
GIIGNL MRV and GHG Neutral LNG Framework

Questions and Answers

Version 1.0



November 2021

Contents

Purpose1

In the simplest terms what does the framework do? Why was it created?	1
What is the Framework pathway process and steps that the LNG industry needs to follow?	1

Sector Specific Questions2

Is the Framework addressing the issue of methane?	2
Isn't the GIIGNL Framework just another natural gas certification initiative?	2
How will this framework help the LNG sector reduce associated GHG emissions? In what other ways do you think this framework will change the LNG sector?	2
How does the Framework ensure that post-delivery emissions (65-75% of the full life-cycle emissions) are accurately quantified and reported?	3
Isn't this framework just an attempt by the LNG sector to greenwash their emissions?	3
Will GIIGNL request producers to disclose emissions?	3
What does this Framework mean for the LNG industry's sustainability credentials?	3
How can the LNG sector be seen as accountable and credible by developing its own best practices around GHG emissions with no third-party oversight or input?	3
What measures are in place to ensure GHG emissions are captured across the entire value chain?	4
Can the Framework be gamed/manipulated?	4
How does this Framework support decarbonisation?	4

Adoption4

How can my company make sure that its procedures are aligned with the GIIGNL Framework?	4
Can this Framework be applied to any cargo – or just LNG cargoes?	4
What do you think will be the key challenges for those wanting to use the Framework?	4
How many members have committed to using the Framework with their cargoes?	4
Who can use the Framework and what level of support will businesses have in using it?	5

Framework Development5

What were the greatest challenges in developing this Framework?	5
How many members have been involved in developing the Framework?	5
How often will the Framework be reviewed?	5

Reference Standards5

What established standards and methodologies are referenced in this Framework?	5
What accounting principles apply to reporting under the Framework?	6

Accounting Methodology.....7

How does the Framework capture reporting of data in relation to GHG emissions?	7
What does the LNG life cycle cover?	7
How are GHG emissions calculated and reported across the LNG life cycle?	7
Are existing GHG accounting standards and methodologies adapted to quantify emissions of LNG cargoes?	7
Does the GIIGNL Framework allow the use of default factors to quantify emissions?	8
How frequently should GHG data be collected and calculated?	8
Can I use the Wood Mackenzie model to quantify emissions?	8
Why take a Global Warming Potential based on a 100-year timeline and not a 20-year timeline?	8

How does the Framework address the issue of gas supply from multiple sources (e.g. US LNG produced from natural gas sourced from multiple basins)?	9
How do you account for shipping emissions when very few actual measurements on the shipping stage are available?	9
Are there any exclusions of the Framework, and if so, what are they?	9
How does the Framework account for 'Removals' and 'Carbon Capture, Utilisation and Storage' (CCUS)?	9
Is the Framework applicable to cargoes that contain 'Green Gas'??	10
How does the Framework account for the possibility of emission double counting?	10

GHG Neutrality.....10

What does GHG neutrality actually mean in the context of this Framework?	10
Why is GIIGNL using the term GHG Neutral rather than "carbon-Neutral"?	10
How can any player be sure that a cargo is GHG neutral?	10

Offsets11

What are GIIGNL's criteria for offsetting? Isn't this Framework primarily about encouraging reporters to utilise offsetting?	11
Will the pricing of offsets be used as a mechanism to encourage emissions reduction?	11
How is the amount of GHG offsets calculated for each cargo? One offset per tonne of GHG avoided/removed from the atmosphere, or does the Framework offer a new calculation?	11
How does the Framework ensure that offsetting will be permanent?	11
How will the Framework compel companies to make disclosures about the cost and amount of offsets they purchase, as well as where they came from?	12

Verification12

How are emissions correctly calculated across the value chain, so the results are both transparent and credible?	12
What is the standard applied for verification?	12
Will GIIGNL provide a list of GHG verifiers?	12

Reporting/Sharing Outputs.....12

Who is responsible for filing the GHG neutrality declaration?	12
Can GIIGNL support me through the Framework process and completion of the Cargo Statement?	12
How will companies share the calculated emissions?	13
How will this change the way cargoes are contracted?	13

Regulation.....13

How is this Framework enforced or regulated across the LNG industry?	13
--	----

Purpose

IN THE SIMPLEST TERMS WHAT DOES THE FRAMEWORK DO? WHY WAS IT CREATED?

The Framework provides those who use it with a common set of guidelines, based on established methodologies and standards, to quantify the GHG emissions associated with an LNG cargo and make a claim relating to its status as 'GHG Neutral' or 'GHG Offset'. These guidelines can be applied across the entire end-to-end value chain, from production to end use, for a partial life cycle or for a specific stage.

