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 Level 1, 695 Burke Rd, Camberwell VIC 3124
Date 10th April 2021

Subject: Letter of Opinion Auditing Diamond Energy's Renewable Energy and Emission Footprint Performance, April 2021

To Whom It May Concern:

Francis Grey, consulting economist, was engaged by Diamond Energy (DE) to provide an independent Letter of Opinion (LOP) summarising an audit of statements made by DE (and the corresponding supporting analysis) for the period from the company's inception (January, 2007 to December, 2020 inclusive) and the last five years (January 2016 to December 2020 inclusive), namely that:

1. Australian Made Renewable Energy Percentage	<i>"Diamond Energy delivers more electricity sourced from Australian renewable energy generators to the grid than our customers consume."</i>
2. Emissions intensity of sales	<i>"Historically, the net greenhouse gas emissions abatement from Diamond Energy's renewable energy generators exceeds the GHG emissions arising from the electricity consumed by our customers."</i>
3. Emission intensity of assets	<i>"Diamond Energy owned, and controlled, generation assets deliver a lower emission intensity than the grid average. Since inception our assets have delivered a net abatement of 2.87 tonnes of carbon dioxide equivalent per MWh of generated electricity. This is even greater if you include avoided emissions that would otherwise have been released from organic waste."</i>
4. Renewable Energy Index Methodology	<i>"Diamond Energy's owned and controlled generation assets deliver more renewable energy than all their customers consume."</i>

The company committed, in September 2020, to going beyond carbon neutral through the **"Science Based Targets initiative"** (SBTi), a collaboration of the UN Global Compact and implementation partners. The company reviews its annual performance against its SBTi targets. Through SBTi, DE has set its target at the lowest possible target of "well below 2 degrees"¹ and commits to reduce absolute scope 1 and scope 2 GHG emissions 30% by 2030 from a 2018 base year², and to measure and reduce its scope 3 emissions using the "Green House Gas Protocol Value Chain (Scope 3) Accounting and Reporting Standard"³.

5. SBTi Performance against commitment	<i>"Diamond Energy's is meeting and exceeding its SBTi commitment to reduce its scope 1 and scope 2 GHG emissions by 30% by 2030".</i>
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This LOP, follows previous LOP's provided in 2015, 2017 & 2019, and has utilised the same methodology.

1. <https://sciencebasedtargets.org/faqs#what-are-science-based-targets>
 2. <https://sciencebasedtargets.org/resources/?p=resources>
 3. <https://ghgprotocol.org/standards/scope-3-standard>

This audit of the emissions assessment (EA) methods used by DE has sought to test and confirm the accuracy of the above statements. This audit of the information provided by Diamond Energy included examination of the underlying data, its sources and the corresponding calculations and assumptions. This letter should be read in conjunction with the attachment of supporting information.

The aim of this audit was to assess the veracity of the statements and to ensure they are both accurate and fair. The supporting information attachment provides further detail in this regard.

Based on the audit conducted, it is our conclusion that DE's statements are accurate observations, calculations and assumptions about the company's renewable energy and emission footprint performance with respect to the company's retail customers over the period since inception (2007-2020) and over the five year period from 2016 to 2020.

Yours sincerely

A handwritten signature in black ink, appearing to be 'FG', written over a light grey rectangular background.

Francis Grey,
Consulting Economist

ATTACHMENT: SUPPORTING INFORMATION

Introduction

This is a review of the accuracy and fairness of the Diamond Energy statements and the underlying analysis, which comprise the DE Emission Assessment (EA) methodology. It is an increasingly important market distinction to claim mainly or wholly renewable energy as the source of supply to the electricity grid. Importantly the auditor notes that any such statements must be made accurately and in accordance with accepted practices to ensure credibility with customers and stakeholders alike.

Information Sources

Diamond Energy provided the statements, underlying analysis and the underpinning data, sourced principally from the following independent sources for the calendar years 2007 (commencement of generation) to 2020:

1. The **Australian Energy Market Operator (AEMO)** is responsible for the overall management and regulation of the National Electricity Market (NEM) with various responsibilities including wholesale electricity market management and settlement between participants⁴. Diamond Energy has provided AEMO correspondence and data directly stating Diamond Energy electricity market purchases and generation supplies in MWh's.
2. The **Commonwealth Clean Energy Regulator (CER)** is responsible for the regulation of the Commonwealth Mandatory Renewable Energy Target (MRET) which includes accreditation of renewable energy generators and the creation and transfer of renewable energy certificates (REC's) by such generators⁵.

