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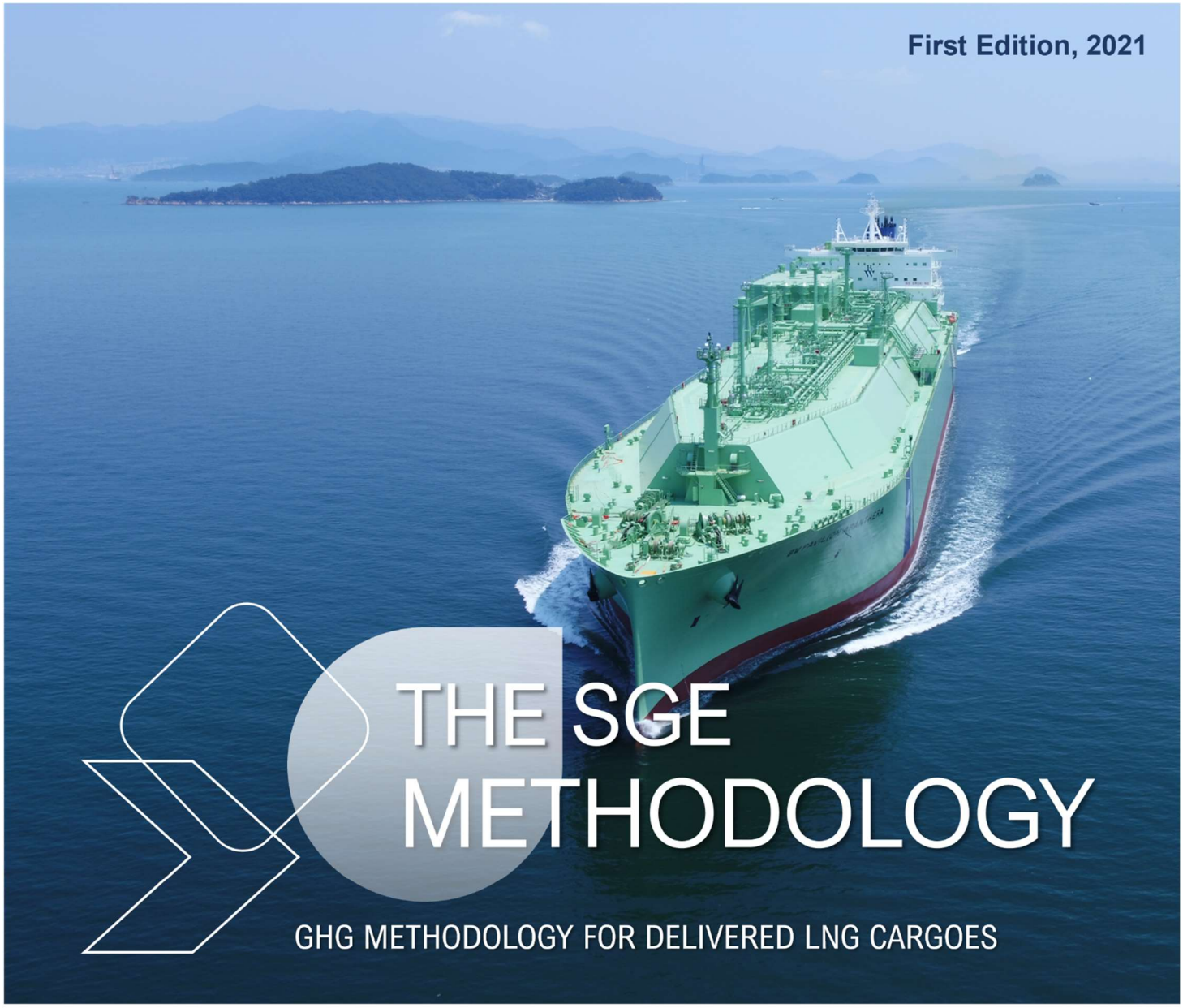

THE SGE METHODOLOGY

GHG METHODOLOGY FOR DELIVERED LNG CARGOES

EXECUTIVE SUMMARY

the human energy company™ Chevron

قطر للطاقة QatarEnergy

PAVILION ENERGY

EXECUTIVE SUMMARY

The Statement of Greenhouse Gas Emissions (SGE) Methodology is one of the first published methodologies specifically developed to quantify the greenhouse gas (GHG) emissions associated with a delivered liquefied natural gas (LNG) cargo. It provides a measurement, reporting and verification methodology which compliments common GHG reporting processes to deliver a consistent, verified SGE for each delivered LNG cargo.