More specifically the Framework is designed to:

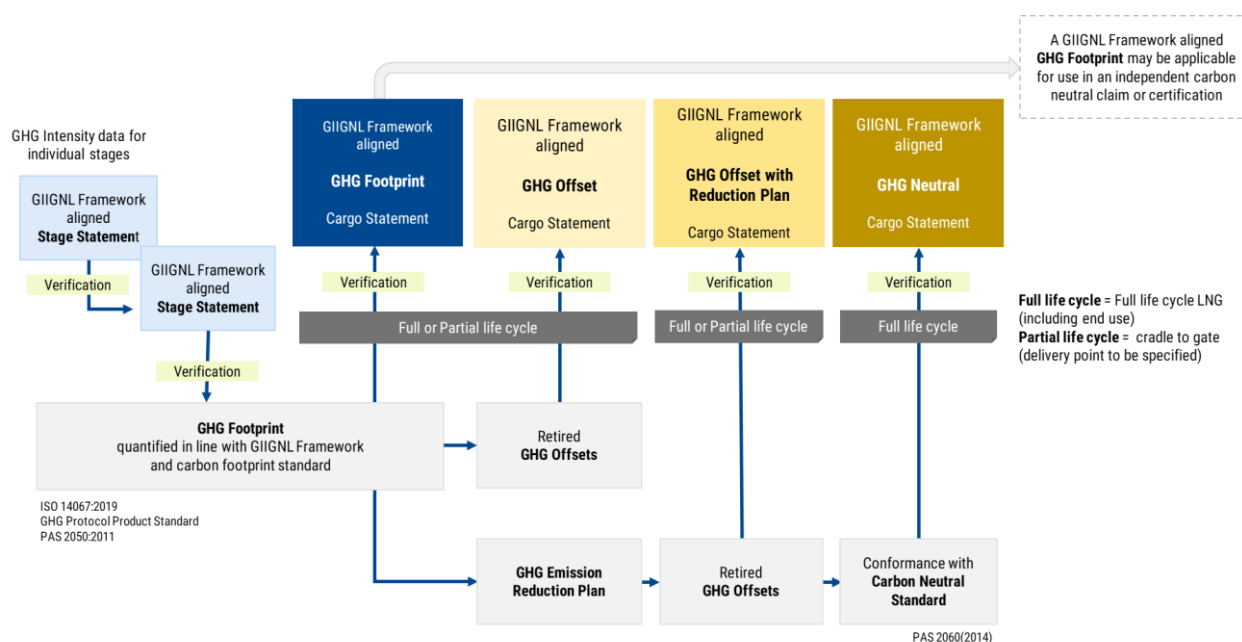
- provide a common source of best practice principles in the monitoring, reporting, reduction, offsetting and verification of GHG emissions associated with a delivered cargo of LNG
- promote the commitment to, and disclosure of, verified emissions based on consistent GHG accounting criteria and definitions from all relevant stages included in the reporting boundary, thereby facilitating the calculation of Cargo GHG Footprint that genuinely reflects its climate impact
- promote a consistent approach to declarations related to emission reduction actions and GHG offsets that are associated with an LNG cargo
- position emission reduction action as the primary focus of a claim of 'neutrality', with the use of offsets to compensate for residual emissions that cannot be reduced
- promote full accounting for methane emissions as well as carbon dioxide and other applicable GHGs

WHAT IS THE FRAMEWORK PATHWAY PROCESS AND STEPS THAT THE LNG INDUSTRY NEEDS TO FOLLOW?

Recognising the various levels of readiness and commercial expectations of those using the framework, five Declaration Pathways have been developed:

- **GIIGNL Framework Aligned Stage Statement ('Stage Statement')**: A verified statement of GHG intensity and emissions associated with a specified amount of gas exported from defined life cycle stage(s) within the LNG value chain that conforms to the GIIGNL Framework criteria and associated GHG footprint standard
- **GIIGNL Framework Aligned LNG Cargo GHG Footprint ('GHG Footprint')**: A verified full ('cradle to grave') or partial ('cradle to gate') life cycle GHG Footprint that conforms to the GIIGNL Framework criteria and defined GHG footprint standard (e.g. ISO14067:2018)
- **GIIGNL Framework Aligned GHG Offset LNG Cargo ('GHG Offset')**: A verified full or partial life cycle GHG Footprint, which has been offset with carbon credits that meet the criteria set out in the Framework
- **GIIGNL Framework Aligned GHG Offset LNG Cargo with Reduction Plan ('GHG Offset with Reduction Plan')**: This is a verified full or partial life cycle GHG Footprint that embodies an emission reduction plan. Residual emissions have been offset with carbon credits that meet the criteria set out in the Framework
- **GIIGNL Framework Aligned GHG Neutral LNG Cargo ('GHG Neutral')**: A verified full life cycle GHG Footprint that embodies an emission reduction plan and commitment to long-term decarbonisation, has been offset with carbon credits that meet the criteria set out in the Framework and conforms to an internationally accepted carbon neutral standard (PAS 2060:2014 or equivalent)

These Declaration Pathways are illustrated below.



Sector Specific Questions

IS THE FRAMEWORK ADDRESSING THE ISSUE OF METHANE?

Yes, the Framework includes a requirement to report methane emissions in the Cargo Statement, and also specifically requires the inclusion of a methane intensity metric (tCH₄/mmBtu). We expect methane quantification methodologies to improve over time as participants adopt one or more of the emerging approaches and technologies.

ISN'T THE GIIGNL FRAMEWORK JUST ANOTHER NATURAL GAS CERTIFICATION INITIATIVE?

