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Notes

1. Unless instructed otherwise, we will automatically produce a new level of blacklining and sequentially change the proof number at each stage.
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3. It is not possible to make corrections to a proof with a new level of blacklining but keep the proof number the same.

Proof No.	Blackline level	Date	Proof No.	Blackline level	Date
2	1	12.03.2018			
3	2	22.03.2018			

Job no.	248777
Proof no.	3
Date	22.03.2018

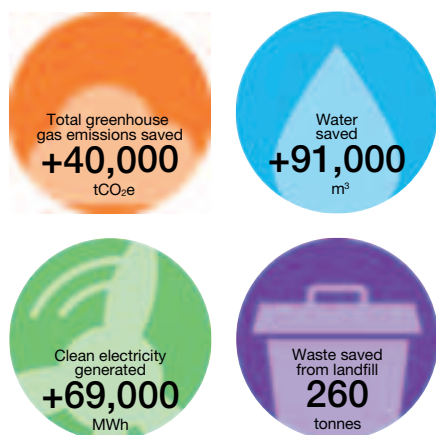## Clean Proof

Menhaden

Impact Report

Measuring Menhaden's positive impact

As a publicly-listed investment trust, Menhaden's core aim is to generate long-term profits for shareholders by investing in opportunities that deliver, or benefit from, the efficient use of energy and resources. As part of this approach the Board strongly believes that the communication of the environmental metrics of the portfolio, alongside the Company's financial performance, is of significant value to shareholders.

That is why Menhaden attempts to quantify, to the extent possible, the positive impacts of its listed portfolio companies. Each year it analyses avoided resource consumption (electricity, fuel, water and waste) and the greenhouse gas emissions avoided due to the listed companies' products and services. The biggest private holding, **X-ELIO**, is also included in the analysis.

Impact measurement is an emerging field and while the quantifications are best estimates, they show that Menhaden's share of its portfolio holdings last year helped generate over 69,000 megawatt hours of clean electricity and saved over 40,000 tonnes of greenhouse gases from being emitted into the atmosphere[1]. That is equivalent to providing the electricity for over 18,000 UK homes or taking over 27,000 cars off the road.

The environmental impact of our portfolio companies in 2017[2]

Total greenhouse gas emissions saved
+40,000
tCO_2e

Water saved
+91,000
m^3

Clean electricity generated
+69,000
MWh

Waste saved from landfill
260
tonnes

[1] All figures are based on the selected environmental savings reported by our investee companies, proportionate to Menhaden's ownership stake, as of 31//12/17. They are best estimates based on the methodology in the technical annex available on the website. For a full explanation of our impact methodology please see Appendix www.menhaden.com
[2] All figures are based on the selected environmental savings reported by our investee companies, proportionate to Menhaden's ownership stake, as of 31//12/17. They are best estimates based on the methodology in the technical annex available on the website. For a full explanation of our impact methodology please see Appendix www.menhaden.com
[3] http://www.bbc.co.uk/news/business-42655965
[4] https://www.ft.com/content/a12ec7e2-fa01-11e7-9b32-d7d59aace167
[5] https://www.cdp.net/en/articles/media/low-carbon-and-high-tech-put-auto-sector-in-flux
[6] http://www.lse.ac.uk/GranthamInstitute/tpi/8-of-the-top-20-car-manufacturers-align-to-the-transition-to-low-carbon-econom

## From small start-ups to mass market

By using a fundamental, research-oriented approach the Portfolio Manager aims to find the innovation, products and services that offer the long-term solutions required for the transition to a low carbon economy. The Company recognises that some of our holdings, by the nature of their business, do intrinsically have some negative environmental impacts too, but the Portfolio Manager invests where the current and potential future sustainability impacts of their products or services justify an investment.

For example, the Company is invested in large clean energy entities such as X-ELIO, a global leader in photovoltaic energy development, and Australian wind and solar developer **Infigen Energy**. It also invests in **Calvin Capital**, an asset investment company helping the UK's largest energy suppliers to meet the UK Government's commitment to install 53 million smart meters by 2020. The technology is projected to save £16.7bn through reduced energy use[3].

