

23 October 2017

Commercial-in-Confidence

Chris Schneider
Managing Director
National Ceramic Industries Australia
PO Box 765
Maitland NSW 2320

Dear Chris

National Greenhouse and Energy Reporting (NGER) 2016-17

1.0 Energy Consumption 2016-17

NCIA's consumption of energy resources from 1 July 2016 to 30 June 2017 is provided in Table 1 with data for the previous six years also provided for comparison.

Table 1 Annual Energy Consumption

Energy Resource	Energy Consumption						
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Natural Gas (GJ)	474,576	418,850	414,315	451,368	481,875	499,401	496,985
Diesel (kL)	26	25	28	34	41	54	67
Diesel (GJ)	1,004	965	1,081	1,312	1,589	2,089	2,585
Electricity (MWh)	16,402	15,316	15,385	15,424	16,171	17,621	17,504
Electricity (GJ)	59,047	55,138	55,385	55,525	58,217	63,436	63,013
Total GJ	534,627	474,953	470,781	508,205	541,681	564,926	562,583
% change from previous year		-11.2	-0.9	+7.9	+6.6	+4.3	-0.4

*GJ = gigajoules, kL = kilolitres, MWh = megawatt hours

Figure 1 shows a monthly breakdown of total energy consumption.

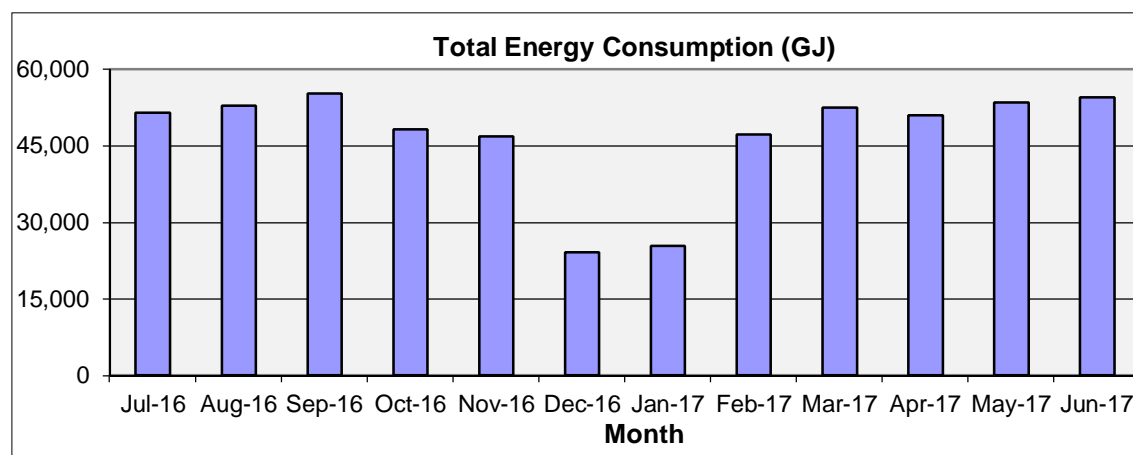


Figure 1 2016-17 Total Energy Consumption by month

2.0 Greenhouse (GHG) Emissions 2016-17

NGER GHG emissions are defined as either Scope 1 (direct) or Scope 2 (indirect), with Scope 1 emissions from sources within the boundary of NCIA (for example the kilns or the front end loader) and Scope 2 emissions attributed to the generation of purchased electricity. As such, the consumption of natural gas and diesel contribute to Scope 1, whilst the consumption of purchased electricity from the grid is the source of Scope 2 emissions.

Based on the consumption of energy resources identified in Table 1, NCIA's GHG emissions have been calculated and are presented in Table 2. All emissions are presented as tonnes of carbon dioxide equivalence (tCO₂-e) with data for the previous six years also provided for comparison.

Table 2 Annual GHG Emissions

Source	GHG Emissions (tCO ₂ -e)						
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Natural Gas	24,360	21,500	21,267	23,169	24,735	25,734	25,610
Diesel	70	68	75	91	111	147	182
Total Scope 1	24,430	21,568	21,342	23,260	24,846	25,881	25,792
Electricity (Scope 2)	14,762	13,631	13,539	13,419	13,907	14,802	14,703
Total	39,192	35,199	34,881	36,679	38,753	40,683	40,495
% change from previous year		-10.2	-0.9	+5.2	+5.7	+5.0	-0.5

Emissions from 2016-17 are presented in Figure 2, which graphically shows the proportions of GHG emissions by source.