GIIGNL is not an organisation that is set up to operate a certification programme. This Framework is designed to guide consistent reporting across the industry. However, a GHG Footprint developed under the framework may be appropriate as a basis for participation in a 3rd party certification scheme.

HOW WILL THIS FRAMEWORK HELP THE LNG SECTOR REDUCE ASSOCIATED GHG EMISSIONS? IN WHAT OTHER WAYS DO YOU THINK THIS FRAMEWORK WILL CHANGE THE LNG SECTOR?

Quantification and reporting in a way that is specific to a cargo, rather than the use of generic industry factors, will help distinguish between cargoes and incentivise GHG emission reduction. Also, implementation of a GHG emission reduction plan is a core component of a claim of GHG neutrality.

The Framework will also encourage improved communication and transparency of GHG information between different participants in the LNG production and use cycle. It is anticipated that the Framework will promote an expectation of a GHG emissions declarations between contracting parties within the sector.

HOW DOES THE FRAMEWORK ENSURE THAT POST-DELIVERY EMISSIONS (65-75% OF THE FULL LIFE-CYCLE EMISSIONS) ARE ACCURATELY QUANTIFIED AND REPORTED?

The Framework itself cannot ensure this. However, it promotes the capture of an emissions profile from all stages in the specific life-cycle boundary of the LNG Cargo and also includes a requirement for third party verification of the GHG Footprint. The emissions associated with the combustion of the LNG itself can be calculated based on analysis of the cargo, but the accounting should also include additional emissions associated with methane loss or imported energy associated with stages from regasification to end use.

The Framework accepts that secondary default data may need to be applied early in the adoption of the Framework, but participants are encouraged to use data based on the actual gas network post regasification if this is possible.

ISN'T THIS FRAMEWORK JUST AN ATTEMPT BY THE LNG SECTOR TO GREENWASH THEIR EMISSIONS?

By constructing this Framework to be accessible by all participants in the LNG production and use chain, it is intended to increase the transparency of emissions accounting throughout the industry. The Framework also encourages open communication of the relevant emissions data. In this way, through complete, transparent reporting, with independent verification, we are approaching the issue in an open and credible manner. Following quantification of the GHG Footprint, the Framework sets criteria for developing and implementing an emission reduction plan, offsetting of residual emissions and for making a declaration of GHG Neutrality.

WILL GIIGNL REQUEST PRODUCERS TO DISCLOSE EMISSIONS?

The Framework includes reporting in an independently verified Cargo Statement. The Cargo Statement includes emissions data (absolute and intensity based) as well as supporting information on the methodologies applied, low GHG features of the cargo, emission reductions and offsets purchased.

A claim of GHG Neutral cargo will need to conform to a carbon neutral standard, of which PAS 2060:2014 is the only such standard available today. Whilst PAS 2060:2014 requires disclosure of specific information, the Framework itself does not require public disclosure of the verified Cargo Statement. It invites users to lodge a copy with GIIGNL to facilitate tracking of the Framework's use and anonymous benchmarking of Cargoes that have applied it.

WHAT DOES THIS FRAMEWORK MEAN FOR THE LNG INDUSTRY'S SUSTAINABILITY CREDENTIALS?

It is anticipated that adoption of the Framework will demonstrate the industry's acceptance that good quality data are needed to underpin transparency and emission reduction goals. A high bar is placed by the Framework on a declaration of GHG neutrality, requiring a commitment to long-term decarbonisation supported by a defined GHG Emission Reduction Plan.

HOW CAN THE LNG SECTOR BE SEEN AS ACCOUNTABLE AND CREDIBLE BY DEVELOPING ITS OWN BEST PRACTICES AROUND GHG EMISSIONS WITH NO THIRD-PARTY OVERSIGHT OR INPUT?

The Framework was developed with the support of experienced sustainability consultants Environmental Resources Management Ltd (ERM). It is based on established international GHG accounting standards and methodologies as translated for the LNG industry. The Framework requires independent third-party verification of the Cargo Statement, including the GHG Footprint and information relating to emission reductions, offset retirement or GHG neutrality.

WHAT MEASURES ARE IN PLACE TO ENSURE GHG EMISSIONS ARE CAPTURED ACROSS THE ENTIRE VALUE CHAIN?

The Framework adopts internationally accepted standards for carbon footprint assessment. In line with these standards, a partial (cradle to gate) footprint boundary may be used. A GHG Neutral declaration under the Framework must include the full value chain, including end use. Partial life cycle footprints are only eligible for a declaration of 'GHG Offset' or 'GHG Offset with Reduction Plan'. The Framework can also be applied to a single stage of the LNG supply chain to allow the emissions from each stage to be carried forward to build the GHG Footprint based, as far as possible, on actual data reported from each stage. The Framework requires complete transparency on the stages included in the GHG Footprint assessment.

CAN THE FRAMEWORK BE GAMED/MANIPULATED?

The Framework is based on established standards, with independent verification. The criteria for making a declaration are clearly stated. As with any accounting system, the potential for manipulation cannot be eliminated, but with a requirement for full transparency and verification the Framework aims to minimise this risk.

HOW DOES THIS FRAMEWORK SUPPORT DECARBONISATION?

