



infigen

# Infigen Energy Carbon Disclosure Project 2016

Submission for the year ended 1 July 2014 – 30 June 2015

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## WHAT IS THE CARBON DISCLOSURE PROJECT (CDP)?



CDP provides the only global environmental reporting system. Every year CDP sends requests for information on behalf of investors and purchasing organisations to thousands of companies worldwide. The data collected by CDP enables investors, companies and governments to mitigate risks from the use of energy and natural resources and identify opportunities from taking a responsible approach to the environment.

CDP's runs a public consultation on its questionnaires every September. In addition, feedback on CDP's system can be provided all year round through CDP's website at [www.cdp.net](http://www.cdp.net).

## LINKING CARBON DISCLOSURE PROJECT (CDP) AND GLOBAL REPORTING INITIATIVE (GRI)

GRI and CDP continue to work together to align best practice and avoid duplication of disclosure effort to ease the reporting burden for the thousands of companies that use CDP's climate change and supply chain programs and the GRI Sustainability Reporting Guidelines. The following table outlines how GRI's G4 guidelines and CDP's 2016 climate change questions are aligned. This information is freely available to download at <https://www.globalreporting.org/resource/library/GRI-G4-CDP-2016-Climate-Change-Linkage-Document.pdf>.

CDP	GRI
CC1. Governance	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-34, G4-36, G4-51-b</li> <li>- Emissions Aspect: G4-DMA-b</li> </ul>
CC2. Strategy	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-1, G4-2, G4-15, G4-16, G4-45, G4-46, G4-47</li> <li>- Emissions Aspect: G4-DMA-a and G4-DMA-b</li> <li>- Public Policy Aspect: G4-DMA-b</li> </ul>
CC3. Targets and Initiatives	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-1, G4-2</li> <li>- Energy Aspect: G4-EN7</li> <li>- Emissions Aspect: G4-EN19-a, G4-EN19-e</li> <li>- Products and Services Aspect: G4-DMA-b, G4-EN27</li> </ul>
CC5. Climate Change Risk	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-2</li> <li>- Economic Performance Aspect: G4-EC2</li> </ul>
CC6. Climate Change Opportunities	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-2</li> <li>- Economic Performance Aspect: G4-EC2</li> </ul>
CC7. Emissions Methodology	<ul style="list-style-type: none"> <li>- Emissions Aspect: G4-EN15-d, G4-EN15-e, G4-EN15-f, G4-EN16-c, G4-EN16-d, G4-EN16-e</li> </ul>
CC8. Emissions Data	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-20, G4-32-b, G4-32-c, G4-33-a, G4-33-b</li> <li>- Emissions Aspect: G4-EN15-a, G4-EN15-c, G4-EN15-e, G4-EN15-g, G4-EN16-a, G4-EN16-d, G4-EN16-f, G4-EN17-c</li> <li>- Supplier Environmental Assessment Aspect: G4-DMA-b</li> </ul>
CC9. Scope 1 Emissions Breakdown	<ul style="list-style-type: none"> <li>- Emissions Aspect: G4-EN15-b</li> </ul>
CC10. Scope 2 Emissions Breakdown	<ul style="list-style-type: none"> <li>- Energy Aspect: G4-EN3 Extract from the Indicator Guidance</li> <li>- Emissions Aspect: G4-EN16 Extract from the Indicator Guidance</li> </ul>
CC11. Energy	<ul style="list-style-type: none"> <li>- Energy Aspect: G4-EN3-a, G4-EN3-b, G4-EN3-c, G4-EN3-e, G4-EN3-g</li> </ul>
CC12. Emissions Performance	<ul style="list-style-type: none"> <li>- Emissions Aspect: G4-EN18-a, G4-EN18-b, G4-EN18-c, G4-EN19-a, G4-EN19-c, G4-EN19-e</li> </ul>
CC13. Emissions Trading	GRI does not provide specific guidance on the disclosure of emissions trading schemes or project-based carbon credits or credit purchase. However, organisations may report this as part of their Disclosures on Management Approach for the Emissions Aspect.
CC14. Scope 3 Emissions	<ul style="list-style-type: none"> <li>- General Standard Disclosures: G4-32-b, G4-32-c, G4-33-a, G4-33-b</li> <li>- Emissions Aspect: G4-EN17-a, G4-EN17-b, G4-EN17-d, G4-EN17-f, G4-EN17-g, G4-EN19-a, G4-EN19-c, G4-EN19-e</li> </ul>



## 0 MODULE: INTRODUCTION

### Page: Introduction

#### CC0.1 Introduction

Infigen Energy (Infigen) is a developer, owner and operator of wind energy generation in Australia. We own six wind farms and a solar farm with a combined installed capacity of 557 megawatts operating in New South Wales, South Australia and Western Australia.

In addition to power generation, each asset is entitled to create one Large-scale Generation Certificate (LGC) for each megawatt hour (MWh) that is exported to the grid after applying the marginal loss factor.

Infigen manages the sale of generation output (including power and LGCs) to its customers from its operations through contracts, which include 'run of plant' power purchase agreements (PPAs), retail supply agreements and LGC sales agreements, and on a merchant basis (wholesale electricity and LGC markets).

Infigen's operating assets generate enough power to meet the needs of over 250,000 homes saving over a million tonnes of carbon dioxide emissions each year. Infigen is the only owner-operator of renewable assets that operates a 24/7 control centre.

Infigen's development pipeline comprises approximately 1,100 megawatts of large-scale wind and solar projects spread across five states in Australia.

Infigen trades on the Australian Securities Exchange (ASX) under the code 'IFN'.

#### CC0.2 Reporting Year

Enter Periods that will be disclosed
01/06/2014 – 30/06/2015

#### CC0.3 Country list configuration

Select country
Australia

#### CC0.4 Currency selection

AUD (\$)



## **CC0.6 Modules**

Electrical

## **Further Information**

Infigen discloses its environmental, social and corporate governance (ESG) performance using the Global Reporting Initiative framework in the Annual Report (download the 2015 Annual Report at <http://www.infigenenergy.com/Media/docs/15-09-29-Annual-Report-2015-bde1e799-7e82-48e8-a9d1-0bcb801354c4-0.pdf>) and Corporate Governance Statement (<http://www.infigenenergy.com/Media/docs/15-09-29-Corporate-Governance-Statement-2015-505fdc7b-198c-45b3-aacf-af4120fb470a-0.pdf>). Other policy summaries are published on the corporate website at <http://www.infigenenergy.com/about-us/corporate-governance.html>.

## **Attachments**

[https://www.cdp.net/sites/2016/55/9055/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC0.Introduction/Annual Report 2015.pdf](https://www.cdp.net/sites/2016/55/9055/Climate%20Change%202016/Shared%20Documents/Attachments/ClimateChange2016/CC0.Introduction/Annual%20Report%202015.pdf)  
[https://www.cdp.net/sites/2016/55/9055/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC0.Introduction/Infigen Corporate Governance Statement 2015.pdf](https://www.cdp.net/sites/2016/55/9055/Climate%20Change%202016/Shared%20Documents/Attachments/ClimateChange2016/CC0.Introduction/Infigen%20Corporate%20Governance%20Statement%202015.pdf)

Both attachments are also published on Infigen's website at <http://www.infigenenergy.com/investors/publications/annual-reports/annual-report-2015/>

## I MODULE: MANAGEMENT

### Page: CC1. Governance

#### CC1.1 Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

#### CC1.1a Please identify the position of the individual or name of the committee with this responsibility

During the reporting period Infigen's Managing Director, also a Board Director, was Chairman of Infigen's Safety and Sustainability Committee, which sets annual Sustainability Targets and tracks progress towards achieving those targets.

