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Citi: Banking on a Climate Shipwreck

Exposing Citigroup's massive role in the expansion of maritime fossil gas

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DISCLAIMER:

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Correction appended

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Key Facts and Findings

Citigroup is greenwashing by ignoring its own climate commitments through its instrumental roles in securing at least **\$246 billion USD** for maritime LNG projects (e.g. LNG terminals, ship fueling infrastructure, newbuild and/or retrofit vessels) and for companies engaged in maritime LNG expansions. This surge in financing has occurred in the years since Citigroup co-founded the Poseidon Principles in 2019.

Note: Citigroup and its subsidiary Citibank are both herein referred to as Citi in this document.

Quick Context:

1. International shipping is one of the most polluting industrial sectors on the planet with greenhouse gas emissions greater than Germany, the 6th most emitting country.
2. LNG (liquefied fossil gas) has been proposed as a so-called 'solution' or 'bridge fuel' to decarbonize the maritime sector. LNG is primarily methane, a greenhouse gas over 80 times more potent than carbon dioxide on a 20-year timeframe. Methane is 28 times more potent a greenhouse gas on a 100-year timeframe. It is the second leading cause of climate change.
3. Studies have shown that the use of LNG as a marine fuel worsens the climate impact of shipping by 70-82% or more compared to business-as-usual.
4. The 4th International Maritime Organization (IMO) GHG study (2020) showed a massive increase in methane emissions of 151 -155% during the study timeframe (2012 - 2018) due to the uptake of LNG as a marine fuel. This increase was disproportionate to the more moderate increase in LNG fuel usage of 28-30% for the same period. The discrepancy between fuel usage and methane emissions was largely attributed to unintentional releases of unburned methane from ship engines (methane slip).
5. Citi is a founding signatory of the Poseidon Principles, an initiative created in June 2019 to bring ship finance into alignment with climate pollution reduction goals. Citi also endorsed the Climate Bonds Initiative, which explicitly excludes LNG shipping from its certification criteria. It has also endorsed other climate finance

initiatives that would exclude its participation in securing funding for LNG projects or corporate finance loans for maritime LNG companies.

Introduction

Although international shipping is often out of sight and out of mind, [90% of global trade goods are transported on oceangoing vessels](#).¹ From the food we eat, the clothing we wear, the furniture in our offices and homes, our lights, electronics and so much more - the vast majority was at one point on a massive, fossil-fueled ship crossing the world's oceans.²

International shipping is one of the world's largest climate polluters. If it were a country, it would be the [world's sixth largest climate polluter with emissions greater than Germany](#).³

LNG-fueled vessels make that climate footprint worse - much worse. In fact, an analysis Stand.earth commissioned from the International Council on Clean Transportation (ICCT) in 2020 showed that LNG-fueled shipping is [between 70-82% worse for the climate than oil-fueled business-as-usual](#).⁴ A subsequent real-world measurement study found that methane slip emissions in at-sea conditions from the most common type of LNG-powered ship engine was [even higher than the 2020 analysis concluded](#)⁵ – 6% as measured in real-world operations vs 3.5% in the earlier modeled study.

The shipping industry is ramping up production of a new generation of liquefied natural gas (LNG)-powered ships, with fossil gas now being the most popular propulsion option for [newbuild vessels](#).⁶ In fact, the number of LNG-powered vessels has [increased 181% since 2020](#).⁷ The number of LNG-powered vessels in operation, excluding tankers, is expected to more than double within the next three years from current orders alone: from [469 in January 2024 to 1002 in 2027](#).⁸

The buildout of LNG-powered shipping requires multi-million dollar investments for both [LNG-powered vessels](#)⁹ and [LNG bunkering infrastructure](#).^{10,11}

Citi has long been one of the leading international financiers of maritime projects. On June 18, 2019, Citi became a founding member of the Poseidon Principles. With this, the bank appeared to take a leadership role in steering capital for the maritime sector towards climate solutions. Citi has also endorsed multiple other climate commitments that *should* preclude its involvement in financing fossil-fueled shipping projects and companies engaged in the maritime LNG buildout.