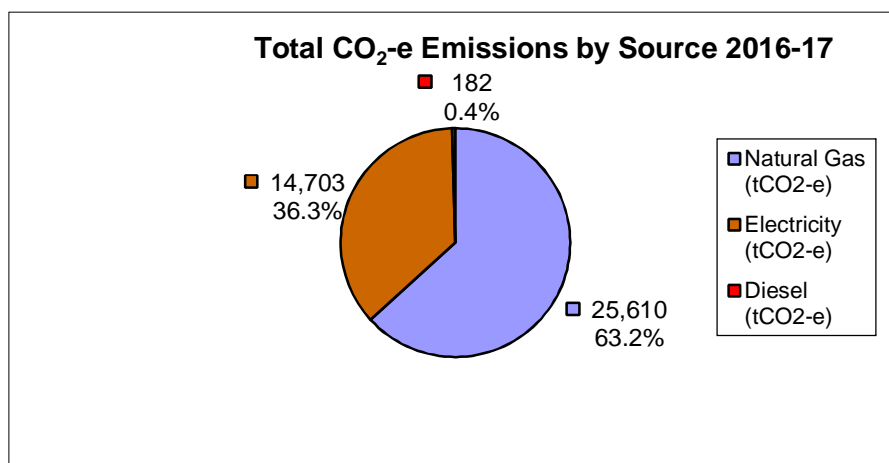


Figure 2 2016-17 GHG Emissions by Source

Figure 3 shows a monthly breakdown of total GHG emissions.

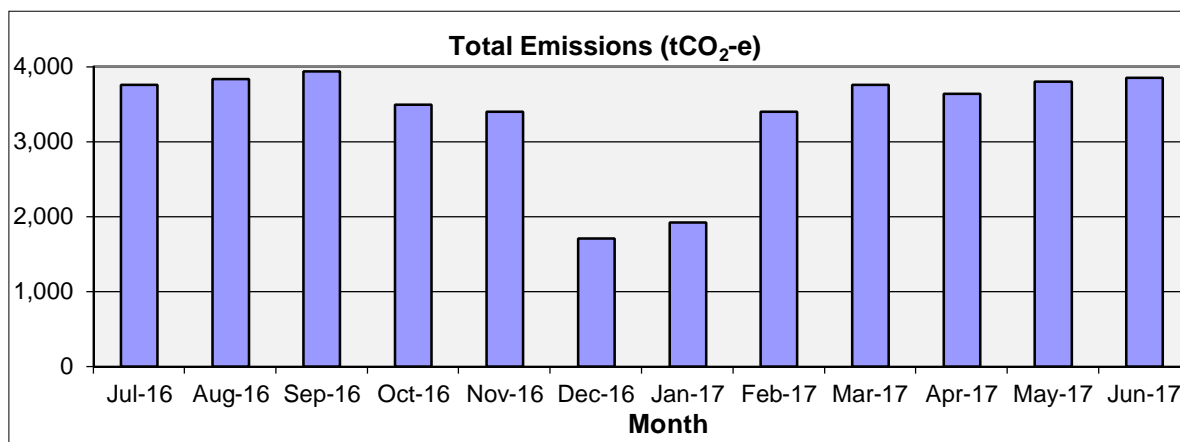


Figure 3 2016-17 GHG Emissions by month

2.1 Scope 1 and Scope 2 Emissions

Onsite consumption of natural gas and diesel contributes to Scope 1 emissions whilst purchased electricity from the grid comprises Scope 2 emissions. The proportion of Scope 1 and Scope 2 emissions for NCIA in 2016-17 is shown in Figure 3.