The Board of Directors of Infigen is responsible for the governance and management of the company, by formulating and approving the strategic direction, investment objectives and goals of Infigen.

#### CC1.2 Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

#### CC1.2a Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
All employees	Other non-monetary reward	Efficiency project Behaviour change related indicator	Initiatives by all employees to reduce waste and power consumption are encouraged through the work of Health, Safety & Environment Office Council, and achievements of individual employees recognised through Infigen's employee recognition program MegaStar. During the period Infigen also sponsored a project initiated by an employee to volunteer and raise funds for Pollinate Energy, which aims to shift from using kerosene and open fire for light and cooking in India to sustainable products. Infigen also promoted the Sydney Rides Business Challenge 2015 which encourages employees to cycle to work instead of commuting by car.
Business unit managers	Recognition (non-monetary)	Emissions reduction target	Infigen's Climate Action committee is responsible for developing Infigen's emissions reduction target that will be submitted to the Science Based Targets Initiative organisation.
Environment/Sustainability managers	Monetary reward	Emissions reduction project Energy reduction project Behaviour change related indicator	Sustainability managers' bonus is linked to key performance indicators which include: acting as a sustainability champion communicating and educating others on sustainability, and collaborating with Infigen's internal teams to build sustainability principles into business plans, capital plans and operational plans. The sustainability managers lead the development of a coordinated program to support the delivery of



Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			Infigen’s sustainability strategy and sustainability targets. During the period the sustainability targets relevant to climate change included: 1. Energy consumption: improve data quality, agree on key indicators and implement two energy efficiency initiatives; 2. Communicate best use of resources; and 3. Formulate Emissions Management Strategy.

**Further Information**

**Page: CC2. Strategy**

**CC2.1 Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

Integrated into multi-disciplinary company wide risk management processes

**CC2.1a Please provide further details on your risk management procedures with regard to climate change risks and opportunities**

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Board or individual/sub-set of the Board or committee appointed by the Board	Australia	3 to 6 years	Infigen's business model is highly dependent on climate models. Refer to the Corporate Governance Statement 2015 for an overview of Infigen's risk management procedures.

**CC2.1b Please describe how your risk and opportunity identification processes are applied at both company and asset level**

Infigen's Enterprise Risk Management Committee (ERMC) meets regularly to assess Infigen's material risks and opportunities at the company level. The material risks and opportunities include operational, financial, strategic and external risks and opportunities. Some of the categories relate to considering impacts from climate change and are referred to the relevant sub-committee or business unit.

Infigen has also established a Top Risk register that provides the same risk-based platform for identifying and assessing Infigen's material risks and opportunities at the asset level. Updated risk registers are subsequently reported to, and reviewed by, the Audit, Risk & Compliance Committee of Infigen's Board. The annual strategy development process also provides additional scope for the Board and management to review Infigen's material risks and opportunities when putting the company's vision and mission into action.

**CC2.1c How do you prioritize the risks and opportunities identified?**

Risks and opportunities are prioritised on a material exposure basis as Infigen assesses the possibility that the risk or opportunity in question could substantively affect the company's ability to create or preserve value for its key stakeholders over the short, medium or long term. Infigen's Risk Management Policy sets out a clearly articulated risk appetite statement as a key element of its enterprise risk management framework. Infigen aims to achieve an appropriate balance between the risks and opportunities the company takes and the value created (or protected) by accepting these risks and opportunities based on Infigen's agreed risk appetite. Risks and opportunities are prioritised based on this ongoing analysis of risk/reward trade-offs, risk appetite and the desired risk profile for the company.

**CC2.2 Is climate change integrated into your business strategy?**

Yes

**CC2.2a Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process**

The company has positioned itself as a green business being a developer, owner and operator of renewable energy assets. Infigen's core product - renewable energy - positively affects adaptation to climate change. The company has a development pipeline of over 1,000 megawatts of large-scale onshore wind and solar photovoltaic projects. Having a 100% renewable energy development project portfolio is a strategic advantage over competitors who have generation assets that may be exposed to a future carbon price.

In June 2015, Infigen became a signatory to CDP's climate commitments:

- a) Commit to greenhouse gas emissions reduction targets that limit global warming to below 2°C
- b) Commit to having a strategy in place to procure 100% of electricity from renewable sources
- c) Responsible corporate engagement in climate policy
- d) Provide climate change information in corporate reports
- e) Put a price on carbon

Following the reporting period, Infigen disclosed its emissions in the interim financial report (six months ended 31 December 2015), established a science-based target to limit global warming to 1.5°C, and continued to engage responsibly in climate change policy through the Clean Energy Council.

**CC2.2c Does your company use an internal price of carbon?**

Yes

**CC2.2d Please provide details and examples of how your company uses an internal price of carbon**

When making investment decisions we examine what carbon policies might be implemented in Australia and the carbon price likely to be associated with them. This is factored into the investment decisions. We have committed to implementing an internal price on carbon having become a signatory to the CDP's climate commitments.

**CC2.3 Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)**

- ✓ Direct engagement with policy makers
- ✓ Trade associations
- ✓ Funding research organizations
- ✓ Other

**CC2.3a On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Clean energy generation	Support	In the 2015 financial year Infigen donated \$160,000 to industry associations and support groups to lobby for a favourable regulatory outcome. During the reporting period, the priority in the regulatory engagement was on the Large-scale Renewable Energy Target. This policy sets annual mandated targets for electricity	During the reporting period Infigen promoted the Clean Energy Council's (CEC) position that it is in the national interest for both major parties to support the proposal to finalise the Renewable Energy Target (RET) scheme

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		retailers. Since the change of government in 2013, there had been ongoing considerations of lowering the legislated 2020 target of 41,000 gigawatt hours. Throughout the reporting period, Infigen ran a program to engage industry members, policy-makers and the media to raise awareness of the benefits of the legislation, and funded research into policy analysis. Infigen's Managing Director and Regulatory Manager met with policy-makers and influencers including the Prime Minister, and party leaders. The revised renewable energy targets were legislated on 23 June 2015 and lowered the target from 41,000 GWh to 33,000 GWh.	review. Infigen opposed elimination of the RET scheme from the beginning of the review. Infigen supported the completion of the review and the outcome of the target 33,000 GWh by 2020-2030, which would be sufficient legislated demand to spur growth in the renewable energy industry. Previously legislated reviews and which were to occur every two years which compounded the lack of investment confidence were also removed.
Climate finance	Oppose	A repeal bill of the Australian Renewable Energy Agency (ARENA) was proposed by the House of Representatives on 1 September 2014. The repeal bill was subsequently opposed by Senate Economics Legislation Committee. Following the failure to repeal ARENA, its funding of \$1.3 billion was withdrawn.	Infigen opposed the repeal bill and supports continuance of ARENA.