The Framework requires a commitment to long-term decarbonisation to support a GHG Neutral declaration and promotes offsetting only for emissions that cannot otherwise be reduced or avoided.

Adoption

HOW CAN MY COMPANY MAKE SURE THAT ITS PROCEDURES ARE ALIGNED WITH THE GIIGNL FRAMEWORK?

The Framework builds on established industry approaches for GHG quantification at entity level, and it is expected that procedures for data collection already exist for many industry participants. The application of a product accounting standard for quantification of the GHG Footprint may be new and require some up-front effort to establish new accounting procedures. The Framework requires a 'GHG Footprint Methodology' to be documented that sets out the approach to this. Once established, however, this methodology will be able to be used for multiple cargoes with a review annually or when there would be any significant changes.

CAN THIS FRAMEWORK BE APPLIED TO ANY CARGO – OR JUST LNG CARGOES?

This Framework has been developed to be applicable to LNG cargoes. The underlying principles are taken from international standards and could therefore also be applied to other cargoes or commodities in a similar way.

WHAT DO YOU THINK WILL BE THE KEY CHALLENGES FOR THOSE WANTING TO USE THE FRAMEWORK?

The Framework was developed with the ambition of increasing the transparency of emissions reporting within the industry, and based on the principle of using the most specific and up-to-date information possible. We anticipate that initially, this may be challenging, and participants may have to use elements of indirect (secondary) data as well, however as uptake of the Framework increases, we expect more specific data to become available.

HOW MANY MEMBERS HAVE COMMITTED TO USING THE FRAMEWORK WITH THEIR CARGOES?

The GIIGNL members' commitment is shown by their desire to come together and create the Framework in the first place. Members are not obliged to use the Framework. Where it is used, GIIGNL requests that copies of verified Cargo Statements are shared with GIIGNL so the Framework's use can be tracked (confidential content may be redacted in the version presented to GIIGNL).

WHO CAN USE THE FRAMEWORK AND WHAT LEVEL OF SUPPORT WILL BUSINESSES HAVE IN USING IT?

Anyone with a role in the LNG supply chain can use the Framework. Those using the Framework may choose to use external support when applying the Framework in addition to their verifiers.

GIIGNL is exploring with its members what forms of support will be useful during early adoption.

Framework Development

WHAT WERE THE GREATEST CHALLENGES IN DEVELOPING THIS FRAMEWORK?

The GHG quantification methodologies and standards for GHG footprint development, offsetting and neutrality on which the Framework is based present significant depth and breadth of complexity. One of the challenges was to distil these into core criteria that are relevant to all life cycle stages, pragmatic to implement and can be applied in a way that promotes consistent reporting of a GHG footprint, directly reflecting the life cycle of an individual cargo.

HOW MANY MEMBERS HAVE BEEN INVOLVED IN DEVELOPING THE FRAMEWORK?

73 of 86 GIIGNL member companies participated in a member survey that explored current practices and member views on the market for carbon neutral LNG and what the Framework should achieve. A Technical Task Force of more than 50 individuals from 20 companies met regularly throughout Framework development and actively contributed to its content and review. These task force member companies are listed below:

bp	Eni	MOL	Sempra
Cheniere	Exelon	Naturgy	Shell
CNOOC	Gate Terminal	Novatek	Tokyo Gas
ENAGAS	Gazprom	Pavilion Energy	TotalEnergies
ENGIE	JERA	RWE	Uniper

HOW OFTEN WILL THE FRAMEWORK BE REVIEWED?

The Framework will be reviewed following its initial adoption to accommodate users' feedback. The Framework will also need to evolve over time to reflect changes to the regulations and guidelines that underpin it - e.g. when the planned carbon neutral standard in development by the International Organisation for Standardisation, ISO/WD 14068, is published (expected in 2023).