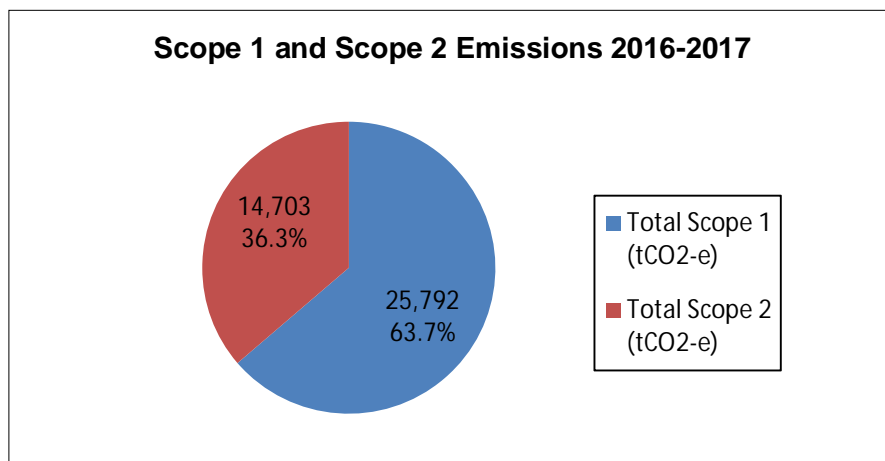


Figure 4 2016-17 Scope 1 and Scope 2 GHG Emissions

2.2 Uncertainty

NGER reporting requirements include an uncertainty estimate to be provided for a facility if the scope 1 greenhouse gas emissions from the combustion of a fuel type are 25,000 tCO₂-e or more in a reporting year. The 2016-17 reporting year scope 1 greenhouse gas emissions of 25,610 tCO₂-e from combustion of natural gas at NCIA have exceeded this trigger threshold. The uncertainty value is calculated to be 5.8% as detailed in Table 3.

Table 3 Uncertainty Calculation for Natural Gas Combustion

	energy content factor (A)	carbon dioxide emission factor (B)	quantity of fuel (C)		tCO ₂ -e	
	Percentage uncertainty of Carbon Dioxide from combustion of fuel type					
	A	B	C	$D = \sqrt{A^2 + B^2 + C^2}$	E	$D^2 + E^2$
Natural gas	0.04	0.04	0.015	0.0585235	25,545	2234974
Diesel	0.02	0.02	0.015	0.032015621	181	33.58
	Percentage uncertainty of Methane & Nitrous oxide from combustion of natural gas					
Natural gas	0.04	0.50	0.015	0.501821681	65	1063.96
Diesel	0.02	0.50	0.015	0.50062461	1	0.25
				Total	25,792	2236071
				Uncertainty = $\sqrt{(\text{total}(D^2 + E^2)) / \text{total tCO}_2\text{e}}$		5.8%

3.0 Historical Trends

Figure 5 shows the historical energy consumption and greenhouse gas emissions for years from 2010/11 to the current reporting year.