**CC2.3b Are you on the Board of any trade associations or provide funding beyond membership?**

Yes

**CC2.3c Please enter the details of those trade associations that are likely to take a position on climate change legislation**

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Clean Energy Council	Consistent	The Clean Energy Council has worked hard to establish and maintain a strategic relationship with ARENA.	Infigen's Managing Director was the Council's Chairman during 2014-2015.

**CC2.3d Do you publicly disclose a list of all the research organizations that you fund?**

No

**CC2.3e Please provide details of the other engagement activities that you undertake**

Infigen supported campaigns run by community groups Australian Wind Alliance and Friends of the Earth to demonstrate to policy makers the public's support to renewable energy.



**CC2.3f What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

Policy engagement strategy is discussed fortnightly to ensure consistency of key messages and best outcome to the business. Infigen engages with its followers on social media sharing company and community news, and promoting renewable energy and policy predictability for the renewable energy industry.



**Page: CC3. Targets and Initiatives**

**CC3.1 Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?**

Intensity target  
Renewable energy consumption and/or production target

**CC3.1b Please provide details of your intensity target**

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (location-based)	21%	44%	Metric tonnes CO2e per megawatt hour (MWh)*	2015	0.00045	2026	Yes	The target is set for the 2026 financial year (ending 30 June 2026). The normalised base year emissions of 0.00045 tCO2e/MWh is the current emissions intensity of: fuel used for transport (scope 1); and energy consumed in head and site offices (scope 2). Note that the remaining 79% emissions excluded from this scope are offset with renewable generation. Infigen’s wind farms consume electricity from the grid when there is insufficient wind to meet their auxiliary load. In recognition of this consumption and associated emissions, a large-scale renewable energy generator in Australia is not entitled to create renewable energy certificates associated with its generation until such time as it exceeds the amount of electricity consumed from the grid. In effect the legislation and regulations in Australia determine that a renewable energy generator must deliver an equivalent amount of renewable to the grid as the amount of non-renewable energy it has consumed before it can get the additional revenue that typically accrues to renewable generators, which is in effect an offset of the emissions arising from its consumption.

**CC3.1c Please also indicate what change in absolute emissions this intensity target reflects**

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	44	No change	0	The target was endorsed following the reporting period. The reduction target applies to absolute emissions from current operations. Further additions of capacity will result in higher absolute emissions but will be subject to the same intensity target improvements.

**CC3.1d Please provide details of your renewable energy consumption and/or production target**

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity consumption	2015	375	0%	2026	100%	Our target is to consume 100% of electricity in our offices from renewable sources. This includes market-based and location-based methods.
RE2	Electricity production	2015	1459000	100%	2026	100%	We operate large-scale wind farms and all generation is from renewable sources. Infigen's development pipeline comprises over 1,000 megawatts of large-scale wind and solar photovoltaic projects.

**CC3.1e For all of your targets, please provide details on the progress made in the reporting year**

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int1	9%	0%	Initiatives undertaken during the reporting period were offset by emissions due to increases in operational activities.
RE1	9%	0%	The electricity consumption contract committing to purchase 100% GreenPower at the head office did not come into effect until after the reporting period.
RE2	9%	100%	All of Infigen's generation is from renewable sources.

**CC3.2 Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?**

Yes

**CC3.2a Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions**

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Product	All of Infigen's power generation is from renewable sources.	Low carbon product	Other: Renewable power plants are accredited by the Clean Energy Regulator - the Australian government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy.	100%	Less than or equal to 10%	All development activities are dedicated to maintaining and pursuing large-scale renewable energy projects in Infigen's development pipeline.
Product	Each wind and solar farm is entitled to create one Large-scale Generation Certificate (LGC) for each megawatt hour (MWh) that is exported to the grid after applying the marginal loss factor.	Avoided emissions	Other: Power plants are accredited by the Clean Energy Regulator - Australian government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy.	100%	Less than or equal to 10%	R&D activities to optimise generation whilst capturing high price events and avoiding negative price events is a business-as-usual cost, and are covered within Energy Markets and asset management costs.

**CC3.3 Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)**

Yes

**CC3.3a Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings**

Stage of development	Number of projects	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	6	
To be implemented*	4	200

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Implementation commenced*	1	80
Implemented*	1	3
Not to be implemented		

**CC3.3b For those initiatives implemented in the reporting year, please provide details in the table below**

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Low carbon energy purchase	Committed to purchasing 100% GreenPower in the Sydney head office. Annual consumption is ~80MWh.	80	Scope 2 (market-based)	Voluntary	0	2000	>25 years	21-30 years	
Energy efficiency: Building services	Formally joined the City Switch program that requires Infigen to obtain energy efficiency accreditation for NABERS Energy rating of 5 stars.	3	Scope 2 (market-based)	Voluntary	1000	0	1-3 years	6-10 years	We estimate that energy efficiency achieved will be marginal, approximately 3 MWh, which is equivalent to \$1,000 savings per year.
Behavioral change	A committee 'Health, Safety & Environment Sydney Office Council' was formed to provide a framework in which to drive change and improvement in the health, safety and environment culture and performance overall.	195	Scope 2 (market-based) Scope 3	Voluntary	0	8000	4-10 years	21-30 years	The initiatives the council implements aim to promote awareness of employees around waste, water and energy efficiency.

**CC3.3c What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for low carbon product R&D	All of Infigen's development activities are dedicated to maintaining and pursuing large-scale renewable energy projects in Infigen's development pipeline.
Other	A formal Sustainability Committee reviews and authorises funding for initiatives that can demonstrate cost savings and emissions reductions.
Partnering with governments on technology development	Infigen engages the Clean Energy Finance Corporation (CEFC) to collaborate on developing financial vehicles for funding and developing renewable energy projects. For example, the CEFC provided a loan to Infigen as part of funding of the 48 MW Woodlawn wind farm.

**Further Information**

The absolute emissions reduction achieved through the methodology was compared with SBTI's methodologies (GEVA and CSO's context-based carbon metric) to ensure the outcome is compatible with the RCP2.6 pathway.



**Page: CC4. Communication**

**CC4.1 Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)**

Publication	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Pages 2-4, 27-37	<a href="https://www.cdp.net/sites/2016/55/9055/Climate%20Change%202016/Shared%20Documents/Attachments/CC4.1/Annual%20Report%202015.pdf">https://www.cdp.net/sites/2016/55/9055/Climate Change 2016/Shared Documents/Attachments/CC4.1/Annual Report 2015.pdf</a>	The 2015 Annual Report was compiled using the Global Reporting Initiative framework, which helped to outline management approach of engagement with regard to climate policy, emissions disclosure, procurement practices, and working with community groups to raise awareness about renewable energy.