The SGE Methodology is intended for industrywide adoption and is applicable across the LNG value chain - from wellhead to delivery point. It can be used by integrated producers and operators of individual segments that contribute to the value chain GHG footprint, as shown in Exhibit E.1 below.

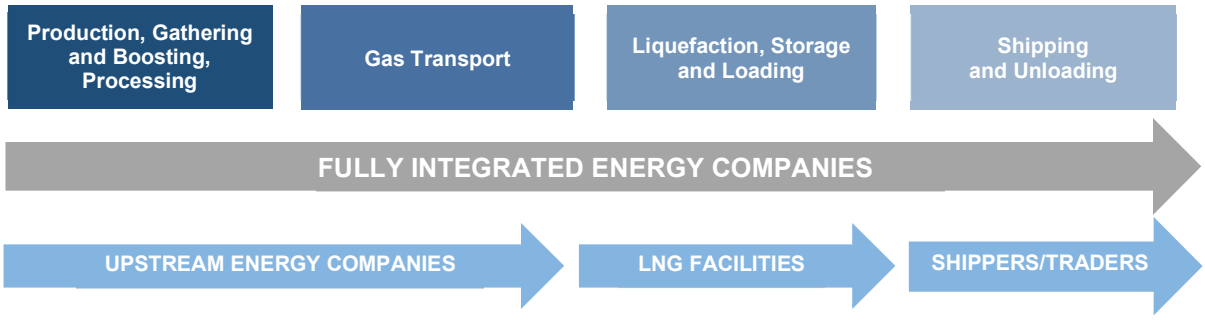

Exhibit E.1. Life cycle stages in the LNG value chain

The methodology has been developed by a technical team representing Chevron, QatarEnergy and Pavilion Energy, supported by Environmental Resources Management Ltd. (ERM), an independent sustainability consultancy, and has been independently reviewed by: Professor Jonathan Stern of the Oxford Institute of Energy Studies, JERA, Lloyd's Register, Maran Gas Maritime Inc., and Flex LNG.

Carbon Footprint Quantification

The SGE Methodology is based on the principles of coherence, relevance, completeness, consistency, transparency, and accuracy.

Coherence: The SGE Methodology provides a measurement, reporting and verification methodology based on industry standards[1] and enables LNG sellers to develop and adapt their internal GHG reporting processes to deliver a SGE for each cargo.

Relevance and completeness: The SGE Methodology covers operational emissions associated with all life cycle stages from production wellhead to delivery point, including an incoming ballast voyage and in-port emissions for shipping. Emissions associated with

[1] The SGE Methodology is designed with reference to currently available product life cycle accounting standards, principally the GHG Protocol Product Life Cycle Accounting and Reporting Standard and ISO14067:2018.

operation of the discharge terminal through to end user are not addressed but could be added as a separate component to fulfil a "cradle-to-grave" life cycle assessment.
***Consistency**:* The SGE is quantified and reported per cargo both as total GHG emissions, expressed as carbon dioxide equivalent (CO_2e), emissions intensity per energy content delivered, expressed as tCO_2e/mmBtu, and methane intensity per energy content delivered, expressed as tCH_4/mmBtu. At a minimum, emissions of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) must be included. All emissions are expected to be allocated appropriately to LNG and all other co-products.

Transparency and accuracy: Each SGE is subject to independent third-party verification. The SGE Methodology includes the development and maintenance of a Methodology Monitoring Plan (MMP). The MMP is a documented procedure that sets out how the reporter intends to meet the criteria established in the SGE Methodology, and it clearly identifies emission sources, calculation approaches, and internal controls. Exhibit E.2 outlines the key steps in developing a MMP and using this to calculate and report a SGE for a delivered LNG cargo.