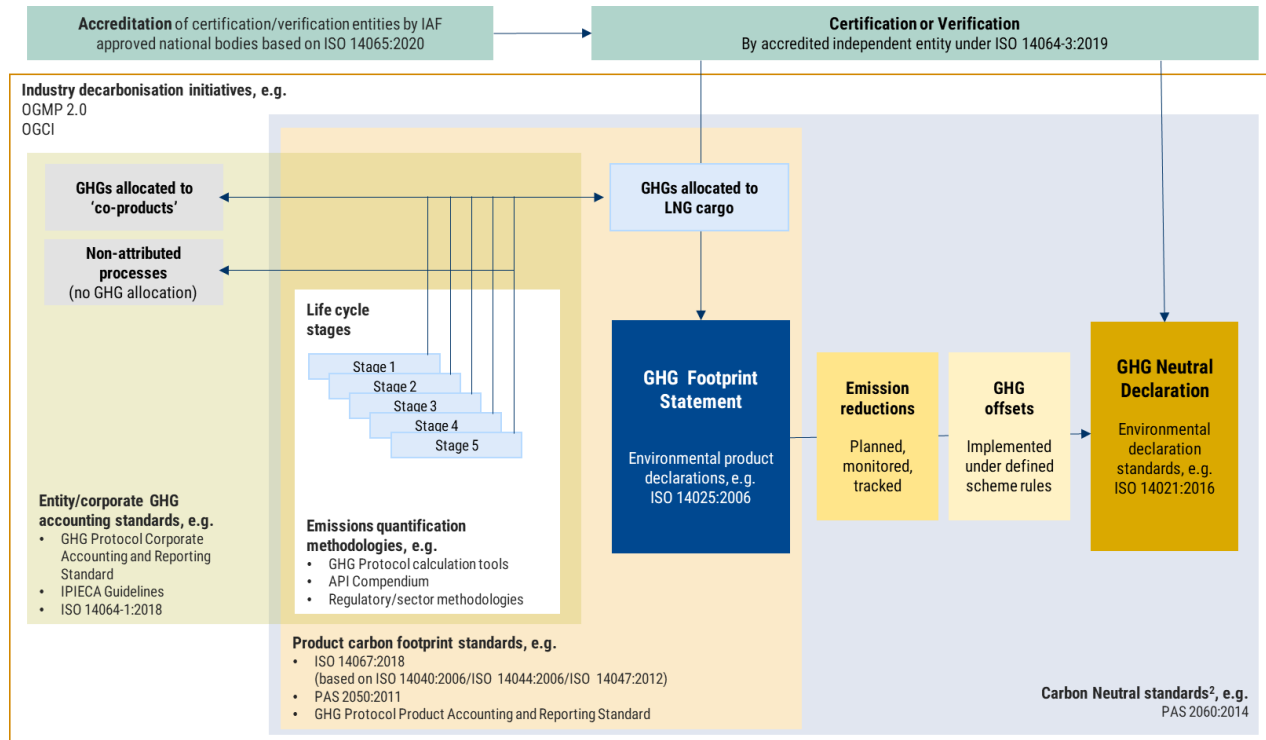
GIIGNL undertakes to review the Framework on a periodic basis to reflect emerging practices and obligations for GHG accounting, offsetting and carbon neutrality claims.

Reference Standards

WHAT ESTABLISHED STANDARDS AND METHODOLOGIES ARE REFERENCED IN THIS FRAMEWORK?

The Framework is designed to support, and not replace, established standards and methodologies that govern GHG emissions calculations, GHG footprint determination, GHG offsetting, and GHG (or carbon) neutral declarations.

The following schematic illustrates how current standards and methodologies are integrated to support the quantification of a 'GHG Footprint' and a 'GHG Neutral' claim. This overall structure has guided the development of the Framework.



WHAT ACCOUNTING PRINCIPLES APPLY TO REPORTING UNDER THE FRAMEWORK?

This standard is underpinned by the following principles which reflect the principles within product carbon footprint standards:

- **Relevance:** All emissions data and methods appropriate to the assessment of the GHG emissions arising from the LNG value chain are selected
- **Completeness:** All significant GHG emissions are included and any that are excluded are disclosed and justified.
- **Consistency:** Assumptions, methods and data are applied in the same way across all relevant stages of the assessment
- **Accuracy:** Quantification of the cargo GHG footprint within the specified boundaries is accurate, verifiable, relevant, and not misleading, with biases and uncertainties reduced as much as is practical. Double counting of emissions is avoided
- **Transparency:** All relevant issues are addressed and documented in an open, comprehensive, and understandable manner
- **Coherence:** Methodologies, standards, and guidance documents that are already recognised internationally and adopted for product categories are applied, to enhance comparability between LNG footprints

Accounting Methodology

HOW DOES THE FRAMEWORK CAPTURE REPORTING OF DATA IN RELATION TO GHG EMISSIONS?

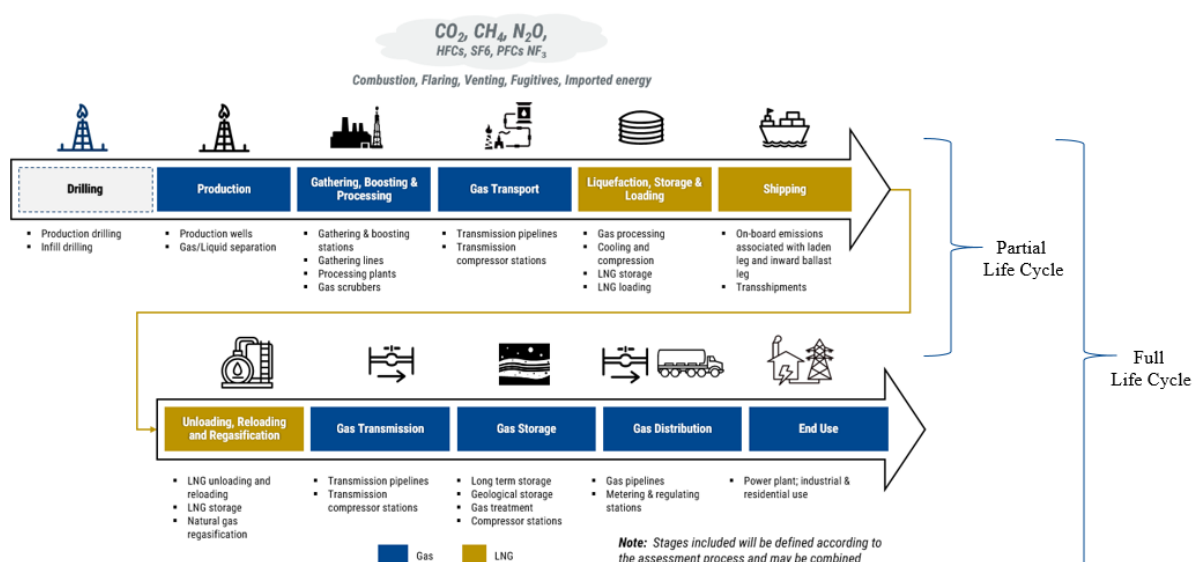
The data are captured in a verified Cargo Statement, which includes the GHG Footprint data as well as supporting information on the stages included in the GHG Footprint boundary and methodologies used, as well as information on reduction plan, offsets used, and GHG neutrality if applicable.