**II MODULE: RISKS AND OPPORTUNITIES**

**Page: CC5. Climate Change Risks**

**CC5.1 Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

- ✓ Risks driven by changes in regulation
- ✓ Risks driven by changes in physical climate parameters

**CC5.1a Please describe your inherent risks that are driven by changes in regulation**

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Renewable energy regulation	During the reporting period the Federal Government was reviewing the Renewable Energy Target (RET) scheme and the generation targets that determine the regulated demand for Large-scale Generation Certificates (LGCs). Approximately half of Infigen's revenue comes from the sale of LGCs. The perceived uncertainty caused by the review of the RET scheme put downward pressure on LGC prices and companies' ability to obtain financing for new renewable energy projects. The RET review was completed in June 2015 with the Government and Opposition agreeing to a lower generation target of 33,000 gigawatt hours (GWh) instead of 41,000 GWh between 2020-2030. This level would require adding 5,000-6,000 MW of renewable capacity by 2020, and would be sufficient to spur demand for LGCs.	Reduced demand for goods/services	3 to 6 years	Direct	About as likely as not	Medium-high	Operating assets: lower revenues for operating assets due to weakened RET. A change of \$1 in the bundled price that Infigen receives for its generation (MWh), reduces annual EBITDA (earnings before interest, tax, depreciation and amortisation) by ~ \$1 million.	Engaging policy-makers for a favourable regulatory outcome through the Clean Energy Council (CEC), which runs a Wind Directorate that is responsible for the oversight and guidance of policy development in the wind power sector. Sponsoring campaigns that raise awareness and rally public support for the policy.	Increased consultancy and membership fees to the Clean Energy Council and Australian Wind Alliance. Additional expenses incurred through increased lobbying activities and management's time and effort away from core business.



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	Onerous planning restrictions potentially increase development and operational costs and can delay planning decisions. Changes to planning legislation may decrease the value of the development pipeline.	Inability to do business	3 to 6 years	Direct	About as likely as not	Low-medium	Higher costs for operating assets and prospective developments due to increased regulatory compliance burden. Uncertainty diminishes potential securityholder, financier and off-taker interest.	Development and Regulatory managers engage with regulators and legislators to promote the renewable energy industry, encourage regulation and legislation to support the industry, and provide advice in relation to potential unintended consequences related to poor policy.	These actions directly increase Infigen's administrative compliance and staffing costs. However, the greater cost to Infigen is the less tangible diversion of focus from its core business activities.

**CC5.1b Please describe your inherent risks that are driven by changes in physical climate parameters**

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Tropical cyclones (hurricanes and typhoons)	Damage to assets and higher operating costs.	Reduction /disruption in production capacity	3 to 6 years	Direct	Unlikely	High	There would generally be financial implications if any of the physical climate change risks were to eventuate, associated with decreased revenue from disruption to operations, and increased operational costs or capital expenditure from higher insurance and contractor fees. Information on operating costs is disclosed in the Management Discussion and Analysis section of the 2015 Annual Report.	Infigen's Enterprise Risk Management framework underpins the management of risks in all its activities. "Severe weather risk" is recognised as an asset management risk and is reported to the Audit, Risk & Compliance Committee. The risk management process is ongoing and requires the continuous identification, assessment, monitoring and management of risks. Infigen Energy's senior executives and the broader management team are all involved in this process. Risk transfer via Global Property and Liability insurance program includes: Crisis Management, Business Continuity framework, and Operations Control Centre - refer below to management methods for drought risk.	Infigen manages its operating costs through post-warranty service and maintenance agreements whereby service providers are paid to carry the risk of component failure; and maximise generation output and minimise turbine failure through scheduled and unscheduled maintenance. There are no extra risk management costs as these actions are almost entirely part of general business and risk management. Costs specifically relating to mitigating risks associated with climate change have not been estimated.



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	Increased frequency of bushfires and floods can cause damage to assets as well as transmission networks.	Reduction /disruption in production capacity	3 to 6 years	Direct	About as likely as not	High	No output during extreme events, and therefore no revenue. Net of insurance reimbursements taking into account policy deductibles.	Methods include: (1) Infigen has developed a comprehensive crisis management framework incorporating disaster recovery plans and business continuity plans; (2) Infigen has placed relevant insurance policies, which are adequate and appropriate given the relative risk of loss, cost of coverage and industry practice, including Property Damage and Business Interruption covers; (3) Infigen runs a 24/7 Operations Control Centre that enables Infigen to react and adapt to market volatility, and to changes occurring over time in the wind resource and market dynamics; (4) Infigen has commissioned independent research to understand the potential impact of climate change on long term mean wind speeds. This research has indicated that Infigen's existing portfolio may experience either slightly higher or lower average wind speeds over the very long term depending on location – with a minimal overall impact; and (5) Management continues to monitor the external environment and the impacts of the physical risks of climate change.	No extra risk management costs.
Induced changes in natural resources	Changes in wind patterns and solar exposure could affect production capacity.	Reduction /disruption in production capacity	3 to 6 years	Direct	Unlikely	High	Increased variability in production capacity leading to higher operating cost or more variable revenue. Potential financial impacts are related to increased variability of earnings over a range of time scales, and increased complexity in managing such variations. These may range from minor short term fluctuations in revenue to longer term asset valuation impacts and margin pressures.	Infigen has industry leading experience in modelling and quantifying production variability and in developing hedging arrangements to accommodate that variability, such as the portfolio production hedge co-developed with Swiss Re Corporate Solutions for the period of 1 April 2015 to 31 March 2016. Other methods to manage the impacts of variable resource include effective use of forecasting to maximise energy capture and internal measures to accommodate for earnings variability from particular assets within the broader asset portfolio.	Infigen's Energy Markets team regularly assesses potential market and volume related risks. Managing these types of risks are factored into Infigen's strategic and budgeting processes as part of general business. Costs specifically relating to mitigating risks associated with climate change have not been estimated.

**CC5.1f Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure**

We have considered each option under risks driven by changes in other climate-related developments, and concluded that some of these options are either neutral or present opportunities rather than risks to the company. For more information on risks and opportunities arising from the 'Failure of climate change adaptation', refer to World Economic Forum – Global Risks 2015 (10th Edition).

Reputation: as a renewable energy company, Infigen would benefit from climate change-related developments. Wind farms and photovoltaic solar farms generate low carbon emission electricity that contributes to a good reputation.

Changing customer behaviour: it is in Infigen's interests that customer preferences become more influenced by climate change-related developments.

Induced changes in human and cultural environments: neither migration nor cultural changes derived from climate change-related developments are likely to reduce demand for electricity.

Fluctuating socio-economic conditions: energy sector is likely to continue to exist despite changes in social and economic prosperity.

Increasing humanitarian demands: climate change related developments can result in strong commitment to transform from a carbon-based energy system to a renewable energy system, where renewable energy companies like Infigen would be able to respond to increased humanitarian demands.

Uncertainty in social drivers: any reputational, behavioural and socio-economic drivers listed above are more likely to benefit than disadvantage the company.

Uncertainty in market signals: Infigen is more likely to benefit than be disadvantaged by the volatility induced as markets respond to climate change impacts and predictions.