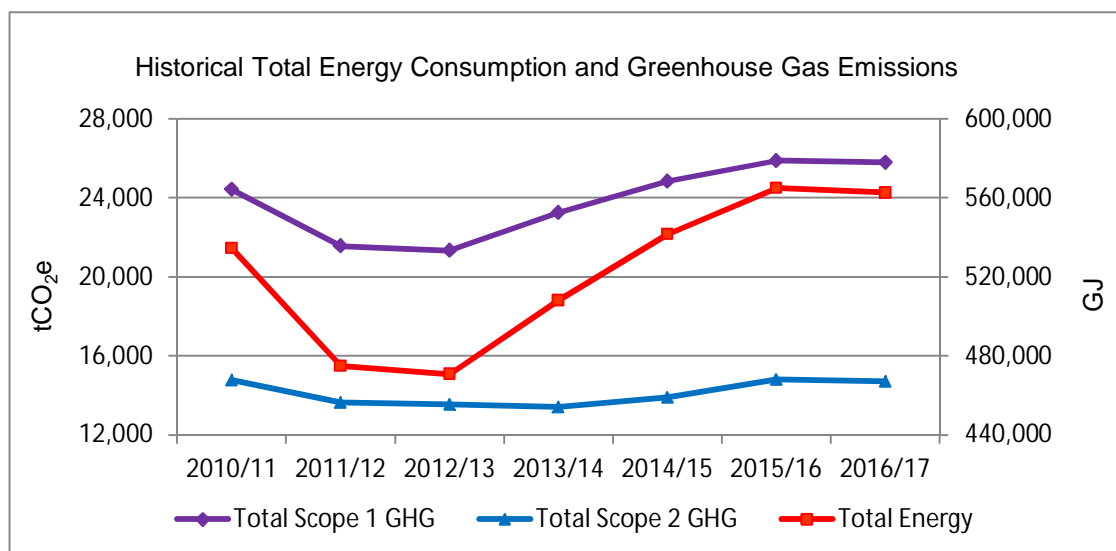


Figure 5 Historical Total Energy Consumption and GHG Emissions

4.0 Initiatives for NCIA Consideration

During the 2016-17 reporting year there have been two auctions under the Emissions Reduction Fund (ERF) in November 2016 and April 2017. In these latest auctions, which were dominated by vegetation projects (52 in total), there were only 3 energy efficiency improvement projects out of a total of 78 projects that were accepted.

The aim of the ERF is to create a positive incentive for businesses to reduce emissions and improve the environment. The initiative allows businesses to undertake approved emissions reduction projects and to seek funding from the Government for those projects through a reverse auction.

The ERF may present an opportunity for NCIA through funding of emission reduction projects. Participants can earn carbon credits by establishing a project under an approved ERF Method, which sets out the rules for the activity. The *Carbon Credits (Carbon Farming Initiative – Facilities) Methodology Determination 2015* (the method) was made on 24 August 2015 and is applicable to facilities that report under the NGERs. The method uses NGER data to determine a baseline emissions intensity against which project abatement is calculated. Relevant projects may include replacing or modifying boilers, improving control systems and processes, upgrading turbines, reducing industrial process emissions, or installing low emissions-intensity electricity generation equipment.

More information on the ERF can be found at:

<https://www.environment.gov.au/climate-change/emissions-reduction-fund>

5.0 2016-17 NGER Report

The data for the 2016-17 reporting year has been entered into the online system and the S19 Energy and Emissions Report (copy attached) generated for your review and submission.

Yours sincerely



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encl: NGRS Online S19 Energy and Emissions Report

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Australian Government
Clean Energy Regulator

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**NATIONAL GREENHOUSE AND ENERGY REPORTING
SECTION 19 - ENERGY AND EMISSIONS REPORT
NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED
FOR THE REPORTING YEAR 2016 – 2017**

REPORT UNDER SECTION 19 OF THE *NATIONAL GREENHOUSE AND ENERGY REPORTING ACT 2007*

Corporations registered under Division 3 of Part 2 of the *National Greenhouse and Energy Reporting Act 2007* (the NGER Act) are required to provide a report to the Clean Energy Regulator (the Regulator) by 31 October each year in respect of the previous financial year relating to:

- greenhouse gas emissions; and
- energy production; and
- energy consumption;

from the operation of facilities under the operational control of the corporation and entities that are members of the corporation's group, during that financial year.

A report under section 19 of the NGER Act must be given in a manner and form approved by the Regulator and set out the information specified in the *National Greenhouse and Energy Reporting Regulations 2008* (the NGER Regulations). The report must also be based on the methods, or methods which meet criteria, set out in the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Measurement Determination).

This report is an approved form in which a report under section 19 of the NGER Act may be given to the Regulator.

Giving false or misleading information is a serious offence.

SUBMITTING THE REPORT

The approved manner for submission of the section 19 report is completion and submission of the report in the Emissions and Energy Reporting System.

Your report must be submitted to the Regulator by 31 October 2017.

If a copy of this report is printed in hardcopy form for any purpose it does not represent, nor can it be treated as, an official version of the report submitted to the Regulator.

CONTROLLING CORPORATION DETAILS

Name	NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED
Australian Business Number (ABN)	83100467267
Australian Company Number (ACN)	-
Australian Registered Body Number (ARBN)	-
Trading Name	-
Head office postal address:	
Postal address line 1	PO Box 765
Postal address line 2	-
Postal address line 3	-
Postal city/suburb	MAITLAND
Postal state	New South Wales
Postal postcode	2320
Postal country	AUSTRALIA
Head office street address:	
Street address line 1	175 Racecourse Road
Street address line 2	-
Street address line 3	-
Street city/suburb	RUTHERFORD
Street state	New South Wales
Street postcode	2320
Street country	AUSTRALIA

EXECUTIVE OFFICER (OR EQUIVALENT) DETAILS

Name	Chris Schneider
Position	CEO
Phone	(02) 4931-8400
Mobile	-
Fax	(02) 4931-8499
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Postal state	
Postal postcode	2320
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Postal address line 3	-
Postal city/suburb	MAITLAND
Postal state	
Postal postcode	2320
Postal country	AUSTRALIA

NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED EMISSION AND ENERGY REPORT SUMMARY

The table below reports total scope 1 and scope 2 greenhouse gas emissions, energy produced and energy consumed by the corporate group NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED for the 2016 - 2017 reporting period.