WHAT DOES THE LNG LIFE CYCLE COVER?

This Framework can be applied across the entire LNG lifecycle, or ‘cradle to grave’ (e.g. from the well head up to and including the end use combustion or final processing of the natural gas). Some of those using the Framework will only be interested in partial life cycle ‘cradle to gate’ approach.

The Framework also makes provision for developing ‘Stage Statements’ that may cover only one, or a subset of stages within the life cycle and which can be used in the overall GHG Footprint calculation.

The stages included are illustrated below:



HOW ARE GHG EMISSIONS CALCULATED AND REPORTED ACROSS THE LNG LIFE CYCLE?

GHG emission calculations are based on established industry methodologies such as the API Compendium¹. The application of a GHG footprint standard then allocates these emissions to the LNG product.

ARE EXISTING GHG ACCOUNTING STANDARDS AND METHODOLOGIES ADAPTED TO QUANTIFY EMISSIONS OF LNG CARGOES?

We have not adapted any standards or methodologies – we have simply framed how emissions along the LNG value chain will be consistently applied when using these standards and methodologies.

¹ Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Gas Industry. American Petroleum Institute, 2015.

DOES THE GIIGNL FRAMEWORK ALLOW THE USE OF DEFAULT FACTORS TO QUANTIFY EMISSIONS?

The Framework sets a hierarchy of data preference. Primary data sourced from site level monitoring, is preferred. It is accepted that secondary default factors will be needed for some stages – at least in the early adoption period of the Framework, but these should be chosen to reflect the region or source as closely as possible. A GHG Footprint based entirely on default factors would not be aligned with the Framework or the GHG footprint Standards.

Data Hierarchy:

- **Primary Direct:** Direct primary data, such as metered flow measurements, gaseous fuel sampling, and product flow measurement. It is particularly important to source primary data for the most significant emission sources
 - **Primary Indirect:** Indirect primary data, such as component counts and engineering assumptions, modelled gaseous fuel composition based on the specific process. Standardised component leakage rates, if modified based on primary direct gas compositions would also be primary indirect data
 - **Secondary Direct:** Cargo-aligned secondary data, including process level default factors and those based on specific regional or basin level assumptions. Use of LCA models that allow input of primary data from the cargo life cycle (e.g. LCA models such as OPGEE) fall into this level
 - **Secondary Indirect:** Secondary factors and LCA models that are not related to the characteristics of the specific stage owners across the defined cargo life cycle. This would include stage-based emission factors and LCA models that are unrelated to the characteristics and sources of the cargo. Sources of default or fixed factors must be stated
-

HOW FREQUENTLY SHOULD GHG DATA BE COLLECTED AND CALCULATED?

For the shipping stage it is expected that the actual voyage data can be applied and for other stages an assessment period of 12 month is applied to allow for a representative data set that will be used in the calculation of the cargo's emissions. The use of a 12-month (maximum) temporal boundary for the GHG Footprint assessment allows for smoothing of abnormal events such as process upsets, plant shut-downs or unintentional release, and is also aligned with typical company GHG reporting and verification cycles.

CAN I USE THE WOOD MACKENZIE MODEL TO QUANTIFY EMISSIONS?

GIIGNL does not endorse specific third-party models. It would be the responsibility of the Reporter to demonstrate to the verifier that the use of a model meets the criteria of the Framework and associated GHG accounting standards.

WHY TAKE A GLOBAL WARMING POTENTIAL BASED ON A 100-YEAR TIMELINE AND NOT A 20-YEAR TIMELINE?

A Global Warming Potential (GWP) is used that reflects the global warming impacts of different GHGs in comparison with one unit of CO₂. The source of GWP values referenced in the Framework is the IPCC Assessment Report. Since the GHG footprint standards and methodologies, as well as quantification of carbon offsets, apply a 100-year timeline, the 100-year GWPs are applied to ensure consistency with other GHG reporting and also with the offsets that would be used to compensate for the emissions.

HOW DOES THE FRAMEWORK ADDRESS THE ISSUE OF GAS SUPPLY FROM MULTIPLE SOURCES (E.G. US LNG PRODUCED FROM NATURAL GAS SOURCED FROM MULTIPLE BASINS)?

The Framework allows for the use of secondary data sourced from the market the gas originates from where primary data is not available to complete the necessary 12-month data set. In the US, where EPA average data is available - we ask that participants use the most recent data set available for the basin or region from which the gas originates.