All Diamond Energy owned or controlled (under power purchase agreements (PPA)) market generators are accredited under the MRET scheme. Accreditation details were provided by Diamond Energy. The MWh output of Diamond Energy generators was also identified in the corresponding AEMO data in point 1 above.

3. **GreenPower** is a joint initiative of the ACT, NSW, SA, VIC and TAS governments and guarantees that the renewable electricity voluntarily bought by customers is helping to develop new infrastructure in the renewable energy sector⁶. Diamond Energy identified the MRET accredited renewable generators it owns or controls that are also GreenPower accredited.
4. The **Greenhouse Gas Abatement Scheme (GGAS)**, regulated by the NSW Independent Pricing and Regulatory Tribunal (IPART) commenced on the 1st January 2003 and was the first mandatory greenhouse gas emissions trading scheme in the world⁷. Diamond Energy identified the renewable energy generators it owns or controls, that were registered under GGAS and the tonnes of carbon pollution avoided as assessed under GGAS rules.

Diamond Energy has also provided the auditors with access to key Diamond Energy personnel, records and systems as appropriate to assist with the conduct of this audit as required.

⁴ Refer: <http://www.aemo.com.au/>

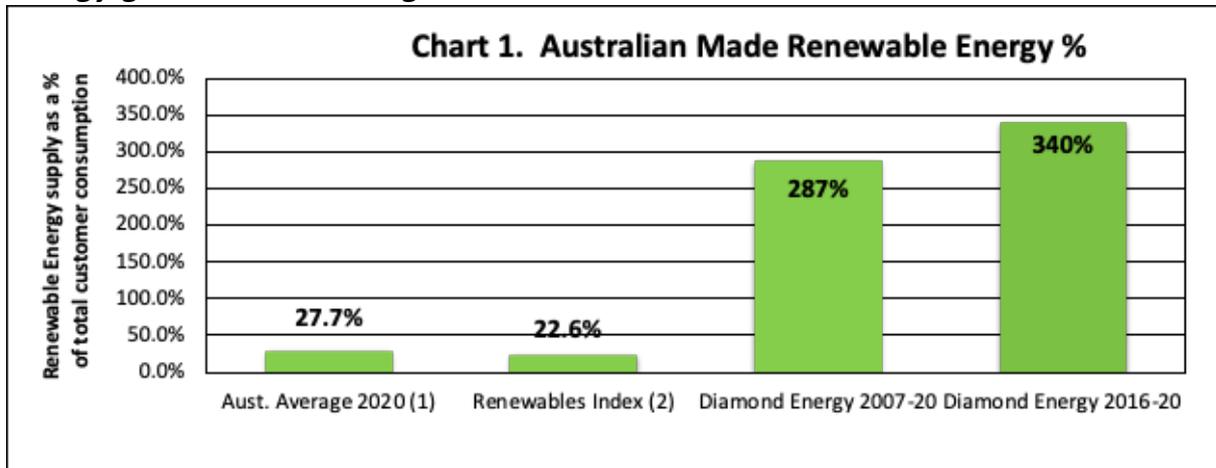
⁵ Refer: <http://www.cleanenergyregulator.gov.au/RET/Pages/default.aspx>

⁶ Refer: <http://www.greenpower.gov.au/>

⁷ Refer: http://www.ipart.nsw.gov.au/Home/Industries/Electricity/Greenhouse_Gas_Reduction_Scheme

Statement 1: Australian Made Renewable Energy Percentage

“Diamond Energy delivers more electricity sourced from Australian renewable energy generators to the grid than our customers consume.”



Using the AEMO renewable generator output (in MWh’s) and customer consumption data (in MWh’s supplied), Diamond Energy supplies on average 2.87 MWh of accredited renewable energy to the grid for each MWh of retail customer consumption over the period 2007-20, whilst for the period 2016-20 the corresponding ratio is 3.40 MWh of renewable energy per MWh of retail customer consumption. In short, when each customer receives a MWh of electricity, an additional 187% of renewable power is sold to the grid (for general use across the grid, ie ‘grid customer’) for each MWh sold to retail customers. This compares with average Australian consumption of accredited renewable energy supply, that is only 27.7% of each MWh supplied on the grid.