GREENHOUSE GAS EMISSIONS (t CO ₂ -e)		
Scope 1	Scope 2	Total of Scope 1 and Scope 2
25,792	14,703	40,495

ENERGY PRODUCED AND ENERGY CONSUMED (GJ)		
Energy Consumed Total	Energy Consumed Net	Energy Produced
562,583	562,583	-

GREENHOUSE GAS SCOPE 1 EMISSIONS BY GAS (t CO ₂ -e)						
Carbon Dioxide CO ₂	Methane CH ₄	Nitrous Oxide N ₂ O	Perfluorocarbons PFCs	Hydro Fluoro Carbons HFCs	Sulphur Hexafluoride SF ₆	Total
25,726	50	16	-	-	-	25,792

UNCERTAINTY

The NGER Regulations require a registered corporation's report to include the amount of uncertainty associated with estimates of scope 1 emissions for their corporate group. Uncertainty is to be assessed for an emissions estimate so that a range for statistical uncertainty is provided at a 95% confidence level. The uncertainty of emissions estimates is to be calculated in accordance with the rules set out in Chapter 8 of the NGER Determination, including in accordance with the Greenhouse Gas Protocol guidance on uncertainty assessment in greenhouse gas inventories and calculating statistical parameter uncertainty (September 2003), as applicable.

FACILITY NAME : NCIA FACILITY - RUTHERFORD, NSW		
Fuel Type	Emission Total (tCO ₂ -e)	Uncertainty %
Natural gas distributed in a pipeline	25,610	5.8

NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED EMISSION AND ENERGY REPORT DETAIL

Corporate Structure

The table below lists the entities whose greenhouse gas emissions and energy production and energy consumption are included in the S19 report.

No.	Entity Details	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Energy Consumed Total (GJ)	Energy Consumed Net (GJ)	Energy Produced (GJ)
1	NCIA Facility - Rutherford, NSW Type: Facility	25,792	14,703	562,583	562,583	0

1: NCIA FACILITY - RUTHERFORD, NSW - FACILITY

Name	NCIA Facility - Rutherford, NSW
Facility Street Address	175 Racecourse Road RUTHERFORD New South Wales 2320 AUSTRALIA
Geographic Coordinates	Latitude 32.717S / Longitude 151.503E
Facility location	-
Activity location	New South Wales
Location description	NCIA is located on Racecourse Road, in the Rutherford Industrial Estate, New South Wales. Note: The latitude is actually a negative (i.e -31.171) but the system says Latitude must be positive.
Activity description	-
ANZSIC Code	202 - Ceramic product manufacturing
Operational Control	NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED
Number of Days with Operational Control	Full Year
Operational Control Dates	01/07/2016 - 30/06/2017
Grid Connected Electricity Generator	No

The following tables summarise total greenhouse gas emissions from operation of this facility during the period that it was under the operational control of NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED.

GREENHOUSE GAS EMISSIONS (t CO ₂ -e)		
Scope 1	Scope 2	Total of Scope 1 and Scope 2
25,792	14,703	40,495

ENERGY PRODUCED AND ENERGY CONSUMED (GJ)		
Energy Consumed Total	Energy Consumed Net	Energy Produced
562,583	562,583	-

GREENHOUSE GAS SCOPE 1 EMISSIONS BY GAS (t CO ₂ -e)						
Carbon Dioxide CO ₂	Methane CH ₄	Nitrous Oxide N ₂ O	Perfluorocarbons PFCs	Hydro Fluoro Carbons HFCs	Sulphur Hexafluoride SF ₆	Total
25,726	50	16	-	-	-	25,792