Despite this, Citi has played an instrumental role in helping secure at least \$246 billion USD in financing for maritime LNG companies and projects through syndicated loan and bond underwriting deals since 2019.¹² It would appear that Citi has used its climate commitments to obfuscate its role in financing LNG shipping, rather than use its significant clout in the maritime finance sector to catalyze increased investments in zero emission vessels and infrastructure.

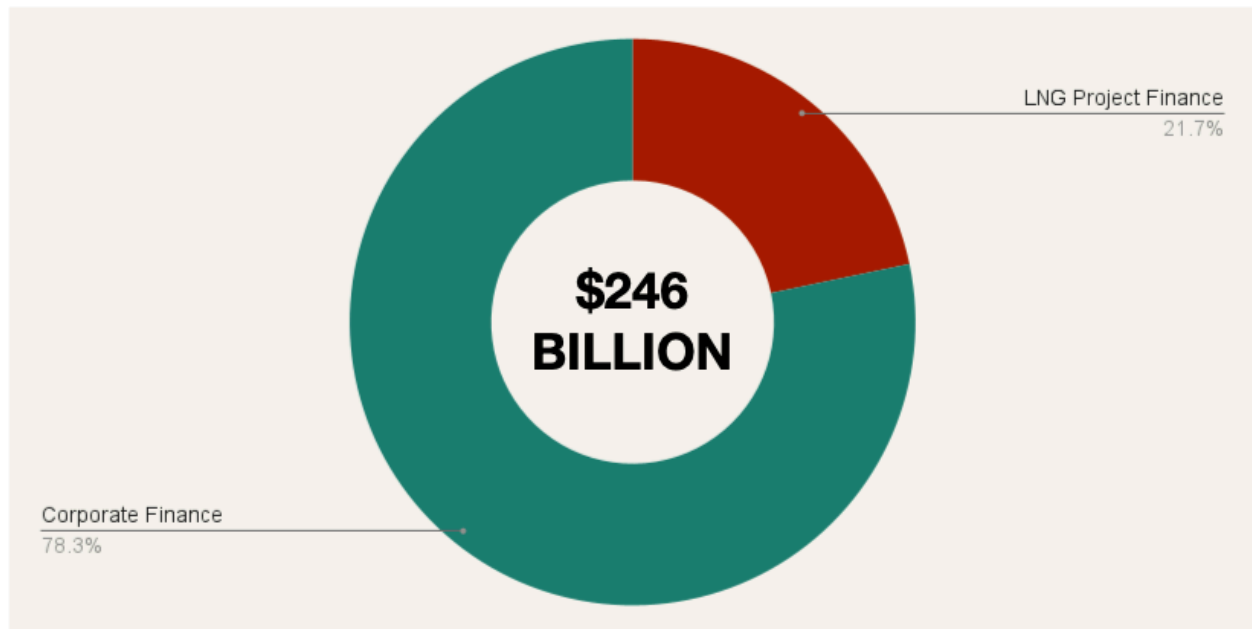


Figure 1. Since 2019, Citibank has helped LNG companies secure at least \$246 billion USD in financing, with 22% going to LNG project financing and a further 78% going to companies involved in maritime LNG for general corporate purposes (see definitions in the Annex). Analysis by Stand.earth Research Group based on data from IJGlobal.

Background

Shipping, the climate, and fossil gas

While fossil gas is a fairly new fuel for non-tanker vessels, major [fossil fuel industry](#)¹³ players have been [looking at the maritime sector](#)¹⁴ as a life raft [in a time of increasing climate action](#)¹⁵ for [years](#)^{16,17}. This means ships with engines designed to burn LNG must be built. Additional LNG [bunkering infrastructure](#)¹⁸ to refuel LNG-powered vessels would need to be constructed in ports globally. [Oil and gas companies](#)¹⁹ are also [directly investing in LNG bunkering infrastructure](#)²⁰ around the world.