HOW DO YOU ACCOUNT FOR SHIPPING EMISSIONS WHEN VERY FEW ACTUAL MEASUREMENTS ON THE SHIPPING STAGE ARE AVAILABLE?

Shipping emissions will be based primarily on CTMS system to track the amount of fuel that has been combusted during the voyage. Methane slip (unburnt fraction of the LNG used as fuel during the voyage) and other emissions will need to be calculated based on appropriate methodologies. The shipping stage will include both the laden leg and the inward ballast leg.

ARE THERE ANY EXCLUSIONS OF THE FRAMEWORK, AND IF SO, WHAT ARE THEY?

The Framework does not explicitly exclude any emissions. However, in line with the reference standards, reporters may be able to justify specific documented exclusions based on the immateriality of those emissions (below the given cut-off criteria).

Examples of such potential exclusions are given below. These exclusions can be subsequently added at a later stage if it is later deemed necessary/material.

- **Construction activities and materials** - Emissions associated with construction activities, as well as construction materials such as steel, concrete, etc.
- **Production materials** - Raw material used in production operations such as amines used in acid gas removal, glycol used in dehydration, thermal heat transfer fluids etc.
- **Exploration Drilling** - Due to the temporal nature of their emissions and complexity in accurate allocation to lifetime production, exploration drilling is not required to be included in the Framework approach. Production drilling, including infill drilling, should be assessed for significance and if applicable transparently included
- **Decommissioning** - The timing and quantification of emissions associated with decommissioning will be difficult to attribute to the cargo with any degree of accuracy

HOW DOES THE FRAMEWORK ACCOUNT FOR 'REMOVALS' AND 'CARBON CAPTURE, UTILISATION AND STORAGE' (CCUS)?

CCUS within the life cycle boundary will reduce the emissions intensity of that stage through diverting emissions and it is not considered a negative emission. Emissions associated with collecting the gas would be quantified and allocated appropriately to the GHG Footprint.

Provision is made within the Framework to document 'low GHG Features' such as CCUS that are within the GHG Footprint.

Projects such as Direct Air Capture that remove GHGs from the atmosphere may be accounted for as offsets if verified and cancelled in an appropriate 3rd party registry.

IS THE FRAMEWORK APPLICABLE TO CARGOES THAT CONTAIN ‘GREEN GAS’??

This first publication of the Framework is based on quantification of a GHG Footprint based on fossil sources of gas. If non-fossil sources such as biomethane/renewable natural gas (RNG) or synthetic methane are a component of the delivered cargo, equivalent principles will apply based on quantification methodologies that are aligned with the source and processes involved in its production, taking appropriate account of CH₄ and N₂O emissions, as well as removals accounting if applicable.

HOW DOES THE FRAMEWORK ACCOUNT FOR THE POSSIBILITY OF EMISSION DOUBLE COUNTING?

Preventing double counting is a core principle of GHG quantification methodologies and accounting standards

The Framework provides clarity that credits should not be sold from an emission reduction project within the life cycle boundary, and that if they are sold to a third-party, they will need to be ‘added back in’ to the GHG Footprint to avoid double counting of the reduction.

GHG Neutrality

WHAT DOES GHG NEUTRALITY ACTUALLY MEAN IN THE CONTEXT OF THIS FRAMEWORK?

The Framework references PAS 2060:2014 as currently the only international standard that sets out an approach to achieving carbon neutrality. A definition of GHG Neutral under the Framework has been established as:

**A verified full life cycle GHG Footprint across the entire cargo value chain
including end use, supported by a long-term decarbonisation commitment,
an emission reduction plan and fully netted with offsets
that meet best practice principles**

WHY IS GIIGNL USING THE TERM GHG NEUTRAL RATHER THAN “CARBON NEUTRAL”?

The terms ‘GHG Neutral’ and ‘GHG Offset’ are used to describe declarations made in alignment with the Framework rather than ‘carbon neutral’ and ‘carbon offset’ in order to emphasise the importance of methane and promote accuracy of language in describing GHG emissions.

HOW CAN ANY PLAYER BE SURE THAT A CARGO IS GHG NEUTRAL?

The Reporter is required to give full transparency of the GHG Footprint, a reduction plan and retirement of sufficient GHG offsets to compensate for the emissions. All information in the Cargo Statement is subject to third-party verification and based on established standards. This combination of transparency and verification designed to give confidence in the veracity of the declaration.

Offsets

WHAT ARE GIIGNL'S CRITERIA FOR OFFSETTING? ISN'T THIS FRAMEWORK PRIMARILY ABOUT ENCOURAGING REPORTERS TO UTILISE OFFSETTING?

The Framework encourages Reporters to adopt emission reduction practices and only offset in order to compensate for reductions that cannot be achieved. The Framework recognises that in the early stages of adoption some reporters will want to offset their emissions while developing their GHG reduction strategy. This flexibility may also increase levels of adoption of the Framework.

The Framework does not have a positive or negative list of project types. The voluntary carbon market is evolving, and a Reporter will need to take national and regional policies into account as well as their own company strategy. For the declaration categories 'GHG Offset', 'GHG Offset with Reduction Plan' or 'GHG Neutral', the Reporter is asked to develop an offset Strategy that sets out the criteria for selection.

