

## Sustainalytics' Opinion Dorian LPG Sustainability Linked Loan

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**Location of Borrower:** United States

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### Introduction

Dorian LPG Ltd. (“Dorian LPG”, the “Company”, or the “Borrower”) is a liquefied petroleum gas shipping company headquartered in Stamford, Connecticut, focused on operating very large gas carriers (“VLGCs”). The Company owns and operates a fleet of 22 modern VLGCs, including 19 new fuel-efficient 84,000 cbm ECO-design VLGCs and three 82,000 cbm VLGCs.

Dorian LPG is negotiating a Sustainability Linked Loan (SLL) where the interest rate of the loan is tied to Sustainability Performance Target (SPT) that includes one Key Performance Indicator (KPI) associated with the Company’s material sustainability-related issues.

The Company has engaged Sustainalytics to review the SLL and provide an opinion on the alignment of the loan with the Sustainability Linked Loan Principles (SLLP).<sup>1</sup>

As part of this engagement, Sustainalytics held conversations with various members of the Company’s management team to understand the SPT and associated KPI, the Company’s sustainability strategy, as well as the processes that it has in place to verify its performance in relation to the SPT. Sustainalytics also reviewed relevant public documents.

This document contains Sustainalytics’ opinion of Dorian LPG’s SLL, reviewed against the SLLP.

### Sustainalytics’ Opinion

#### Alignment with the Sustainability Linked Loan Principles 2019

The four core components of the Sustainability Linked Loan Principles are:

1. Relationship to Borrower’s Overall Corporate Social Responsibility (CSR) Strategy
2. Target Setting – Measuring the Sustainability of the Borrower
3. Reporting
4. Review

Sustainalytics is of the opinion that Dorian LPG’s SLL aligns to the four core components of the Sustainability Linked Loan Principles 2019.

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<sup>1</sup> The Sustainability Linked Loan Principles (SLLP) were launched by the Loan Markets Association in March 2019. They are administered by the LMA and are available at: [https://www.lma.eu.com/application/files/8015/5307/4231/LMA\\_Sustainability\\_Linked\\_Loan\\_Principles.pdf](https://www.lma.eu.com/application/files/8015/5307/4231/LMA_Sustainability_Linked_Loan_Principles.pdf)

## Section 1: Relationship to Dorian LPG's Sustainability Strategy

Dorian LPG demonstrates its commitment to sustainability in its mission statement, stating its intention to contribute to "...a reduction in permitted emissions, ensuring the preservation, safety and security of the communities and properties of whichever areas [our] vessels operate in and protecting the natural environment, be it marine or otherwise". The Company has shared with Sustainalytics a series of confidential documents that outline its overall sustainability efforts, the key aspects of which have been highlighted below as they pertain to the Dorian LPG Sustainability Linked Loan:

- The Company's fleet of vessels comply with maritime environmental laws and regulations, and in particular those of the EU, which mandate a variety of reporting and analysis. The Company has received certification verifying its ongoing compliance, specifically with ISM Code, ISO 9001:2015, ISO 14001:2015, and OHSAS 18001:2007.
- Dorian LPG applies a series of enterprise-wide policies, including a Code of Ethics, Occupational Health, Safety & Environmental Protection Policy and Social Responsibility Policy. The Company uses its Occupational Health, Safety (OH&S) & Environmental Protection Policy to set and review quality, environmental and OH&S objectives and targets. The Company's targets are principally to promote health and safety at sea, prevention of human injury, loss of life or occupational ill health, and ensure avoidance of damage to the environment; in particular to the marine environment as well as to property.
- Dorian LPG's most recent Investor Presentation, dated February 2020, discloses its average fuel consumption by vessel profile. The presentation highlights the Company's 19-Korean-built fuel-efficient vessels which consume an average of 45 MT/day and 41 MT/day for its laden and ballast fleets respectively, demonstrating considerably more efficient and lower overall fuel consumption in comparison to the Company's total fleet composition.<sup>2</sup>
- The Company has implemented an energy efficiency management plan that outlines procedures in place to measure and limit the use of energy in its operation. The plan aims to minimize energy waste, promote energy efficiency awareness, implement ship and voyage energy strategies to minimize energy usage and promote co-operation with charterers and others to facilitate energy efficient operations. As a part of this process, the Company conducts a self-evaluation and improvement process to evaluate the effectiveness of implemented measures and identify further measures to improvement. This process takes into consideration the main energy efficiency measures taken within the cycle; energy efficiency data, energy efficiency improvement performance, trend of energy efficiency change and cause analysis, comparison of indexes (CO<sub>2</sub>) with sister vessels, achievement of energy efficiency goals and indexes and problem identified and improvement plans.