In both cases the data supports the statements above and the assumption that retail customers are the relevant denominator is supportable. For comparison, in 2018-19 the Australian average MWh comprised 27.7% accredited renewable supply per MWh of customer consumption⁸ (in line with minimum liability requirements under the RET). Similarly the average result for the Renewable Energy Index, covering the period from July 2018 to June 2019, cited in the above graph, identified that renewables were 22.6% of electricity supplied in in 2018-19.

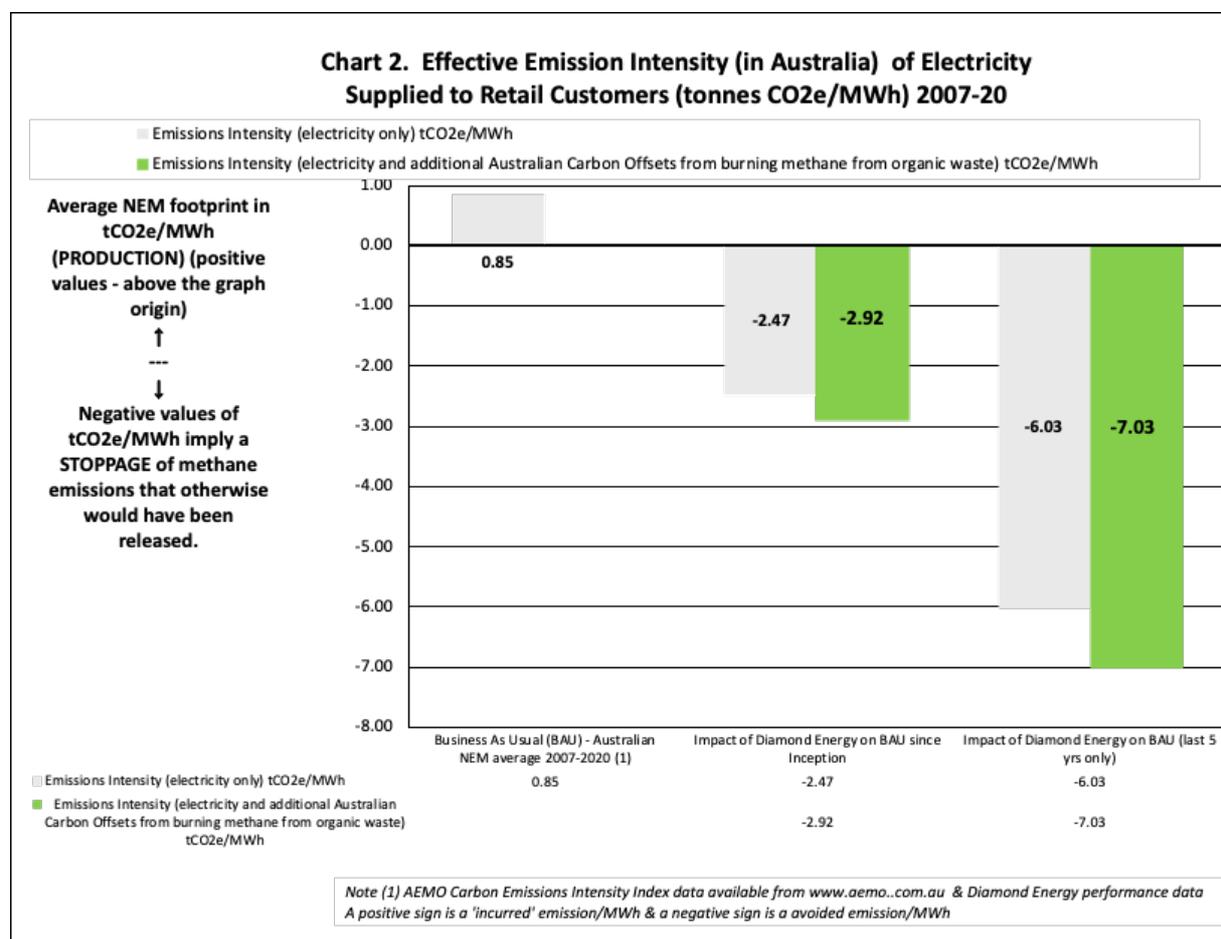
Given the above analysis, the auditor is comfortable that the statement above is fair and reasonable.