**Page: CC6. Climate Change Opportunities**

**CC6.1 Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

- ✓ Opportunities driven by changes in regulation
- ✓ Opportunities driven by changes in physical climate parameters
- ✓ Opportunities driven by changes in other climate-related developments

**CC6.1a Please describe your inherent opportunities that are driven by changes in regulation**

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	Acceleration of decarbonisation of the economy would increase investor confidence in renewable energy sector and would enable Infigen to obtain offtake agreements and financing when developing its renewable energy project pipeline of over 1,000 MW.	Increased demand for existing products/s ervices	3 to 6 years	Direct	Likely	High	Infigen has over 1,000 megawatts of advanced projects in development pipeline in Australia. The potential investment in Infigen's entire development pipeline is over \$2 billion.	Infigen seeks regulatory support for renewable energy sector from regulatory bodies. The Development team, Regulatory Affairs and other senior managers engage with regulators and legislators to promote the renewable energy industry.	There is no extra cost of management that is not already captured in membership fees. However, delay in support increases development costs (i.e. the cost of licenses and wind and solar farm development costs incurred prior to commencement of construction). In the 2015 financial year, Infigen reported development costs of \$2 million to maintain and advance the most prospective projects in the pipeline.



Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	Approximately 5,000-6,000 MW of renewable capacity is required to be installed under the Renewable Energy Target legislation. With such high level of demand and an increasing number of renewable energy projects to be reviewed, the planning authorities could provide clear guidelines to the wind farm industry and streamline the planning process.	Other: Reduced capital and operating costs	3 to 6 years	Direct	Likely	High	A supportive environment for renewable energy may lead to lower development costs from improved efficiency in the planning process, and higher competition in providing maintenance services and lower operating costs.	Regulatory lobbying efforts are made through industry trade organisations.	Membership fees to industry trade bodies are part of Infigen's corporate costs.
Other regulatory drivers	Energy regulators could make it easier for wind generation plants to feed electricity into the grid.	Increased production capacity	3 to 6 years	Direct	About as likely as not	Medium-high	Uplift in revenue.	Infigen manages this opportunity by considering the commercial outcomes of 'change of law' provisions when writing contracts.	There is no extra cost of management as this is part of business-as-usual strategy (Energy Markets business division).

**CC6.1b Please describe the inherent opportunities that are driven by changes in physical climate parameters**

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	This may soften the decline in falling electricity demand, and lead to higher wholesale electricity prices.	Increased demand for existing products/services	>6 years	Direct	Likely	Low-medium	Uplift in revenue.	Infigen is the only owner-operator of renewable assets that operates a 24/7 control centre which enables Infigen to monitor and plan the operation of all assets, and react and respond appropriately to pricing events in energy markets.	There is no extra cost of management.



Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	Droughts may reduce energy output from hydro electricity plants and some thermal generation plants (as they need water for cooling) with the effect being lower supply availability in the energy market, and therefore volatility in wholesale electricity prices.	Increased demand for existing products/services	3 to 6 years	Direct	More likely than not	Low-medium	Uplift in revenue.	Optimising generation and revenue in the event of negative and high market prices is part of Infigen's bidding strategy, and is carried out by Operations Control Centre and Energy Markets business units.	There is no extra cost of management.

**CC6.1c Please describe the inherent opportunities that are driven by changes in other climate-related developments**

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Companies that develop renewable energy projects are generally perceived as being environmentally friendly by the majority of stakeholders (investors, customers, suppliers, and the public in general). As a renewable energy company, Infigen would benefit from climate change related developments.	Increased production capacity	1 to 3 years	Indirect (Client)	Very likely	Medium	The potential investment in Infigen's entire development pipeline is over \$2 billion.	"Acting on climate change" is formally identified as a sustainability objective for the business as part of addressing reputational risks and opportunities. Infigen's Communications business division is active in joining programs that promote action on climate change, e.g. committing to the Carbon Disclosure Project's climate initiatives, engaging and supporting climate action campaigns of Friends of the Earth, and joining the City Switch program.	There is no extra cost of management.



Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	If customers take a more proactive approach on addressing climate change challenges, and switch to using renewable energy, there may be a lift in consumer-driven demand for renewable energy and stronger political support. New business customers also become available as more businesses set themselves targets to source their energy from renewable sources.	Premium price opportunities	1 to 3 years	Indirect (Client)	Very likely	Medium-high	As switching to renewable energy is driven by consumers and businesses, Infigen could generate more revenue through higher demand and opportunities to obtain offtake contracts for operating assets and development projects.	Responding to changing consumer behaviour requires a strong renewable energy brand though improved ESG disclosure and community engagement. Both objectives are formally established under the Safety and Sustainability program, and implemented by relevant committees and business units.	There is no extra cost of management.
Other drivers	Attract investment from capital providers that seek strong ESG performance. This may reduce the cost of capital of the business and thereby improve its value.	Increased stock price (market valuation)	1 to 3 years	Direct	Likely	High	The potential investment in Infigen's entire development pipeline is over \$2 billion.	As part of overall improvement of Infigen's ESG performance, the Safety and Sustainability committee leads a program to improve sustainability reporting and implement programs to achieve the sustainability objectives. We have set a formal target of acting on climate change. The committee is also accountable for achieving Infigen's climate commitments that have been made public in the 2015 Annual Report and are published on Infigen's website at <a href="http://infigenenergy.com/about-us/safety-and-sustainability.html">http://infigenenergy.com/about-us/safety-and-sustainability.html</a> .	Infigen considers ESG aspects in its investment decisions.

**Further Information**

We aim to improve Infigen's ESG performance by setting formal sustainability objectives: 1.) Act on climate change; 2. Maintain a diverse, capable, agile and motivated team; 3.) Aim for a high level of community engagement; 4.) Strive for a Zero Harm workplace; and 5.) Increase securityholder value.

### III MODULE: GHG EMISSIONS ACCOUNTING, ENERGY AND FUEL USE, AND TRADING

#### Page: CC7. Emissions Methodology

##### CC7.1 Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Mon 01 Jul 2013 - Mon 30 Jun 2014	212
Scope 2 (location-based)	Mon 01 Jul 2013 - Mon 30 Jun 2014	2404
Scope 2 (market-based)	Mon 01 Jul 2013 - Mon 30 Jun 2014	140

##### CC7.2 Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
Australia - National Greenhouse and Energy Reporting Act

##### CC7.3 Please give the source for the global warming potentials you have used

Gas	Reference
CO2	Other: NGER Technical Guidelines for Australia
CH4	Other: NGER Technical Guidelines for Australia
N2O	Other: NGER Technical Guidelines for Australia
SF6	Other: NGER Technical Guidelines for Australia
HFCs	Other: NGER Technical Guidelines for Australia

##### CC7.4 Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Waste oils	27.9	Other: kgCO2e/GJ	Australia: Other - Combustion of other petroleum products (e.g. waste oils)
Distillate fuel oil No 2	66.7	Other: kgCO2e/GJ	Australia: Petrol - used for stationary energy