The Company has also looked at areas such as fuel efficiency in the transport sector, leading it to invest in holdings such as aircraft component manufacturer **Safran**, whose innovative 'LEAP' engine delivers a 15% reduction in fuel consumption compared to current standard engines. For similar reasons, Menhaden also currently holds German automaker **Volkswagen (VW)**.

VW attracted negative sentiment because of the way it historically undertook tests and reported on its diesel vehicle emissions; however, this was under its previous management up to 2015. Since then, its fundamental U-turn has been significant and a new leadership team has put impressive focus and resources into new technologies, vowing to spend €20bn on electrification and planning to unveil more than 30 new all-electric car models by 2025[4].

Climate-related improvements this year have been noted by the likes of environmental non-profit organisation CDP, which moved VW up five places to sixth in a ranking of global automakers' climate performance[5], and the asset owner backed Transition Pathway Initiative which ranked VW in the top level for its quality of its management framework on climate change[6]. As a mass volume car maker, by practicing a high standard of corporate governance, product innovation, and by meeting or exceeding environmental regulatory standards in respect of vehicle manufacturing, emissions and disposals, Volkswagen can further reduce its environmental footprint and deliver significant positive environmental impact. The Portfolio Manager and the Board will keep their progress under constant review to ensure there is no return to previous poor practice, in which case the holding will be reassessed.
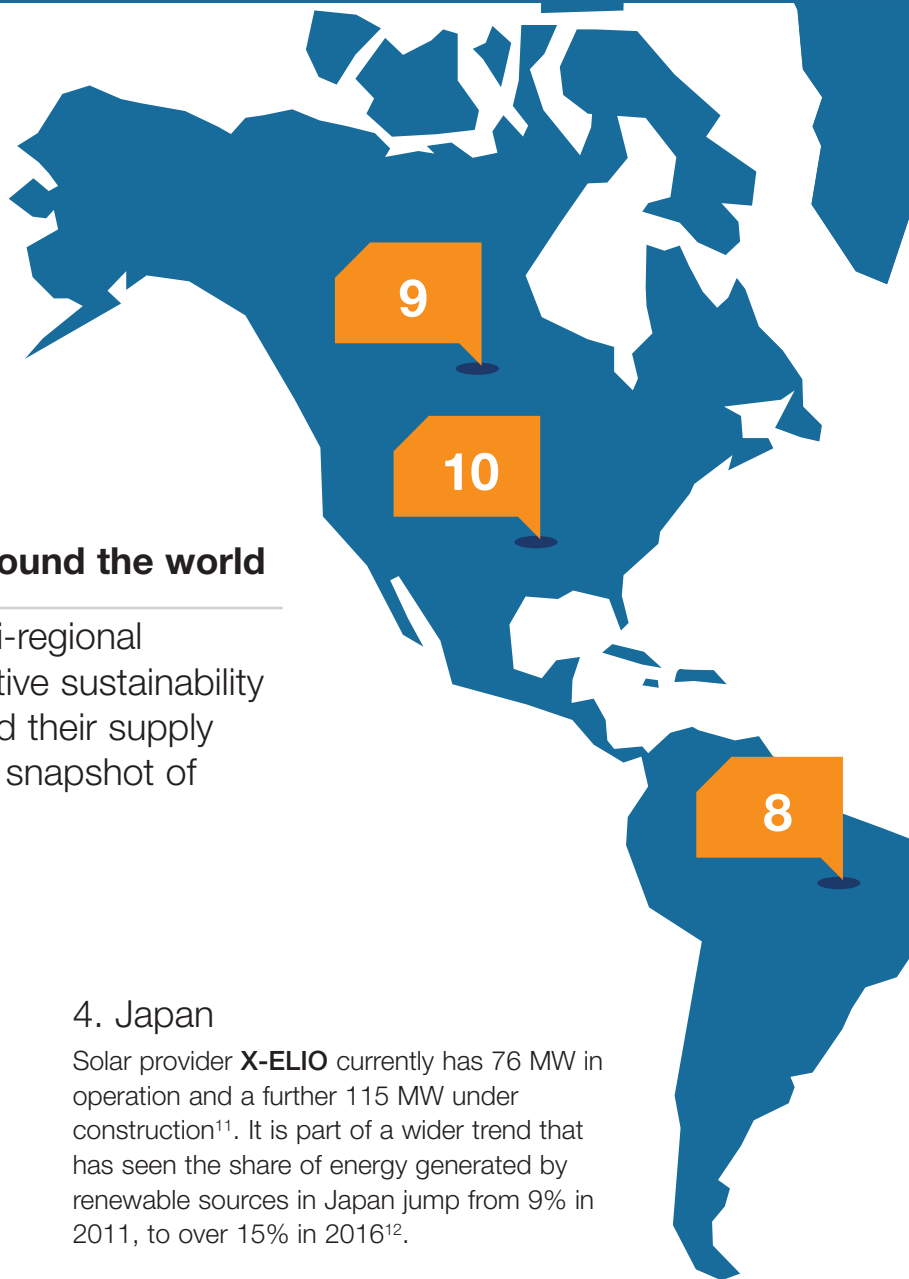
Menhaden portfolio impacts around the world