LNG bunkering infrastructure has been rapidly increasing. In 2019, the LNG bunkering market was [valued at \\$0.38 billion USD](#)²¹. It is currently valued at approximately [\\$1.26 billion USD, and is projected to reach \\$4.73 billion USD by 2029](#)²². Put another way, [in 2020 there were 96 ports worldwide that had LNG bunkering capabilities](#)²³. According to data furnished by SEA-LNG²⁴, there currently are approximately [190 ports with LNG bunkering infrastructure, with another 80](#)²⁵ either building or considering LNG bunkering infrastructure buildout. Further expansion of LNG vessel fleets and bunkering threatens to lock-in fossil gas use in a heavily polluting sector for [decades to come](#)²⁶.

That is a huge problem for the climate. The 4th IMO Greenhouse Gas (GHG) study for ships noted that the increase in methane²⁷ emissions from the shipping sector was disproportionately large in relation to the more modest growth of LNG as a marine fuel during the study period. Between 2012-2018, the use of LNG as a marine fuel increased between 28-30%. However, the IMO found that during the same time period, methane emissions from the shipping sector had increased 151-155% ([see pg. 110](#))²⁸. The IMO attributed the disparity between use and emissions increases to unintentional releases of unburned methane from ship engines, referred to as 'methane slip'. In fact, the most popular engine type for non-tanker vessels is also the leakiest, resulting in unintentional releases of significant quantities of unburned methane into the atmosphere.

The 2023 IMO GHG reduction strategy

In July 2023, the IMO passed its final GHG reduction strategy. This dramatically shifted the regulatory landscape because it included all GHGs, whereas the previous iteration only set targets for carbon dioxide. The updated GHG reduction strategy also stipulates that emissions must be calculated on a well-to-wake, lifecycle basis. The IMO agreed to absolute GHG emissions reductions from a 2008 baseline of:

- 30% by 2030
- 80% by 2040
- Net-zero by 2050

While the final IMO GHG reduction strategy is far more ambitious than the earlier version, it still falls short of the Paris agreement. Its targets would result in 1.6-1.7 °C warming. Thus, additional action above and beyond the IMO targets must be taken if warming is to be limited to 1.5 °C.

Counterintuitively, [LNG remains the most popular fuel choice for newbuild vessels](#)²⁹. According to industry executives, lower LNG prices and more LNG-capable vessels [will further increase demand for LNG marine fuel](#)³⁰.

Maritime LNG finance

Newbuild and vessel retrofit projects are often funded through both public and private investors, such as Export Credit Agencies (ECAs) and private banks. For example in 2022, Seaspan secured 1.4 billion USD in funding for 10 new LNG container ships from the two official ECAs of Korea: the Export-Import Bank of Korea (KEXIM) and the Korea Trade Insurance Corporation (K-Sure). The deal was coordinated by Citigroup. [The total cost of Seaspan's fully-funded 70 vessel LNG-powered newbuild program was a staggering \\$7.6 billion USD](#)³¹.

Funding for LNG bunkering infrastructure differs in each country, but can also include government infrastructure grants and/or public banks, such as the European Investment Bank. In addition, shipping lines and private banks also participate in funding these projects.

What Citi says: Climate smoke and mirrors

Citi has cultivated a brand image as a finance sector climate leader. It has endorsed or been a founding member of numerous climate-responsible finance initiatives. Yet, its status as one of the world's largest financiers of fossil fuel companies, including its financing for maritime LNG, exposes a track record of greenwashing its sustainability commitments.

Citi is one of the top 10 global banks providing funding for ship finance. It has also endorsed or co-founded finance initiatives aimed at accelerating the decarbonization of the shipping sector.

Maritime finance climate initiatives

In September 2015, [Citi joined the Climate Bonds Initiative](#)³². This is an international nonprofit organization that aims to mobilize capital for climate solutions in line with science-based targets and the Paris agreement. It [explicitly excludes LNG vessels from its certification criteria](#)³³ for shipping.