Fuel/Material/Energy	Emission Factor	Unit	Reference
Kerosene	68.2	Other: kgCO <sub>2</sub> e/GJ	Australia (combusted)
Diesel/Gas oil	69.2	Other: kgCO <sub>2</sub> e/GJ	Australia: Diesel - used for stationary energy (combusted)
Liquefied petroleum gas (LPG)	59.6	Other: kgCO <sub>2</sub> e/GJ	Australia: LPG - used for stationary energy
Distillate fuel oil No 2	66.3	Other: kgCO <sub>2</sub> e/GJ	Australia: Petrol - used for transport
Electricity	238.889	Other: kgCO <sub>2</sub> e/GJ	Australia: Electricity purchased from the grid (Capital, Woodlawn, Capital East solar farm, Sydney office)
Electricity	169.444	Other: kgCO <sub>2</sub> e/GJ	Australia: Electricity purchased from the grid (Lake Bonney)
Electricity	211.111	Other: kgCO <sub>2</sub> e/GJ	Australia: Electricity purchased from the grid (Alinta wind farm)

### Further Information

In relation to scope 1 emissions, the NGER Determination 2008 (latest) provides four methods for the measurement of emissions. Method 1 applies national emission factors to the estimation of emissions. Method 2 is a facility-specific method using industry practices for sampling and Australian or equivalent standards for analyses. Method 3 is the same as Method 2 but is based on Australian or equivalent standards for both sampling and analysis. Method 4 provides for facility-specific measurement of emissions by continuous or periodic emissions monitoring. Infigen's emissions come from relatively homogenous sources – predominantly the combustion or liquid fuels and use of electricity imported from the grid. Method 1 is listed as the most applicable method for such cases and used for calculating scope 1 emissions throughout all reporting. Method 1 requires the type and quantity of fuel combusted, and the volume of electricity usage as well as the state in which the electricity is drawn from the grid. Standard emission and energy content factors are then used to calculate the emissions resulting. In relation to scope 2 emissions, there is only one method given for the calculation of emissions from electricity usage under the NGER guidelines. Similarly to scope 1 calculation methods, the emissions factors are available through the NGER Guidelines and are updated by the Clean Energy Regulator annually. Attached are the Technical Guidelines for the Estimation of Greenhouse Gas Emissions by Facilities in Australia.

### Attachments

[https://www.cdp.net/sites/2016/55/9055/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/NGER Technical Guidelines 2014.pdf](https://www.cdp.net/sites/2016/55/9055/Climate%20Change%202016/Shared%20Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/NGER%20Technical%20Guidelines%202014.pdf)

This attachment is also available to view at <https://www.environment.gov.au/system/files/resources/da7bde5c-1be2-43f7-97d7-d7d85bb9ad6c/files/nger-technical-guidelines-2014.pdf>



**Page: CC8. Emissions Data - (1 Jul 2014 - 30 Jun 2015)**

**CC8.1 Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory**

Financial control

**CC8.2 Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e**

466

**CC8.3 Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?**

Yes

**CC8.3a Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e**

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
2554	113	Location-based emissions represent emissions from electricity consumed by wind turbines at times of no wind and by offices located on wind farms. Infigen’s wind farms consume electricity from the grid when there is insufficient wind to meet their auxiliary load. In recognition of this consumption and associated emissions, a large-scale renewable energy generator in Australia is not entitled to create renewable energy certificates associated with its generation until such time as it exceeds the amount of electricity consumed from the grid. In effect the legislation and regulations in Australia determine that a renewable energy generator must deliver an equivalent amount of renewable to the grid as the amount of non-renewable energy it has consumed before it can get the additional revenue that typically accrues to renewable generators, which is in effect an offset of the emissions arising from its consumption. The market-based emissions represent electricity consumed that is procured from a retailer and is consumed in the head office.

**CC8.4 Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

**CC8.5 Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations**

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Data Gaps Assumptions	The calculated uncertainty accounts for the uncertainty associated with fuel use estimation, energy content factors and emission factors.

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
		Extrapolation Metering/ Measurement Constraints Data Management	
Scope 2 (location-based)	More than 5% but less than or equal to 10%	Metering/ Measurement Constraints Data Management	The calculated uncertainty accounts for the uncertainty associated with emission factors, estimation of leakage rate, and other natural variations such as fluctuations in measurement equipment.
Scope 2 (market-based)	Less than or equal to 2%	Assumptions	The calculated uncertainty accounts for the uncertainty associated with emission factors.

**CC8.6 Please indicate the verification/assurance status that applies to your reported Scope 1 emissions**

No third party verification or assurance – regulatory CEMS required

**CC8.6b Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)**

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission
Other: National Greenhouse and Energy Reporting (Measurement) Determination 2008	100	Tue 01 Jul 2014 - Tue 30 Jun 2015	<a href="https://www.cdp.net/sites/2016/55/9055/Climate_Change_2016/Shared_Documents/Attachments/CC8.6b/2015_10_26_-_FY15_Section19_Report.pdf">https://www.cdp.net/sites/2016/55/9055/Climate_Change_2016/Shared_Documents/Attachments/CC8.6b/2015_10_26_-_FY15_Section19_Report.pdf</a>

**CC8.7 Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures**

No third party verification or assurance

**CC8.8 Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2**

Additional data points verified	Comment
Product footprint verification	All of Infigen's generators are accredited by the Australian Government Clean Energy Regulator to sell Large-scale Generation Certificates and certified by GreenPower, a government managed scheme that enables Australian households and businesses to displace their electricity usage with renewable energy.



**CC8.9 Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

No

**CC8.9a Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2**

**Further Information**

Note that emissions reported to the National Greenhouse and Energy Reporting scheme and in the 2015 Annual Report excluded an estimation of SF6 discharge. We disclosed an estimation of these emissions in the interim financial report (see <http://infigenenergy.com/investors/publications/financial-results/fy16-interim-results.html>) and in the 2016 CDP Climate Change report.

**Attachments**

[https://www.cdp.net/sites/2016/55/9055/Climate\\_Change\\_2016/Shared\\_Documents/Attachments/ClimateChange2016/CC8.EmissionsData\(1Jul2014-30Jun2015\)/H1FY16-Management-Discussion-and-Analysis.pdf](https://www.cdp.net/sites/2016/55/9055/Climate_Change_2016/Shared_Documents/Attachments/ClimateChange2016/CC8.EmissionsData(1Jul2014-30Jun2015)/H1FY16-Management-Discussion-and-Analysis.pdf)

[https://www.cdp.net/sites/2016/55/9055/Climate\\_Change\\_2016/Shared\\_Documents/Attachments/ClimateChange2016/CC8.EmissionsData\(1Jul2014-30Jun2015\)/Infigen-Energy-Interim-Results-Presentation-Six-Months-Ended-31-December-2015.pdf](https://www.cdp.net/sites/2016/55/9055/Climate_Change_2016/Shared_Documents/Attachments/ClimateChange2016/CC8.EmissionsData(1Jul2014-30Jun2015)/Infigen-Energy-Interim-Results-Presentation-Six-Months-Ended-31-December-2015.pdf)

These attachments are also published on Infigen's website at <http://www.infigenenergy.com/investors/publications/financial-results/fy16-interim-results/>

**Page: CC9. Scope 1 Emissions Breakdown - (1 Jul 2014 - 30 Jun 2015)**

**CC9.1 Do you have Scope 1 emissions sources in more than one country?**

No

**CC9.2 Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)**

- ✓ By facility
- ✓ By GHG type
- ✓ By activity

**CC9.2b Please break down your total gross global Scope 1 emissions by facility**

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Sydney head office	0	-33.86393	151.208997
Alinta wind farm	78	-28.897819	114.859267
Lake Bonney wind farm 1, 2 & 3	184	-37.722331	140.375156
Capital wind farm	154	-35.1662	149.518461
Woodlawn wind farm	50	-35.095556	149.579167
Capital East solar farm	0	-35.180542	149.546378

**CC9.2c Please break down your total gross global Scope 1 emissions by GHG type**

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	272
N2O	2
SF6	192

**CC9.2d Please break down your total gross global Scope 1 emissions by activity**

Activity	Scope 1 emissions (metric tonnes CO2e)
Mobile combustion (transport)	262
Stationary combustion	12



Activity	Scope 1 emissions (metric tonnes CO2e)
Fugitive emissions	192

**Further Information**

The methodology changed since the previous reporting period, whereby an estimation of SF<sub>6</sub> leakage is calculated and included in scope 1 emissions.