SCOPE 1 EMISSIONS					
EC = Energy Content Factor, Z = Energy Content, EF = Emission Factor					
Source Activity	Fuel / Criterion	Quantity	Energy Values (EC & Z)	Gas / Method	Scope 1 Emissions (t CO ₂ -e)
Source category: Fuel combustion Source of emissions: Stationary and Transport energy purposes (excluding electricity generation) Activity type: Emissions released from combustion of gaseous fuels - Stationary energy purposes	Fuel / Energy commodity: Natural gas distributed in a pipeline Fuel usage: combustion Criterion: A	496,985 GJ	EC (GJ/Unit): 1 Z (GJ): 496,985	Gas: CO ₂ EF (kg CO₂-e / GJ): 51.4 Method: Method 1	25,545
				Gas: CH ₄ EF (kg CO₂-e / GJ): 0.1 Method: Method 1	50

				Gas: N2O EF (kg CO2-e / GJ): 0.03 Method: Method 1	15
Source category: Fuel combustion Source of emissions: Stationary and Transport energy purposes (excluding electricity generation) Activity type: Emissions released from combustion of liquid fuels other than petroleum oils or greases - Transport energy purposes	Fuel / Energy commodity: Diesel oil - Transport Fuel usage: combustion Criterion: A	66.98 kL	EC (GJ/Unit): 38.6 Z (GJ): 2,585	Gas: CO2 EF (kg CO2-e / GJ): 69.9 Method: Method 1	181
				Gas: CH4 EF (kg CO2-e / GJ): 0.1 Method: Method 1	0
				Gas: N2O EF (kg CO2-e / GJ): 0.5 Method: Method 1	1
Source Total			499,570		25,792
Total			499,570		25,792

SCOPE 2 EMISSIONS

Activity Type	Amount	Units	Emission Factor (kg CO2-e / unit)	Scope 2 Emissions (t CO2-e)
Purchase of electricity from main electricity grid in a State or Territory	17,503,512	kWh	0.84	14,703
Total				14,703

ENERGY CONSUMED BY MEANS OF COMBUSTION FOR TRANSPORT							
Activity Type	Fuel / Energy Commodity	Fuel Usage	Criterion	Amount	Units	Energy Content Factor (GJ/Unit)	Energy Content (GJ)
Emissions released from combustion of liquid fuels other than petroleum oils or greases - Transport energy purposes	Diesel oil - Transport	combustion	A	66.98	kL	38.6	2,585
Total							2,585

ENERGY CONSUMED BY MEANS OF COMBUSTION FOR PURPOSES OTHER THAN PRODUCING ELECTRICITY, PRODUCING A CHEMICAL OR METAL PRODUCT OR FOR TRANSPORT							
Activity Type	Fuel / Energy Commodity	Fuel Usage	Criterion	Amount	Units	Energy Content Factor (GJ/Unit)	Energy Content (GJ)
Emissions released from combustion of gaseous fuels - Stationary energy purposes	Natural gas distributed in a pipeline	combustion	A	496,985	GJ	1	496,985
Total							496,985

ENERGY CONSUMED BY MEANS OTHER THAN COMBUSTION							
Activity Type	Fuel / Energy Commodity	Fuel Usage	Criterion	Amount	Units	Energy Content Factor (GJ/Unit)	Energy Content (GJ)
Purchase of electricity from main electricity grid in a State or Territory	-	-	-	17,503,512	kWh	0.0036	63,013
Total							63,013

CORPORATE GROUP THRESHOLD MET

The corporate group of NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LIMITED has met a corporate group threshold prescribed in sections 13 (1)(a),(b), or (c) of the NGER Act during the reporting year and is reporting under Divisions 4.3 to 4.5 of the NGER Regulations (regulation 4.03).

PRIVACY STATEMENT

PROTECTION OF INFORMATION

The Clean Energy Regulator is bound by the secrecy provisions of Part 3 of the *Clean Energy Regulator Act 2011* (CER Act) in regard to information it collects in relation to this report and also by the *Privacy Act 1988* in regard to personal information it collects.

PRIVACY NOTICE

'Personal information' is defined in the Privacy Act 1988 to mean information or an opinion about an identified individual, or an individual who is reasonably identifiable:

- (a) whether the information or opinion is true or not; and
- (b) whether the information or opinion is recorded in a material form or not.