Considering the above, Sustainalytics is of the opinion that Dorian LPG's SPT and associated KPI are aligned with the Company's sustainability strategy and is indicative of the Company's efforts to manage key aspects of its sustainability performance. Given this alignment and Dorian LPG's approach to monitoring its environmental impact, Sustainalytics is of the view that the SLL will help to advance the Company's overall sustainability strategy.

## Section 2: Target Setting

The SLLP state that appropriate SPTs should be negotiated and set between the borrower and lender for each loan transaction. As outlined in the SLLP, a borrower may elect to tie the interest rate of the loan to improved performance on KPIs associated with the company's material sustainability-related issues. Sustainalytics' ESG Risk Rating<sup>3</sup> identifies Carbon - Own Operations as one of the most material sustainability issues for the Oil & Gas Storage and Transportation subindustry (see rationale below).

<sup>2</sup> Dorian LPG, Investor Presentation, February 2020: [http://s21.q4cdn.com/513962416/files/doc\\_presentations/2020/02/updated/2020-02-10.pdf](http://s21.q4cdn.com/513962416/files/doc_presentations/2020/02/updated/2020-02-10.pdf)

<sup>3</sup> See Appendix for ESG Risk Rating methodology.

Dorian LPG's SPT is based on the following KPI (see Appendix 1 for a detailed definition):

SPT	KPI <sup>4</sup>	KPI definition	Baseline Date
Reduction of CO <sub>2</sub> Emissions in line with IMO 50% by 2050 trajectory	Fleet Sustainability Score	Dorian LPG to achieve or exceed an annual Fleet Sustainability Score based on Average Efficiency Ratio (AER) Trajectory set for each year (see Appendix 1)	Annual trajectory based on IMO 50% decarbonisation by 2050 target

Over 90% of worldwide trade by volume is transported by sea. Emissions from the shipping industry were estimated to account for approximately 3% of global greenhouse gas (GHG) emissions by the International Maritime Organization (IMO)'s most recent study, and projected to rise to 6% by 2020 and to 15% by 2050. Recognizing these trends, the IMO has established emissions reduction targets, with a stated ambition of having shipping sector GHG emissions peak as soon as possible and subsequently decrease, resulting in a reduction of annual emissions of at least 50% by 2050, from a 2008 baseline.<sup>5</sup> This target is reflected within the Poseidon Principles, which use the IMO 50% target as the metric by which the climate alignment of ship finance portfolios is assessed.<sup>6</sup> It is recognized that the IMO 50% target is not fully aligned with the Paris Agreement 2-degree scenario, but is nevertheless a meaningful target for the maritime shipping sector.

Sustainalytics notes that carbon intensity of vessels is only one of several material sustainability issues for the shipping industry. The SLLP specify that targets should be based on recent measurements of selected KPI performance. Sustainalytics notes that the Borrower's performance is based on information validated by a Recognized Organization (RO)<sup>7</sup> and submitted to the IMO for each calendar year starting in 2020 (with 2020 being the baseline year). Each sustainability pricing adjustment will be in accordance with the SLLP's suggested time period of the previous 6-12 months.

Sustainalytics is of the opinion that the KPI selected by Dorian LPG is material to its business model. The KPI is directly linked to the identified issue, and improvements in performance on the KPI by the Borrower will lower the Company's carbon emissions intensity and enhance its sustainability performance. Therefore, on this basis, Sustainalytics is of the opinion that linking performance improvements on the KPI to the loan is meaningful and appropriate and will contribute to mitigating material environmental risk associated with the Company's core business.

### Section 3: Reporting

The SLLP recommends that borrowers make and keep readily available up-to-date information relating to their SPTs. The loan agreement describes that Dorian LPG will report to the lenders annually, within 120 days after the end of the calendar year, on its fleet-wide performance. This reporting cycle is aligned with existing regulatory reporting required under IMO convention. Sustainalytics considers this reporting to be aligned with the SLLP.

### Section 4: Review

Dorian LPG will calculate its yearly fleet emissions by accounting for the weighted average carbon intensity of all its owned and operated vessels. The estimates for vessel carbon intensity will be certified by a Recognized Organization (RO) as evidenced by the relevant Fleet Carbon Intensity Certificate(s). Sustainalytics believes that Dorian LPG's external assurance practices, along with the involvement of a

<sup>4</sup> Please refer to Appendix 1 for further details on Dorian LPG's KPI.

