.

These data were originally reported in length system volume units (trillion cubic feet, million cubic feet) and were converted to metric volume units (bcm).

The converter from Natural Gas Intelligence, a provider of data relating to the gas markets, was used for the following relevant conversions: www.naturalgasintel.com/natural-gas-converter/

DETAILS ON THE METHODOLOGY USED WITH THE OTHER DATA

TotalEnergies financial data

The data relating to TotalEnergies' financial results are mainly derived from the documentation published by the company, in particular the Universal Registration Document (URD) for the year 2022. Since financial information is mainly expressed by the company in dollars, it has been converted into euros by Greenpeace, using the exchange rate specified.

LNG contract data

The data relating to the corporate contracts in force for the purchase or sale of LNG were mainly extracted from the GIIGNL (International Group of Liquified Natural Gas Importers) annual report for the year 2022, as well as from the Bloomberg NEF Global LNG Contracts database (version Q4 2022, updated until December 31, 2022).
The data relating to the contract quantities of LNG are given in units of mass (million tons or Mt) of LNG. It is recognized that 1 Mt of LNG is equivalent to approximately 1.36 bcm of gas. See, for example, the converter from BP: www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-approximate-conversion-factors.pdf.

It should be noted that the liquefaction of natural gas makes it possible to reduce its volume by a factor of nearly 600 for the same calorific value.

GREENPEACE

Floating LNG terminal in Le Havre:

SYMBOL OF A DRIFTING CLIMATE AND ENERGY POLICY

REPORT
June 2023