In June 2019, [Citi became a founding member of the Poseidon Principles](#)³⁴ - a framework for assessing the climate alignment of ship finance portfolios. This initiative aims to catalyze the decarbonization of the shipping sector through [climate responsible ship finance](#)³⁵. While the Poseidon Principles do not explicitly address maritime LNG projects, the stated objective of the principles is to [align banks' ship finance portfolios with climate targets](#)³⁶.

The Poseidon Principles framework chose to follow the initial IMO GHG reduction strategy, though it is being updated to align with the 2023 revised strategy. It is also important to note that nothing within the Poseidon Principles limits signatories from taking more ambitious action than indicated in the framework itself. Indeed, other climate initiatives that Citi has founded or endorsed would require that it exceed the Poseidon Principles level of ambition.

It is important to highlight that the Poseidon Principles apply only to vessel financing. This narrow definition of maritime finance enables signatories to exclude large categories

of financing for maritime LNG, e.g., LNG export and import terminals and LNG ship fueling (bunkering) projects.

This Stand analysis includes LNG import and export terminals, bunkering projects, as well as corporate finance loans to companies engaged in the buildout of maritime LNG. It also includes **both financed and facilitated activities**, in line with Citi's commitments under the Net-Zero Banking Alliance and the Partnership for Carbon Accounting Financials (see below). This provides a more complete picture of Citi's role in maritime LNG financing.

This broader definition for maritime finance is also important in several other ways: 1) LNG export and import terminals support the continued or increased use of LNG globally during this critical period in which drastic GHG emissions reductions are needed to avert the worst impacts of climate change ; 2) tankers and export and import terminals not only result in large volumes of LNG being carried across the waves, but LNG tankers often use methane boil-off-gas (BOG) from the cargo for fuel; 3) other types of LNG-fueled vessels (e.g., container, car carriers, passenger vessels) cannot operate without LNG bunkering infrastructure to refuel them.

Other relevant climate finance endorsements

A month after co-founding the Poseidon Principles, Citi became the first North American bank to endorse the '[Principles for Responsible Banking](#)' (PRB)³⁷. The PRB addresses both climate and other corporate responsibility issues. While the Poseidon Principles chose to follow the IMO GHG process, the PRB states that signatories are expected to align portfolios with the Paris Agreement 1.5 °C target. The [PRB guidance](#)³⁸ does state that frameworks from other credible sources may be used for industry-specific targets, but stipulates that these industry-specific frameworks used *must* be Paris-aligned.

The PRB guidance also identifies the [UN Environment Programme \(UNEP\) 2020 Emissions Gap Report](#)³⁹ as a core document. The UNEP 2020 Gap report examines international shipping and aviation, which fell outside the Paris Agreement framework due to the international nature of these industries. It further explored solutions for decarbonizing the shipping sector, including: slowing ship speeds (slow steaming), efficiency retrofits, and (explicitly) non-fossil fuels and technologies, e.g., battery power storage, wind-assisted propulsion, and fuels sourced from renewables such as green hydrogen and ammonium.

In April 2021, [Citi also became a founding member of the Net-Zero Banking Alliance](#)⁴⁰ (NZBA). This is a UN-convened, industry-led alliance and is the climate-focused subgroup of the PRB. Initially, guidance for NZBA signatories remained the PRB guidance. In March 2024, NZBA members voted to update the guidance. The [updated guidance](#)⁴¹ reiterates the founding Principles of NZBA. It states: “Targets shall *at a minimum* align with a goal to limit global warming to 1.5°C above the preindustrial average by the end of the century, be science-based, and support the transition towards a net-zero economy by 2050 [emphasis added].”

While the updated NZBA guidance notes that sector-specific metrics may be used, including intensity metrics, it makes clear that an intensity metric should not be applied exclusively. In its guidance on reporting it states:

“The financed emissions profile of the bank’s portfolio shall be calculated and disclosed annually. This *shall* include, where targets have been set: Absolute emissions; *and* Portfolio-wide emissions intensity (e.g., CO₂e/USD lent or invested); *and* Sector-specific emissions intensity (e.g., CO₂e/metric)” [emphasis added].