⁸ (CEC, 2021:10); Clean Energy Council, Report ‘Clean Energy Australia Report, web and PDF versions, 2021’, <https://www.cleanenergycouncil.org.au/policy-advocacy/reports/clean-energy-australia-report.html>.

Statement 2. Emissions intensity of sales

“Historically, the net greenhouse gas emissions abatement from Diamond Energy’s renewable energy generators exceeds the GHG emissions arising from the electricity consumed by our customers.”

Renewable electricity generation, by definition, has zero carbon emissions and displaces existing generation (at the prevailing NEM average emissions intensity, approximately 0.85 tonnes CO₂e/MWh⁹) as would otherwise have occurred to meet the consumer demand at the time. Renewable energy plants that combust methane from organic sources, such as sewage plants operated by Diamond Energy, also produce CO₂ exhaust gas, as a by-product of destroying the more powerful greenhouse gas known as methane. This CO₂ is considered to be part of the natural carbon cycle and hence not included as a greenhouse gas emission as per standard greenhouse gas auditing practice



The analysis in regard to Statement 1 confirmed Diamond Energy supplied more accredited renewable electricity than that consumed by its retail customers over the relevant periods. This equated to an effective emission **abatement** per MWh of retail customer consumption of 2.47 tonnes CO₂e/MWh and 2.92 tonnes CO₂e/MWh for the periods 2007-20 and 2016-20 respectively. Diamond Energy owned or controlled biogas generators also generate additional carbon emission

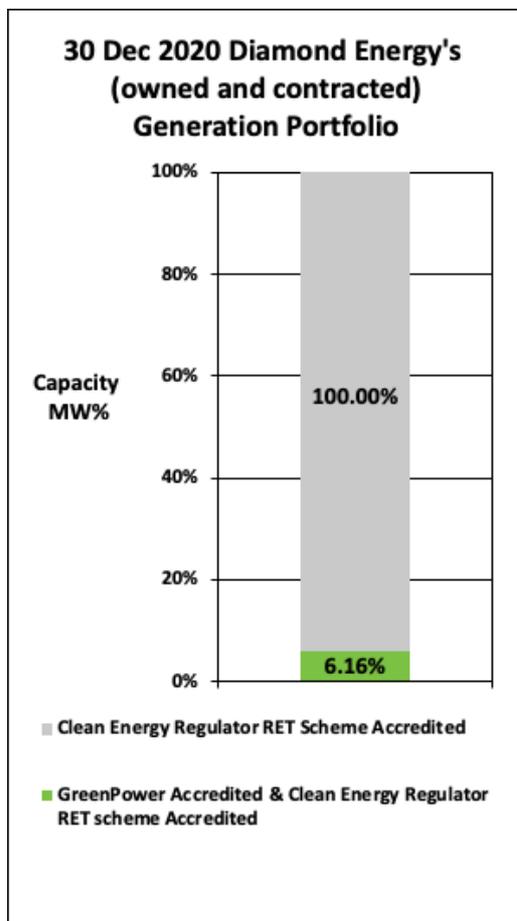
⁹ NEM emissions intensity data as per that issued by AEMO (averaged 2007 -2020), refer <http://www.aemo.com.au/Electricity/Settlements/Carbon-Dioxide-Equivalent-Intensity-Index>

abatement (offsets) as assessed under GGAS rules (arising from the avoided methane emissions that would have otherwise occurred through the decomposition of organic matter).

Including this avoided methane abatement in the above analysis increases the effective emission **abatement** per MWh of customer consumption by approximately 6.03 tonnes CO₂e/MWh and 7.03 tonnes CO₂e/MWh for the periods 2007-20 and 2016-20 respectively. Given the above and the underlying analysis, the auditor is sufficiently satisfied with respect to the veracity of the above statement.