**Page: CC10. Scope 2 Emissions Breakdown - (1 Jul 2014 - 30 Jun 2015)**

**CC10.1 Do you have Scope 2 emissions sources in more than one country?**

No

**CC10.2 Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)**

- ✓ By facility
- ✓ By activity

**CC10.2b Please break down your total gross global Scope 2 emissions by facility**

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Sydney head office		113
Alinta wind farm	601	
Lake Bonney 1, 2, 3 wind farms	888	
Capital wind farm	871	
Woodlawn wind farm	186	
Capital East solar farm	8	

**CC10.2c Please break down your total gross global Scope 2 emissions by activity**

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Electricity purchased from the grid	187	113
Electricity imported from the generator side	2364	



**Page: CC11. Energy**

**CC11.1 What percentage of your total operational spend in the reporting year was on energy?**

More than 0% but less than or equal to 5%

**CC11.2 Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year**

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

**CC11.3 Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year**

3523

**CC11.3a Please complete the table by breaking down the total "Fuel" figure entered above by fuel type**

Fuels	MWh
Diesel/Gas oil	15
Other: Petroleum	3

**CC11.4 Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a**

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
Grid-connected electricity generation owned, operated or hosted by the company, where electricity attribute certificates do not exist or are not required for a usage claim	3505	Equivalent to generation imported from the grid at times of insufficient wind and represents the bulk of scope 2 emissions. Infigen's wind farms consume electricity from the grid when there is insufficient wind to meet their auxiliary load. In recognition of this consumption and associated emissions, a large-scale renewable energy generator in Australia is not entitled to create renewable energy certificates associated with its generation until such time as it exceeds the amount of electricity consumed from the grid. In effect the legislation and regulations in Australia determine that a renewable energy generator must deliver an equivalent amount of renewable to

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
		the grid as the amount of non-renewable energy it has consumed before it can get the additional revenue that typically accrues to renewable generators, which is in effect an offset of the emissions arising from its consumption.
Other	17	Consumption of energy from emergency back-up power for the site offices.

**CC11.5 Please report how much electricity you produce in MWh, and how much electricity you consume in MWh**

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
28121	3505	1476352	1476352	24616	All of Infigen's generation is renewable. The non-renewable components include: electricity consumption at turbines during insufficient wind, however, this is offset by renewable generation (see comment in CC11.4).

**Page: CC12. Emissions Performance**

**CC12.1 How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?**

Increased

**CC12.1a Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year**

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities			
Divestment			
Acquisitions			
Mergers			
Change in output	168	Increase	Increased use of fuel use in site vehicles, lower output in wind farms.
Change in methodology	192	Increase	Sulphur hexafluoride (SF6) is a greenhouse gas that is contained in circuit breakers of high-voltage switchgear. Infigen reported an estimation of SF6 discharge in FY15 scope 1 emissions in CDP 2016 for the first time.
Change in boundary			
Change in physical operating conditions			
Unidentified			
Other			

**CC12.1b Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based



**CC12.2 Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue**

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.000023	metric tonnes CO2e	133807000	Location-based	23	Increase	Change in methodology due to an inclusion of estimated SF6 discharge, and lower revenue.

**CC12.3 Please provide any additional intensity (normalized) metrics that are appropriate to your business operations**

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.00215	metric tonnes CO2e	megawatt hour (MWh)	1459000	Location-based	22	Increase	Change in methodology due to an inclusion of estimated SF6 discharge and lower generation.



**Page: CC13. Emissions Trading**

**CC13.1 Do you participate in any emissions trading schemes?**

No, and we do not currently anticipate doing so in the next 2 years

**CC13.2 Has your organization originated any project-based carbon credits or purchased any within the reporting period?**

No



**Page: CC14. Scope 3 Emissions**

**CC14.1 Please account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions**

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, not yet calculated				
Capital goods	Relevant, not yet calculated				While there are emissions that are relevant from: consumption of products and services used for maintenance of wind turbines; energy used by offsite servers to host IT infrastructure; and office paper consumption and printing; we do not consider that any of these contribute to Infigen's risk exposure. However, Infigen will determine whether these are deemed critical by key stakeholders, and whether there are potential emissions reductions that could be undertaken by Infigen.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				All purchased fuels, electricity and transmission and distribution losses have been included in scope 1 and scope 2.
Upstream transportation and distribution	Not relevant, calculated	262	The 'hybrid method' was used whereby Infigen collected scope 1 emission data directly from suppliers and calculated the amount of fuel used and applying appropriate emission factors from the National Greenhouse and Energy Reporting Technical Guidelines.		All fuel consumption of Infigen's direct suppliers (tier 1) that is used to provide operations and maintenance services of Infigen's assets is captured in scope 1.
Waste generated in operations	Relevant, not yet calculated				Waste management processes at Infigen's head office include organic recycling, co-mingled systems in kitchens, utility and shared zones for glass, paper and aluminium, and single bin systems. At the three wind farm site offices, all non-hazardous waste is stored for collection and disposed by third party.



Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Business travel	Relevant, calculated	387	The 'supplier-specific method' was used whereby Infigen collected cradle-to-gate GHG inventory data from the travel agency that calculates and reports emissions from employee business travel.		
Employee commuting	Not relevant, explanation provided				Emissions associated with transportation of employees between their homes and the wind farm sites is captured in scope 1.
Upstream leased assets	Relevant, not yet calculated				Infigen's turbine service providers are operating in leased buildings on the wind farms (three site offices). Infigen also leases land from landowners; and landowners are able to continue to use the land for farming purposes. We do not consider that any of these contribute to Infigen's risk exposure. However, Infigen will determine whether these are deemed critical by key stakeholders, and whether there are potential emissions reductions that could be undertaken by Infigen.
Downstream transportation and distribution	Not relevant, explanation provided				Infigen's products, other than power generation, exist in a contractual form (e.g. power purchase agreement with customers, GreenPower, Large-scale Generation Certificates), and do not require distribution via transport or distribution centres.
Processing of sold products	Not relevant, explanation provided				Electricity is an end-use product and is not processed further
Use of sold products	Not relevant, explanation provided				Infigen does not sell products that directly consume energy (fuels or electricity); are fuels and feedstocks; contain or form greenhouse gases that are emitted during use; or cause the end user to consume energy during use.
End of life treatment of sold products	Not relevant, explanation provided				Electricity is an end-use product and there is no end-of-life burden beyond the immediate use of the product.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Downstream leased assets	Not relevant, explanation provided				Infigen does not own downstream assets that receive payments from lessees.
Franchises	Not relevant, explanation provided				Infigen does not operate franchises (i.e. a business operating under a license to sell or distribute another company's goods or services within a certain location).
Investments	Not relevant, explanation provided				Infigen does not invest in equities, stocks or third party organisations, and is not a debtor/financier to other organisations.
Other (upstream)	Not evaluated				
Other (downstream)	Not evaluated				