<sup>5</sup> International Maritime Organization, Greenhouse Gas Emissions, (accessed in January 2020), at:

<http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/GHG-Emissions.aspx>

<sup>6</sup> Poseidon Principles, A global framework for responsible ship finance, (accessed in January 2020), at: <https://www.poseidonprinciples.org/#about>

<sup>7</sup> Recognized Organization (RO) is an authorized organization that performs statutory requirements on behalf of the flag state of a vessel. It can perform functions such as checking and verifying if data is in accordance with regulation, carrying out surveys and may also issue certificates on behalf of flag States.

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recognized third-party organization for validation, enhances the credibility and transparency of the underlying information linked to the Company's SPT.

## Conclusion

Sustainalytics is of the opinion that Dorian LPG's SLL will support the Company's overall sustainability strategy and contribute to the low-carbon transition of the shipping industry. In addition, the use of a KPI associated with material sustainability-related issues as a basis for target-setting is recognized as meaningful by the Sustainability Linked Loan Principles, and the Borrower has committed to providing updates to its KPI on an annual basis. Sustainalytics highlights in particular the alignment of the selected KPI with credible industry standards. Based on the above considerations, Sustainalytics is of the opinion that Dorian LPG's Sustainability Lined Loan is aligned with the SLLP.

## Appendix 1: Dorian LPG's Key Performance Indicator

The Borrower's SPT is the reduction in its fleet CO<sub>2</sub> emissions, and as such has selected as a KPI its Fleet Sustainability Score. The Loan's Sustainability Price Adjustment depends on achieving a Fleet Sustainability Score that is compliant with the IMO's 50% decarbonization trajectory, as calculated using the methodology described by the Poseidon Principles.

The Fleet Sustainability Score is an average of the Vessel Sustainability Score, weighted for capacity (deadweight tonnes) and owned days, of all the owned and operated vessels in Dorian LPG's fleet. A Vessel Sustainability Score measures if a given ship, based on its capacity, is performing with the efficiency required to be in alignment with the IMO trajectory for a given calendar year. This vessel-level calculation is based on performance data verified by an RO, and then compared to the established Average Efficiency Ratio (AER) for that vessel class in that year. In mathematical terms, the Vessel Sustainability Score can be described as a ship's total carbon emissions as a factor of the product of its total distance traveled and design deadweight capacity in a given calendar year, divided by the AER for its class.

The table below shows the AER which is required of Dorian LPG's Liquefied Gas Tankers, over time, to comply with the IMO Trajectory. These figures have been derived by comparing the average performance of a vessel in that class in the year 2012, based on actual data reported in the IMO's Third GHG Study, to a required rate of decarbonization.

### AER Trajectory Value

Segment	Size (DWT)	2020	2021	2022	2023	2024	2025	2026
Liquefied Gas Tanker	50,000-199,999	8.342924	8.121296	7.899669	7.678042	7.456414	7.234787	7.013159

## Appendix 2: About the Sustainalytics ESG Risk Rating

With a clear focus on financial materiality, Sustainalytics' ESG Risk Ratings measure the degree to which a company's enterprise value is exposed to material ESG issues. Specifically, the ratings measure a company's exposure to industry-specific material ESG risks and how well a company is managing those risks. This multi-dimensional way of measuring ESG risk combines the concepts of management and exposure to arrive at an assessment of unmanaged ESG risk. The ESG Risk Rating for a company is a quantitative score based on a scale from 0-100 and is categorized between five levels of risk: negligible, low, medium, high and severe. The numerical assessments represent units of unmanaged ESG risk, with lower scores representing less unmanaged ESG risk. The risk assessments are absolute, meaning that a high-risk assessment reflects a comparable degree of unmanaged ESG risk relative to any other company in the research universe.

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Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization, and supports various stakeholders in the development and verification of their frameworks. In 2015, Global Capital awarded Sustainalytics "Best SRI or Green Bond Research or Ratings Firm" and in 2018 and 2019, named Sustainalytics the "Most Impressive Second Party Opinion Provider". The firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance in 2018, and in 2019 was named the "Largest Approved Verifier for Certified Climate Bonds" by the Climate Bonds Initiative. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan and the Minister of the Environment Award in the Japan Green Contributor category of the Japan Green Bond Awards in 2019.

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