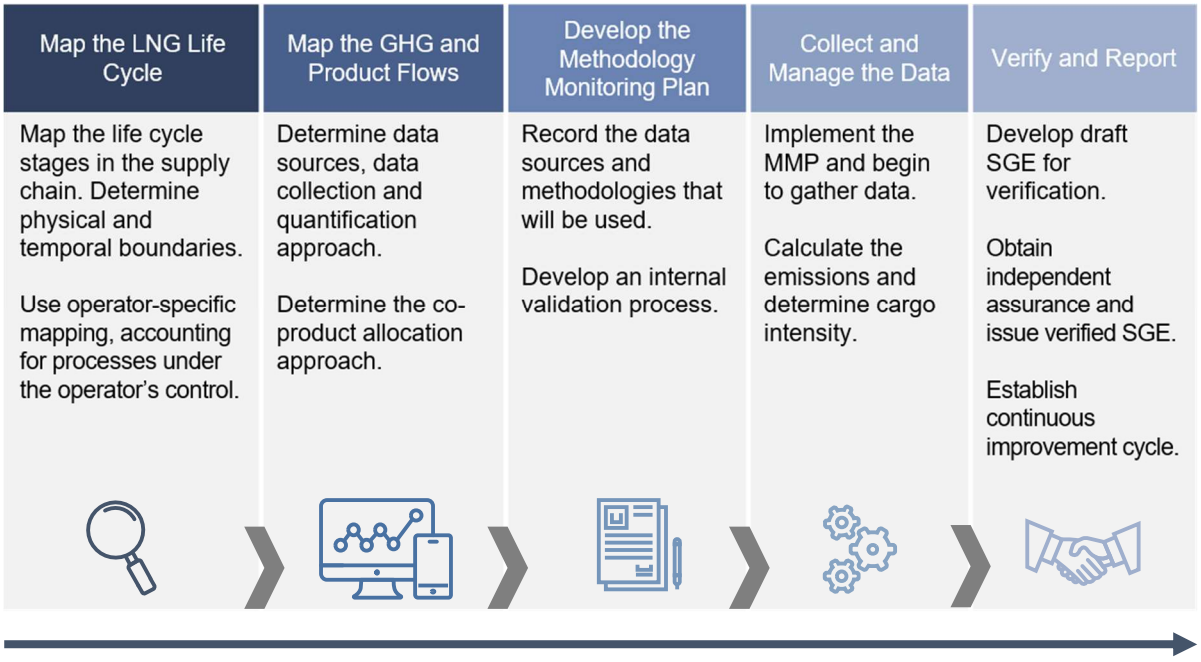

Exhibit E.2. Key steps to developing a Methodology Monitoring Plan and reporting an SGE

Source Data

The SGE Methodology requires reporters to use the highest-quality data available. For operated assets, the best available data is expected to be primary data, where data is sourced from operations and is specific to the value chain of the delivered LNG.

For third-party sourced inputs or products, the SGE Methodology provides a tiered approach using secondary (non-specific) data where primary data is not available. Use of primary data is expected to increase over time and, in all cases, the data used will be transparently presented for assurance to a third-party verifier. Exhibit E.3 shows this tiered approach to primary and secondary data.