The approach taken is to require that offsets are retired on a third-party registry and are based on the following best practice principles. The amount, type and source used must be disclosed.

- **Real:** there will be evidence that the project actually removes or reduces emissions
- **Measurable:** the volume of emission reductions/removals can be quantified, using recognised measurement methods
- **Permanent:** the reduction/removals are permanent and adequate safeguards are in place to minimise the risk of reversal
- **Additional:** the emissions reductions are additional to what would have occurred if the project had not been carried out
- **Avoid leakage:** offset projects must assess and mitigate against potential increases in emissions elsewhere resulting from the implementation of an offset project
- **Independently verified:** a third-party verifier has verified the reductions/removals to a reasonable level of assurance
- **Unique:** No more than one carbon credit can be associated with one tonne of emissions reduction/removal and a mechanism to prevent double counting is present. Registered on a third-party registry

WILL THE PRICING OF OFFSETS BE USED AS A MECHANISM TO ENCOURAGE EMISSIONS REDUCTION?

The Framework has no influence over the pricing of offsets – which is set by market demand and varies widely depending on the project type. Reporters will need to source their offsets at a price determined by the market or invest in and certify their own offset projects

HOW IS THE AMOUNT OF GHG OFFSETS CALCULATED FOR EACH CARGO? ONE OFFSET PER TONNE OF GHG AVOIDED/REMOVED FROM THE ATMOSPHERE, OR DOES THE FRAMEWORK OFFER A NEW CALCULATION?

One tonne of verified GHG offset retired in a third party registry is assumed to compensate for one 1 tonne CO_{2e} of emissions.

HOW DOES THE FRAMEWORK ENSURE THAT OFFSETTING WILL BE PERMANENT?

Permanence is one of the principles adopted in the Framework for offset selection. The GIIGNL Framework has adopted best practice principles for GHG offsets which include permanence and the transparent retirement/cancellation on a third-party registry.

HOW WILL THE FRAMEWORK COMPEL COMPANIES TO MAKE DISCLOSURES ABOUT THE COST AND AMOUNT OF OFFSETS THEY PURCHASE, AS WELL AS WHERE THEY CAME FROM?

The Framework does not compel companies to disclose associated costs, just the number of verified offsets that have been retired/cancelled, the project type, project details and registry information. The cancellation certificates must be available to the verifier.

Verification

HOW ARE EMISSIONS CORRECTLY CALCULATED ACROSS THE VALUE CHAIN, SO THE RESULTS ARE BOTH TRANSPARENT AND CREDIBLE?

Quantification is on the basis of established GHG quantification methodologies, which are already widely used across the Industry.

The reliability of the data will be assessed by the independent verifier, who will verify:

- The Reporter's GHG Footprint methodologies for alignment with the Framework and associated reference standards (reporters also have to document how the calculations have been done)
- Quantification of stage level intensity data used in the calculations
- The information contained in the Cargo Statement

WHAT IS THE STANDARD APPLIED FOR VERIFICATION?

The Framework integrates the verification standard, ISO14064-3:2019, which applies to the verification of GHG assertions and is relevant for both entities and products. The level of assurance is agreed with the verifier in advance, ranging from reasonable assurance to limited assurance, and will inform the planning of verification activities.

The Framework makes clear that the verification team will need competence in the GHG calculation methods within the sector and also product accounting standards. Particular specialists may be needed, for example to cover shipping emissions.

WILL GIIGNL PROVIDE A LIST OF GHG VERIFIERS?

The Framework has set an expectation that GHG verifiers accredited under ISO14065:2020 will provide verification.

Accredited GHG verifiers may be identified from national accreditation bodies that are members of the [International Accreditation Forum Accreditation Bodies - IAF](#).

Reporting/Sharing Outputs

WHO IS RESPONSIBLE FOR FILING THE GHG NEUTRALITY DECLARATION?

The Cargo Statement is the responsibility of the Reporter, who will sign it. GIIGNL requests that the Cargo Statement is shared with GIIGNL's Central Office. Any commercially sensitive or confidential information in the Cargo Statement may be redacted in the version shared with GIIGNL.

CAN GIIGNL SUPPORT ME THROUGH THE FRAMEWORK PROCESS AND COMPLETION OF THE CARGO STATEMENT?

GIIGNL is exploring with its members what type of support will be useful to promote adoption.

HOW WILL COMPANIES SHARE THE CALCULATED EMISSIONS?

Companies are not obliged to make the emission statements public. The Cargo Statement will be available to relevant stakeholders and users are asked to share a copy with GIIGNL.

HOW WILL THIS CHANGE THE WAY CARGOES ARE CONTRACTED?

It is anticipated that in the longer term, LNG buyers will require a Cargo Statement as part of the supply agreement and that LNG producers will start to expect Stage Statements from their suppliers.

Regulation

HOW IS THIS FRAMEWORK ENFORCED OR REGULATED ACROSS THE LNG INDUSTRY?

It is a voluntary framework, not a standard or regulation and its use is not enforced. The requirement for independent verification of the Cargo Statement will help ensure that quality is maintained.