**CC14.2 Please indicate the verification/assurance status that applies to your reported Scope 3 emissions**

No third party verification or assurance

**CC14.3 Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?**

No, this is our first year of estimation

**CC14.4 Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)**

- ✓ Yes, our suppliers
- ✓ Yes, our customers
- ✓ Yes, other partners in the value chain



**CC14.4a Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success**

Environmental management plans for Infigen’s operating sites typically include a GHG management strategy. These strategies formalise the efforts by Infigen and its contractors to reduce emissions, largely through minimising the use of fuels and electricity.

Some of the suppliers, e.g. financiers, are engaged from the outset, whereby Infigen obtains debt for renewable energy projects. For example, Infigen provides quarterly reports of community engagement that include promoting renewable energy to the financiers of the Woodlawn wind farm.

Infigen engages with prospective customers (off-takers of power of Large-scale Generation Certificates (LGCs)) through communicating its climate change commitments throughout the procurement processes.

Infigen plans social media campaigns with partners, including GreenPower, and supports campaigns of Friends of the Earth for climate action.

Infigen also encourages its employees to partake in public events that show support for the objectives of the Conference of Parties (COP21), as well as foster a culture of 'reduce, recycle and re-use'. For example, during the reporting period Infigen offered its employees LGCs at a discounted price.

The measure of success is relevant to success of campaigns and procurement processes.

Infigen's management regularly attends and presents at public events urging action on climate change and promoting renewable energy. During the reporting period, Infigen was invited to and presented at the Carbon Disclosure Project's event 'Climate Leadership Summit 2015'.

**CC14.4b To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent**

Number of suppliers	% of total spend (direct and indirect)	Comment
500	100%	Infigen's Procurement Policy states that we seek to source materials and services from local suppliers to bolster the local economy, enhance community engagement, and reduce the impact on the environment from transportation. Infigen reported the procurement location of services or products of wind farm operations and maintenance during the reporting period at its Safety and Sustainability Report in the 2015 Annual Report.

**CC14.4c If you have data on your suppliers’ GHG emissions and climate change strategies, please explain how you make use of that data**

How you make use of the data	Please give details
Managing physical risks in the supply chain	We report GHG data (scope 1) provided by suppliers (Vestas and Suzlon during the reporting period).

**CC14.4d Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future**

**Further Information**



**MODULE: SIGN OFF**

**Page: CC15. Sign Off**

**CC15.1 Please provide the following information for the person that has signed off (approved) your CDP climate change response**

Name	Job title	Corresponding job category
Marju Tonisson	Manager, ESG & Investor Relations	Environment/Sustainability manager

**Further Information**

The submission was reviewed by a member senior management.

**MODULE: ELECTRIC UTILITIES****Page: EU0. Reference Dates**

**EU0.1** Please enter the dates for the periods for which you will be providing data. The years given as column headings in subsequent tables correspond to the "year ending" dates selected below. It is requested that you report emissions for: (i) the current reporting year; (ii) one other year of historical data (i.e. before the current reporting year); and, (iii) one year of forecasted data (beyond 2020 if possible).

Year ending	Date range
2014	Mon 01 Jul 2013 - Mon 30 Jun 2014
2015	Tue 01 Jul 2014 - Tue 30 Jun 2015
2025	Tue 01 Jul 2025 - Tue 30 Jun 2026



**Page: EU1. Global Totals by Year**

**EU1.1** In each column, please give a total figure for all the countries for which you will be providing data for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO <sub>2</sub> e)	Emission intensity (metric tonnes CO <sub>2</sub> e/MWh)
2014	557	1572	2756	0.0018
2015	557	1459	3133	0.0022
2026	1600	4800	5616	0.0012

**Page: EU2. Individual Country Profiles - Australia**

**EU2.1 Please select the energy sources/fuels that you use to generate electricity in this country**

Other renewables

**EU2.1h Other renewables : Please complete the following table for the "year ending" periods that you selected in answer to EU0.1**

Year ending	Nameplate capacity (MW)	Production (GWh)
2014	557	1572
2015	557	1459
2026	1600	4800

**EU2.1i Total figures for this country (Please enter total figures for this country for the "year ending" periods that you selected in answer to EU0.1)**

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes in CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2014	557	1572	2756	0.0018
2015	557	1459	3133	0.0021
2026	1600	4800	5616	0.0012



**Page: EU3. Renewable Electricity Sourcing Regulations**

**EU3.1 In certain countries, e.g. Italy, the UK, the USA, electricity suppliers are required by regulation to incorporate a certain amount of renewable electricity in their energy mix. Is your organization subject to such regulatory requirements?**

Yes

**EU3.1a Please provide the scheme name, the regulatory obligation in terms of the percentage of renewable electricity sourced (both current and future obligations) and give your position in relation to meeting the required percentages**

Scheme name	Current % obligation	Future % obligation	Date of future obligation	Position in relation to meeting obligations
Australia – renewable energy target	11%	26%	2020	This obligation applies to electricity retailers and large facilities. Infigen Energy fully meets the obligations that apply from its retailing activities.



**Page: EU4. Renewable Electricity Development**

**EU4.1 Please give the contribution of renewable electricity to your organization's EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization) in the current reporting year in either monetary terms or as a percentage**

Please give:	Monetary figure	%	Comment
Renewable electricity's contribution to EBITDA	83493000	100.00%	Infigen receives revenue from the: sale of electricity generated for its wind and solar farms, and generation of Large-scale Generation Certificates.

**EU4.2 Please give the projected contribution of renewable electricity to your organization's EBITDA at a given point in the future in either monetary terms or as a percentage**

Please give:	Monetary figure	%	Year ending	Comment
Renewable electricity's contribution to EBITDA		100.00%	2026	Infigen's develops large-scale renewable energy projects. By 2026 it is expected to have developed the majority of its large-scale wind and solar photovoltaic projects.

**EU4.3 Please give the capital expenditure (capex) planned for the development of renewable electricity capacity in monetary terms and as a percentage of total capex planned for power generation in the current capex plan**

Please give:	Monetary figure	%	End year of capex plan	Comment
Capex planned for renewable electricity development	2500000000	100.00%	2026	We have an equity interest in over 1,000 MW of renewable development opportunities that will likely be required to meet Australia's renewable energy target. We aspire to construct all of our pipeline before 2026 and at current capex costs this would be ~\$2.5 billion.