The collection of personal information relating to this report is authorised by the *National Greenhouse and Energy Reporting Act 2007* (NGER Act) and the National Greenhouse and Energy Reporting Regulations 2008.

Personal information collected in relation to this report will be used for the purposes of assessing the report content, auditing compliance, enforcement of relevant laws and regulations, the performance of our statutory functions and for related purposes. We will also use the personal information which you provide for our administrative purposes, for example, to pre-populate other Clean Energy Regulator forms which you wish to fill out online in the future, and for improving our service delivery to you. We cannot process the application if we do not collect relevant personal information.

The Clean Energy Regulator's Privacy Policy contains information about the agency's procedures for handling personal information including how a person can access their personal information held by the agency, and how to seek correction of such information. The Privacy Policy also contains information about how to complain about a breach of the Australian Privacy Principles. The Clean Energy Regulator's Privacy Policy can be found at www.cleanenergyregulator.gov.au.

DISCLOSURE OF INFORMATION

The Clean Energy Regulator is only able to disclose information relating to this report (including personal information) in accordance with the CER Act, the NGER Act, the Privacy Act 1988 or as otherwise required by law.

The circumstances in which such information may be disclosed include:

- Disclosure to the Secretary or authorised officer of a Department for the purpose of administering a program or collecting statistics relating to greenhouse gas emissions, energy consumption or energy production;
- Disclosure to certain agencies, bodies or persons where the Regulator is satisfied that disclosure will enable or assist those agencies, bodies or persons to perform or exercise their functions or powers, including the Australian Securities and Investments Commission, the Australian Competition and Consumer Commission and the Commissioner of Taxation;
- Disclosure for the purposes of law enforcement;
- Disclosure to States and Territories in accordance with the NGER Act; and
- Disclosure for the purposes of a climate change law or for the purposes of the performance of our functions under a climate change law.

DECLARATION

The Executive Officer (or equivalent), as described in the National Greenhouse and Energy Reporting Act 2007 (NGER Act), should read the following declaration below before electronically submitting the report

It is the responsibility of the reporting entity to ensure that the information provided in the Report is prepared in accordance with the requirements set out in the NGER Act and the *National Greenhouse and Energy Reporting Regulations 2008* (the NGER Regulations) and that the data it contains is based on methods prescribed in the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Measurement Determination).

Under the NGER Act and the NGER Regulations, the reporting entity remains responsible for the truth and accuracy of the contents of the report despite the assistance, if any, of a third party in its preparation.

Section 19 of the NGER Act includes a civil penalty provision, a breach of which may attract a pecuniary penalty of up to 2,000 penalty units. The *Crimes Act 1914* provides that one penalty unit is \$180.

In accordance with section 22 of the NGER Act, a reporting entity is required to keep records of the activities of the members of its group that, inter alia, allow it to report accurately under the NGER Act. Records must be retained for a period of 5 years from the end of the year in which the activities took place. Section 22 includes a civil penalty provision, a breach of which may attract a pecuniary penalty of up to 1,000 penalty units.

By electronically submitting, the signatory declares that:

- they have read and understood the penalties that apply for breaching the *National Greenhouse and Energy Reporting Act 2007*;
- the information provided in this report (including any attachments) is true and correct, and that they understand that the provision of false or misleading information is a serious offence under the *Criminal Code 1995* and may have consequences under the *National Greenhouse and Energy Reporting Act 2007*;
- the information provided in this Report has been prepared and supplied in accordance with the requirements set out in the *National Greenhouse and Energy Reporting Act 2007*, the *National Greenhouse and Energy Reporting Regulations 2008* and the *National Greenhouse and Energy Reporting (Measurement) Determination 2008*;
- they are duly authorised to act, including submitting this report, on behalf of the reporting entity;
- the Clean Energy Regulator may compel or conduct an audit of the information contained in this report or in relation to compliance with the *National Greenhouse and Energy Reporting Act 2007* or the *National Greenhouse and Energy Reporting Regulations 2008*;
- the Clean Energy Regulator may request further clarification or documentation to verify the information supplied in this Report; and
- the entity providing the report and each group member (if any) listed in the report is a body corporate.