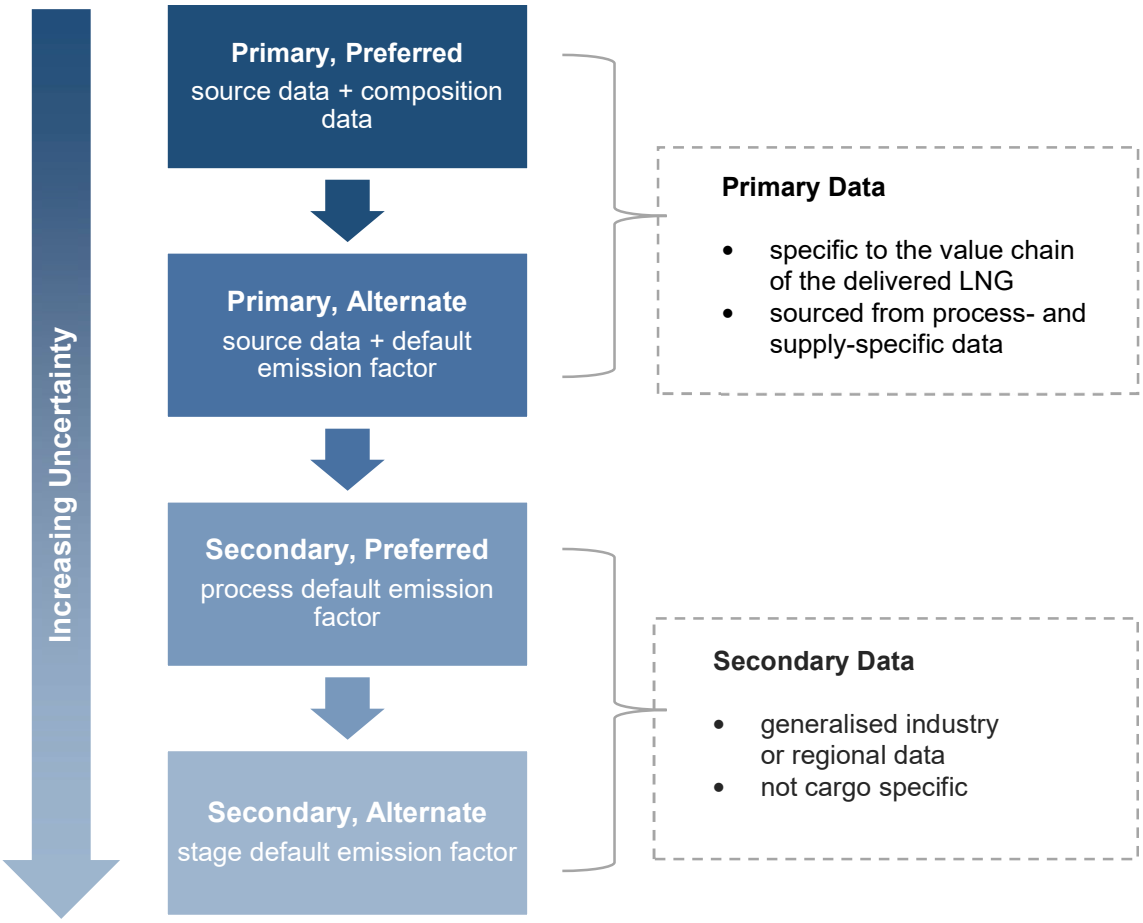

Exhibit E.3 Hierarchy of data sources and effect on uncertainty

Assurance

Consistent with the principles of transparency and accuracy, the SGE Methodology sets out the ambition that SGEs will achieve a reasonable level of assurance by a third-party verifier. The verifier will assure that the SGE has been calculated per the SGE Methodology and that there are no material errors or omissions in the reported SGE.

Continuous Improvement

Over time, both the SGE Methodology and its application are expected to evolve as more detailed and granular source data become available and as industry regulations and GHG reporting standards advance. Industry should strive to improve the data quality and the transparency of their value chains over time and to demonstrate continuous improvement in reducing the uncertainty level of the SGE.

Table E-1 below summarises the key approaches taken by the SGE Methodology.

In conclusion, the developers of the SGE Methodology welcome working with the LNG industry to promote further advancement of product carbon footprinting.

Table E-1. Summary of SGE Methodology

Methodology Scope	Measurement, reporting, and verification of the product carbon footprint of LNG cargos
Applicability	LNG value chain
Use of Primary Data	Yes, preferred
Use of Secondary Data	Yes, if primary data not available
Gases Included	CO_2, CH_4, and N_2O, at a minimum
Methane Considerations	Source-specific calculations. Quantification based on leak detection where available
Global Warming Potentials	AR5 (CO_2 =1, CH_4 = 28, and N_2O=265)
Physical Boundary	
Wellhead	Included
Processing	Included
Pipeline	Included
Liquefaction	Included
Shipping, Laden Voyage	Included
Shipping, Ballast Voyage	Included (repositioning)
Regasification	Excluded
Distribution Pipeline	Excluded
End Use	Excluded
Temporal Boundary	Best available for LNG production (no longer than a 12-month average), cargo-specific for shipping
Allocation Basis	Energy, HHV
Treatment of non-energy products (e.g., helium)	First allocate emissions between energy and non-energy products based on mass, then within the energy products category allocate their share based on energy content
Reported Units	tCO_2e/mmBtu, tCH_4/mmBtu, and tCO_2e
Reporting Frequency	Per cargo
Third-Party Verification	Required. Reasonable assurance expected where possible