It continues:

“The scenarios used by banks *shall* be aligned with a 1.5°C by end of century outcome and shall come from credible and well-recognised sources. Banks should provide a rationale for the scenario(s) chosen. . . Banks may use different scenarios for different parts of the portfolio, though they *shall* ensure that each scenario is aligned with a scenario as defined in these Guidelines” [emphasis added].

Further, the 2024 NZBA guidelines make clear that it applies not only to lending and investing, but also to capital markets activities and both financed and facilitated emissions.

Citi is also a signatory to the Partnership for Carbon Accounting Financials (PCAF). The [PCAF Global GHG Accounting and Reporting Standard for the Financial Industry](#)⁴² also makes clear that both financed and facilitated emissions are included. Its standard covers seven asset classes, including business loans and project financing.

What Citi Does: Major Financing of Maritime Fossil Gas

On paper, Citi appears to be a climate leader in the finance sector. This carefully cultivated image does not hold up under scrutiny of its actions. An analysis of Citi’s investments and activities reveals that, despite its multiple climate commitments, it has played an active role in financing maritime LNG projects and companies. This includes LNG-powered vessels, tankers, and/or bunkering vessels; LNG port infrastructure (e.g., import and export terminals and/or bunkering infrastructure); and corporate loans for companies engaged in maritime LNG projects. **The following table provides the total transaction value of all LNG-related financing, including both directly financed activities as well as facilitated activities where Citi has played an indirect role, including advisory roles.**

Table 1. Financing for LNG companies facilitated by Citi between 2019 - 2024, broken down by project and corporate finance. Analysis by Stand.earth Research Group based on data from IJGlobal.

Sector	Total Est. Deal Amount (USD billion)
Project Finance	53.3
Corporate Finance	192.3
Total	245.6

Financial transaction data reveal that since June 18, 2019 (the date Citi and partners launched the Poseidon Principles) Citi helped secure an estimated \$53 billion USD for maritime LNG projects (e.g., newbuild or retrofit LNG-powered vessels, tankers, bunkering facilities, or export terminal infrastructure) (see Table 1).⁴³ It also helped secure another estimated \$192 billion⁴⁴ USD for companies engaged in maritime LNG projects, (e.g., for corporate uses, repayment, or refinancing of previous debt). In sum, since mid-2019 Citi has facilitated or financed at least \$246 billion USD for maritime LNG projects and companies engaged in the buildout of maritime LNG fleets and/or infrastructure.⁴⁵

International maritime finance often requires the backing of both private and public banks. [Citi recognized](#)⁴⁶ the importance of Export Credit Agencies (ECA) in maritime finance at least a decade ago. In 2014, Citi [touted its relationships with ECAs](#)⁴⁷ and its ability to [secure funding for shipping](#)⁴⁸ and offshore drilling operations.

Citi has and is supporting the expansion of fossil gas-powered shipping through multiple avenues and financial structures. Its 2021 analysis of LNG markets also identified [LNG ship bunkers as third of the top five demand areas for fossil gas globally](#)⁴⁹.

Citi has been instrumental in securing financing for maritime LNG projects and companies, often as a lead financial institution. Between June 18, 2019 - March 31, 2024, it acted as a [Global Coordinator](#)⁵⁰, Mandated Lead Arranger (MLA), Bond Arranger, Export Credit Agency (ECA) Admin, and Bookrunner for maritime LNG financing.⁵¹ In 2022, [Citi pioneered a novel combination of ship finance structures combining ECA-backed loans with a Japanese Operating Lease with Call Option \(JOLCO\)](#)⁵² for LNG newbuild vessels.

Conclusion

International shipping is one of the most polluting global sectors. [Its GHG emissions](#)⁵³ not only exceed those of Germany, but also those of [international aviation](#)⁵⁴.

