

Independent reasonable assurance
report to the Management and
Directors of Orica Limited ('Orica') in
relation to compliance with Section 19
of the *National Greenhouse and
Energy Reporting Act 2007* for the
financial year ended 30 June 2018

Audited body

Name of audited body:	Orica Limited
Name of contact person for audited body:	Jason Nham
Contact person phone number:	+61 3 9665 7815
Contact person email address:	jason.nham@orica.com

Reporting requirements

Total scope 1 emissions for audited body:	1,663,781 tCO ₂ -e
Total scope 2 emissions for audited body:	161,528 tCO ₂ -e
Total energy consumption for audited body:	18,278,006 GJ
Total energy production for audited body:	299,106 GJ

Audit Description

Kind of audit:	Reasonable Assurance
Objective of the assurance engagement:	Assurance on scope 1 greenhouse gas (GHG) emissions and scope 2 GHG emissions, energy production, and energy consumption in Orica's Energy and Emissions Report under section 19 of the NGER Act.
Reporting period covered by audit:	1 July 2017 – 30 June 2018
Date terms of engagement signed:	29 May 2018
Date audit report signed	18 October 2018

Audit Report Coversheet

Auditor Details

Name of audit team leader:	Terence Jeyaretnam
GEA registration number	0233/2016
Organisation	Ernst & Young
Phone Number	+61 3 9288 8291
Address	8 Exhibition Street Melbourne VIC 3000
Names and contact details of other audit team members	<u>Engagement Manager:</u> Frederic Papon +61 39288 8868 <u>Engagement team:</u> Crosbie Baulch +61 39655 2592 Beth Nelson +61 39288 8532
Details of exemptions under section 6.71 of the National Greenhouse and Energy Reporting Regulations 2008 for the audit team leader or professional member of the audit team. These may include:	Not applicable - Audit team is in full compliance with independence requirements

<ul style="list-style-type: none"> • conflict of interest and details of the procedures for managing conflict of interest • relevant relationships, and • exemptions for an audit team leader to carry out more than five consecutive greenhouse and energy audits in relation to the audited body 	
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Peer Reviewer Details

Name of peer reviewer:	Mathew Nelson
Organisation	Ernst & Young
Phone Number	+61 3 9288 8121
Address	8 Exhibition street

Part A – Auditor’s Conclusion

To: Directors of Orica Limited

We have conducted a reasonable assurance engagement of Orica Limited’s (“Orica”) Energy and Emissions Report for the period 1 July 2017 to 30 June 2018 (the “Energy and Emissions Report”), prepared in accordance with Section 19 of the *National Greenhouse and Energy Reporting Act 2007*.

Details of the audited body

Name of audited body:	Orica Limited
Address	Level 3, 1 Nicholson Street, East Melbourne, Victoria Australia 3002
ABN	24 0041 458 68

Subject Matter

The Subject Matter for our assurance engagement is Orica’s Energy and Emissions Report for the period 1 July 2017 to 30 June 2018.

The amounts within the Energy and Emissions Report being audited, consists of the following:

- Scope 1 greenhouse gas emissions being 1,663,781 tonnes carbon dioxide equivalent (tCO₂-e)
- Scope 2 greenhouse gas emissions being 161,528 tonnes carbon dioxide equivalent (tCO₂-e)
- Energy production being 299,106 gigajoules (GJ)
- Energy consumption of 18,278,006 (GJ).

Criteria

The Criteria are:

- Section 19 of the *National Greenhouse and Energy Reporting Act 2007* (“the NGER Act”)
- *National Greenhouse and Energy Reporting Regulations 2008* (“the NGER Regulations”)

- *National Greenhouse and Energy (Measurement) Determination 2008*, incorporating amendments up to the *National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2017 (No. 1)* (“the NGER (Measurement) Determination”)

Management’s responsibility

Management of Orica are responsible for the preparation and presentation of the Subject Matter in accordance with the Criteria, and in compliance with section 19 of the NGER Act. This includes establishing and maintaining internal controls relevant to the preparation and presentation of the Subject Matter that are free from material misstatement, whether due to fraud or error.

Management of Orica are responsible for the interpretation and application of the requirements of the NGER Act and the NGER (Measurement) Determination in determining operational control and quantifying emissions and energy, which are reflected in Orica’s “NGER Reporting Manual” and Orica’s “Basis of Preparation for Reporting Nitrous Oxide Emissions from Nitric Acid Plants,” which have been provided to us.