Statement 3. Emissions Intensity of Assets

“Diamond Energy owned and controlled generation assets deliver a lower emission intensity than the grid average. Since inception our assets have delivered a net abatement of 2.47 tonnes of carbon dioxide equivalent per MWh of generated electricity. This is even greater if you include avoided emissions that would otherwise have been released from organic waste.”



The output of renewable generation displaces existing generation (assumed to occur at the prevailing NEM average emissions intensity, approximately 0.85 tonnes CO₂e/MWh as noted in Statement 2) from the national electricity market (NEM). This avoided generation would otherwise have met the consumer demand at the time.

Given this and the fact that all Diamond Energy owned or controlled generation assets are renewable (MRET accredited and GreenPower accredited also - refer chart left), effectively results in a net **abatement** of 2.47 tonnes CO₂e/MWh generated, in regard to these assets based on data used in Statement 2. The net abatement of 2.47 tCO₂e/MWh comprises, in part, 0.85 tCO₂e/MWh, due to renewables from DE displacing MWhs from other sources on the grid, with a net footprint of 0.85tCO₂e/MWh. A further 1.62 tCO₂e/MWh of net abatement is created as DE renewable energy, excess to customer requirements, is supplied to the grid. Given this the auditors are sufficiently satisfied with the veracity of Statement 3 above.

As per the analysis presented under Statement 2, some Diamond Energy owned, or controlled, generation assets also result in avoided methane pollution as assessed under GGAS. If this additional abatement is included, the overall combined greenhouse gas emissions abatement intensity (tonnes CO₂e avoided/overall generator output in MWh's) for all Diamond Energy owned or controlled generation assets would be substantially higher.

DE generation has been assumed to include all market generation plants owned, or affiliated through contract, with DE, between 2007 and 2020, this excludes rooftop generation owned by 'market

customers'. AEMO clearly defines market generators and market customers. Diamond Energy's biogas energy plants are market generators and they reduce more emissions per MWh than rooftop solar. However looking forward rooftop solar has the potential to scale up in volume (MW's) at a much higher rate but for the purpose of this asset footprint analysis it has been excluded as it pertains only to market customers.

Given the above analysis, the auditor is comfortable that the statement above is fair and reasonable.

Statement 4. Renewable Energy Index: Company Results

“Diamond Energy’s owned and controlled generation assets deliver more renewable energy than all their customers consume. “

The Renewable Energy Index¹⁰ has provided an overview of the contribution of the Renewable Energy Sector to Australia. Using the same methodology DE has calculated the contribution from its portfolio of generating assets and its load from all of its electricity customers.

DE has calculated their net position with data sourced from the Australian Energy Market Operator (AEMO) and calculated their “Renewable Energy Index” as per the approach of Green Energy Markets and Leading Edge Energy. See Chart 1 for a direct comparison between DE performance and the Renewable Energy Index.

Green Markets and Leading Edge Energy created a Renewable Energy Index for the Getup non-governmental organisation (NGO). The Index uses *“data sourced from the Australian Energy Market Operator (AEMO) and via NEM Review for all power except rooftop solar PV generation in the WEM. Rooftop solar PV generation in the WEM is derived from an estimate of the cumulative installed capacity in WA multiplied by a generic capacity factor for each month derived from AEMO’s 2017 WA Electricity Statement of Opportunities with a discount to align it with Clean Energy Regulator estimates for solar PV annual average generation”*¹¹

Given the above analysis, the auditor is comfortable that the statement above is fair and reasonable.

¹⁰. <http://greenmarkets.com.au/news-events/green-energy-markets-launches-australias-renewable-energy-index> and <https://leadingedgeenergy.com.au/renewable-energy-index/>

¹¹. http://greenmarkets.com.au/images/uploads/Resources/RE_Index/Renewable_Energy_Index_2016-17- Benchmark_report.pdf; page 11, Notes on Figure 1.

Statement 5. Science Based target Initiative (SBTi), 2020.

“Diamond Energy is meeting and exceeding it’s SBTi commitment to reduce it’s scope 1 and scope 2 GHG emissions below 30% by 2030.”

In September 2020 DE committed itself to targets under the SBTi.