As one of the leading international financiers of the maritime sector, Citi has an opportunity and responsibility to catalyze the zero emission shipping transition. Citi is a founding member and signatory to multiple climate finance initiatives, including the Poseidon Principles and the Climate Bonds Initiative. It has an obligation to bring its full maritime portfolio - including securing funding through capital markets or syndicated loans for maritime bunkering infrastructure, terminals, and companies - into alignment with a 1.5 °C pathway. Citi can and must redirect its considerable experience and success in securing capital for maritime projects and companies towards zero emission vessel (ZEV) newbuilds and retrofits, ZEV fuels and propulsion technologies, vessel efficiency projects, and ZEV port infrastructure.

Note: An earlier version of this briefing note misstated the amount of funding Citigroup has facilitated for project and corporate finance of maritime LNG. The correct value is \$246 billion.

Annex - Definitions

The following definitions of maritime LNG, and project-related and corporate-purpose financing of maritime LNG, are used solely for the purposes of this study in order to best estimate the full extent of Citi's maritime LNG financing:

Maritime LNG projects

- (a) LNG vessels, including LNG carriers and bunkering vessels, floating LNG bunkering terminals, and LNG-powered vessels
- (b) associated infrastructure such as LNG export terminals*, storage, liquefaction, and bunkering facilities
- (c) This does NOT include:
 - (i) LNG production, regasification or other infrastructure exclusively for land-based uses such as power generation or trucking
 - (ii) pipelines, unless the pipelines are dedicated for maritime LNG use

** LNG export terminals are included because (a) the export process involves the use of LNG carriers, (b) such terminals commonly provide refueling/bunkering services, and (c) once the LNG is exported, all end uses are possible including for supplying LNG-powered vessels in the respective destination countries.*

Project-related financing of maritime LNG

- (a) Financing for maritime LNG-specific projects
- (b) Corporate financing for pure-play companies e.g. those set up exclusively for an LNG project
- (c) This does NOT include:
 - (i) transactions outside the relevant time period, such as if the financing occurred after a company disposed of its LNG assets

Corporate-purpose financing of maritime LNG

- (b) Financing, including for debt repayment or restructuring purposes, for:
 - (i) companies that own marine terminals that include LNG terminal(s) or storage facilities, even if that is not the primary focus of the company
 - (ii) companies that provide bunkering services that include LNG bunkering, even if that is not the primary focus of the company
 - (iii) fleet owners and shipbuilders that own or build LNG vessels, including LNG tankers, LNG bunkering vessels, and LNG-powered vessels.

- (iv) major petroleum companies like Shell, BP, or TotalEnergies that are pushing for and/or expanding their maritime LNG operations
- (v) companies that provide consulting or advisory services to any of the above
- (c) This does NOT include:
 - (i) fracking companies, even if we know they supply the LNG industry
 - (ii) LNG production, regasification or other infrastructure exclusively for land-based uses such as power generation or trucking
 - (iii) pipeline companies, unless the pipelines are dedicated to a maritime LNG use
 - (iv) port owners, even if there happens to be an LNG terminal in the port
 - (v) subsidiaries, if it is known that the specific subsidiary is not involved in maritime LNG
 - (vi) transactions outside the relevant time period, such as if the financing occurred after a company disposed of its LNG assets

Roles as specified by data provider IJGlobal:

- (a) **Bond Arranger:** Citi has been allocated credit based on underwritten commitments for these financial transactions. If underwritten values were not fully disclosed to the financial database organization, then allocations were made by dividing the tranche debt equally among the various Bond Arrangers.
- (b) **Financial Adviser:** Citi has been allocated credit for these transactions according to the full value of the transaction.
- (c) **Mandated Lead Arranger (MLA):** A MLA is one of the original banks and in a more senior position in a syndicated loan. This is the lender responsible for debt origination and/or underwriting at financial close. In the financial transaction database for reporting purposes all commercial lenders are assigned the MLA role. Credit was allocated based on underwritten commitments of the total debt in an infrastructure transaction at financial close. If the underwritten values were not fully disclosed, allocations were made by dividing tranche debt equally amongst the lenders. All known values for participant banks were allocated equally across all MLAs.

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