Independence and quality control

In conducting our assurance engagement, we have met the independence requirements of the *APES 110 Code of Ethics for Professional Accountants* and have complied with the relevant ethical requirements relating to assurance engagements, which include independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence, due care, confidentiality and professional behaviour. These include all of the requirements defined in the NGER Regulations regarding the Code of Conduct, independence and quality control. We have the required competencies and experience to conduct this assurance engagement.

Furthermore, in accordance with *Auditing Standard ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information and Other Assurance Engagements*, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditor’s responsibility

Our responsibility is to express a reasonable assurance conclusion as to whether the Subject Matter, has been prepared, in all material respects, in accordance with the Criteria.

We have conducted our reasonable assurance engagement in accordance with:

- *National Greenhouse and Energy Reporting (Audit) Determination 2009* (“the NGER (Audit) Determination”)
- *ASAE 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information*
- *ASAE 3410 Assurance Engagements on Greenhouse Gas Statements*
- *ASAE 3100 Compliance engagements*

The NGER (Audit) Determination and above relevant national and international standards require that we plan and perform this engagement to obtain reasonable assurance about whether the Energy and Emissions Report is free from material misstatement.

A reasonable assurance engagement involves performing procedures to obtain assurance evidence about the Subject Matter being audited. The procedures selected depend on the audit team leader’s judgement, including an assessment of the risks of material misstatement or material non-compliance of the matter being audited, whether due to fraud or error. In making those risk assessments, we consider internal controls relevant to Orica’s determination of the amounts and disclosures in the

matter being audited in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Orica's internal controls. A reasonable assurance engagement also includes evaluating the reasonableness of emissions and energy estimates made by management of the company as well as evaluating the overall presentation of the Subject Matter.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Summary of procedures undertaken

The procedures we conducted in our reasonable assurance engagement included, but were not limited to the following:

- Gaining an understanding of the greenhouse gas and energy reporting processes supporting the business activities of Orica through discussions with Orica personnel, responsible for maintaining Orica's data management systems, in order to understand the data collation, controls and calculation processes within the systems supporting the preparation and presentation of the Energy and Emissions Report
- Conducting visits to selected sites (Yarwun Mining Chemicals, Yarwun Nitrates, Kooragang Island and Deer Park) to identify sources of greenhouse gas emissions, energy consumption, and energy production; and understand the basis for measurement and preparation of the Energy and Emissions Report
- Checking documentation in support of operational control decisions
- Checking that methodologies had been correctly applied as per the requirements in the NGER (Measurement) Determination
- Testing the calculations performed by Orica
- Undertaking analytical review procedures to support the reasonableness of the Energy and Emissions Report
- Identifying and testing assumptions supporting the calculations performed by Orica
- Testing, on a sample basis, to underlying source information to support completeness and accuracy of the Energy and Emissions Report
- Reviewing the appropriateness of the presentation of the information.

Use of our reasonable assurance engagement report

This Report has been prepared for the Management and Directors of Orica, and for the Clean Energy Regulator, for the sole purpose of reporting on Orica's Energy and Emissions Report and its compliance with the NGER Act. Accordingly, we disclaim any assumption of responsibility for any reliance on this report to any persons or users other than the intended users, or for any purpose other than that for which it was prepared.

Inherent limitations

There are inherent limitations in performing assurance – for example, assurance engagements are based on selective testing of the information being examined – it is possible that fraud, error or non-compliance may occur and not be detected. A reasonable assurance engagement is not designed to detect all instances of non-compliance with the Criteria, as a reasonable assurance engagement is not performed continuously throughout the period and the procedures performed in respect of compliance with the Criteria are undertaken on a test basis. The conclusion expressed in this Report has been formed on the above basis.

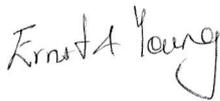
Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and sampling or estimating such

data. We specifically note that Orica has used estimates or extrapolated underlying information to calculate certain amounts included within the greenhouse gas and energy information.

Our conclusion

In our opinion the Subject Matter as set out in Orica's Energy and Emissions Report for the period 1 July 2017 to 30 June 2018 has been prepared in accordance with section 19 of the NGER Act, in all material respects.

Auditor Part A Sign Off



Ernst & Young



Terence Jeyaretnam
Partner
Melbourne Australia
18 October 2018

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