“DE has set it’s target at the lowest possible target of “well below 2 degrees” and commits to reduce absolute scope 1 and scope 2 GHG emissions 30% by 2030 from a 2018 base year¹², and to measure and reduce its scope 3 emissions using the “Green House Gas Protocol Value Chain (Scope 3) Accounting and Reporting Standard”.

DE has a set of generation assets that allow it, since inception, to avoid more emissions of carbon dioxide equivalent CO₂ gases, than is required just for generation alone. That is, to be clear, DE has a business structure whereby DE has renewable generation assets and has other renewable generation assets, owned or affiliated, that allow the avoidance of additional, significant methane emissions.

The consequence of this growing portfolio is that DE, since inception, has contributed additional CO₂e avoidance beyond that required by ‘zero’ impact renewable generation. Other emitting entities are struggling to reach zero emissions. DE is already negative on an annual and cumulative basis, and is seeking to become even more carbon negative, by virtue of its SBTi target.

DE states that it is ‘meeting and exceeding’ its SBTi goal. DE has a set a goal for 2030 which is 33.3% greater than its 2018 baseline on an absolute emission basis. The following graphs show the track record of DE’s annual negative emissions since inception.

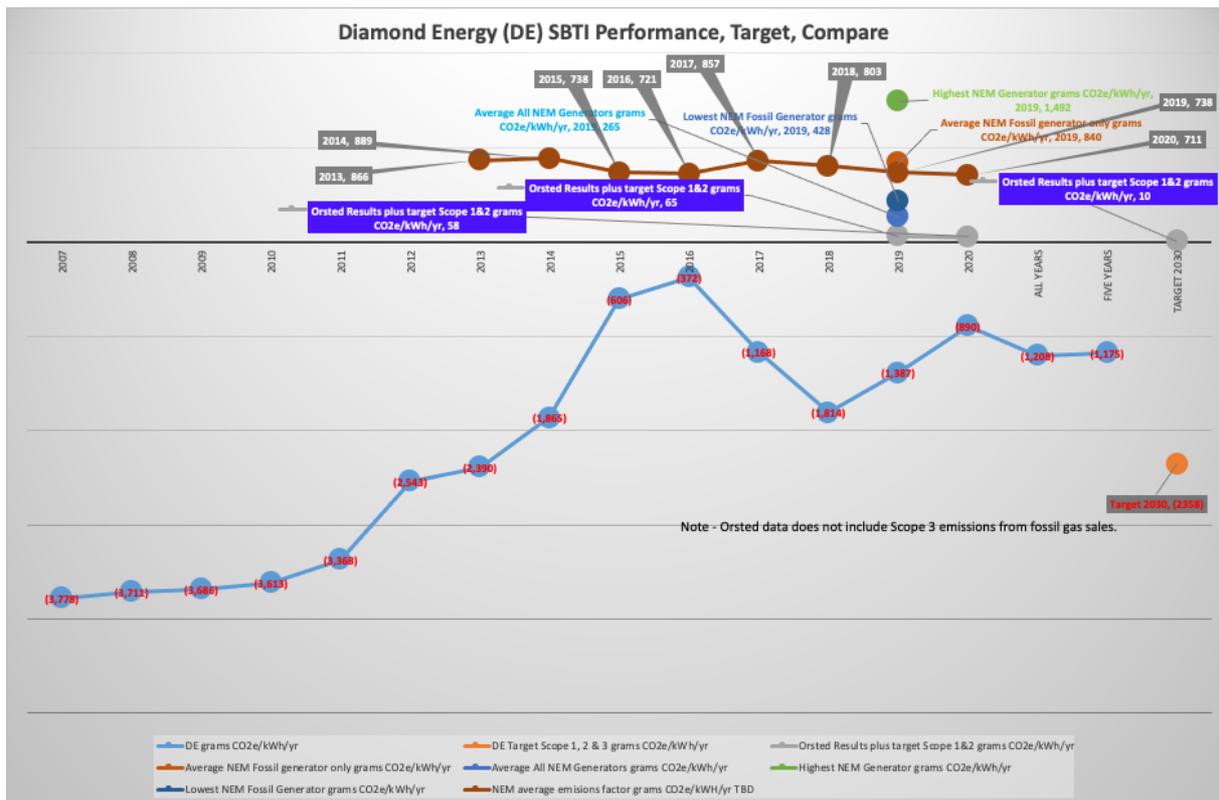
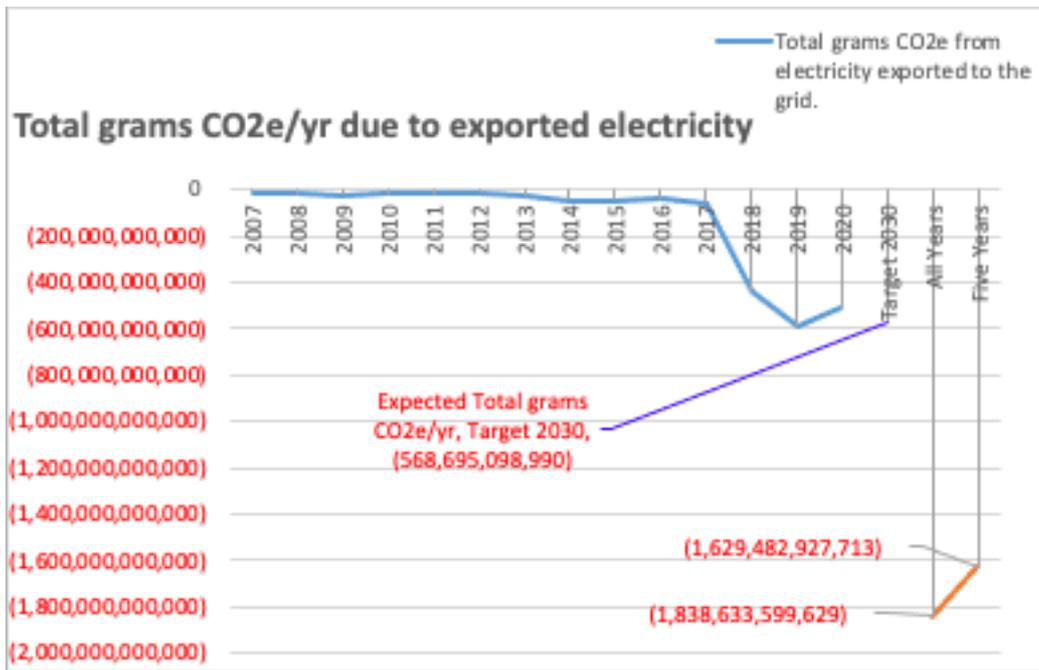
The first graph shows the annual absolute emissions of CO₂e gases in total grams. The results are clearly negative. The 2030 target is also clearly represented. As can be seen DE almost achieved the 2030 target in 2019, ten years ahead of schedule. This is continuing the trend set in 2018 and before. In 2020 the volatility of the generation mix saw a small retreat from the highs of the 2019 result.

On the basis, that target achievement is normally derived by linear emission reduction, it is quite clear that DE is ahead of schedule, and has consistently been ahead since 2017. On this basis it can be said that DE is ‘meeting and exceeding’ its expected performance based on the expected behaviour of the average SBTi signatory.

Further, the second graph shows how DE’s negative carbon emissions, on a grams CO₂e/kWh/year basis, are strongly ahead of the national and international industry’s actual positive carbon emissions by a significant margin. This has been so since inception.

Given the above analysis, the auditor is comfortable that the statement above is fair and reasonable.

4. <https://sciencebasedtargets.org/resources/?p=resources>



Conflicts of Interest Statement

It is necessary for auditors to state whether or not they have any conflicts of interest in performing an audit.

Francis Grey received payment from Diamond Energy to perform this audit, this is standard practice.

Francis Grey has no conflicts of interest in relation to this audit, He has no financial or other interest in the performance of DE. He introduced the Dow Jones Sustainability Index (DJSI) corporate sustainability assessment and rating system to the Australian Top 200 ASX listed companies in the period from March 2000 to July 2013. He has had an ongoing investment in biogas to energy systems, that also creates avoided greenhouse gas pollution, as well as renewable energy. This provides a useful insight into the DE generation process and is not a conflict of interest.

Previous Audit Reporting for DE in relation to the emissions intensity of DE generation.

This is the fourth audit report conducted by Francis Grey for DE. The first audit report was in October 2015, the second in October 2017 and the third in 2019.