Menhaden takes a diversified multi-regional approach to investing, so the positive sustainability impacts of portfolio companies and their supply chains are felt across the world. A snapshot of these is shown on this map.

1. Portugal

Senvion is a wind turbine maker whose 172 MW Ancora wind farm uses local sources for blades, nacelles and hubs and delivers enough clean electricity to power 125,000 homes[7]. It is helping Portugal move to 100% renewable energy – a feat achieved for 107 hours in May 2016 when the country ran exclusively on renewable energy[8].

2. UK

Leading transport operator **First Group** is investing in its low carbon bus fleet, experimenting with electric, bio-methane and hydrogen fuel cell buses, and hybrid electric/diesel trains. It was awarded Low Carbon Vehicle Operator of the Year in the UK[9].

3. France

French multinational **Safran** designed the LEAP engine for commercial jets in partnership with General Electric. The engine delivers a 15% reduction in fuel consumption and CO_2 emissions compared to current standard engines and provides a 50% cut in nitrogen oxides[10].

4. Japan

Solar provider **X-ELIO** currently has 76 MW in operation and a further 115 MW under construction[11]. It is part of a wider trend that has seen the share of energy generated by renewable sources in Japan jump from 9% in 2011, to over 15% in 2016[12].

5. Taiwan

Airbus reduced its CO_2 emissions by 14% in absolute terms in the decade to 2016 and has set a clear target to improve fleet fuel efficiency by 1.5% per year between now and 2020[13], including introducing biofuels to some planes operated by China Airlines, headquartered in Taiwan[14].

6. China

Auto maker **Volkswagen** will invest nearly $12bn by 2025 in developing five electric car models for the Chinese market[15]. China is the largest vehicle market in the world and has aggressive targets for new energy models such as electric vehicles[16].

[7] http://www.senvion.com/global/en/company/references-case-studies/ancora-wind-farms-portugal/

[8] https://energytransition.org/2016/06/portugal-moving-to-100-renewables/

[9] https://www.firstgroup.com/about-us/news/first-bus-wins-prestigious-prize-low-carbon-champions-awards

[10] https://www.safran-aircraft-engines.com/commercial-engines/single-aisle-commercial-jets/leap/leap

[11] https://www.energynews.es/english/renewable-capacity-in-japan-is-growing-at-an-average-annual-rate-of-29-since-2012/

[12] https://www.japantimes.co.jp/news/2017/10/14/business/balance-power-shift-toward-renewable-energy-appears-picking-steam/#.Wmikl2V0PeQ

[13] http://www.airbus.com/company/responsibility-sustainability/minimising-environmental-impact.html.html

[14] http://www.airbus.com/newsroom/press-releases/en/2017/11/china-airlines-takes-delivery-of-a350-xwb-powered-with-biofuel-m.html

7. Australia

Infigen provides over 500 MW of renewable energy. It possesses a minimal supply chain with 74% of products and services procured in Australia, while its Sydney office is powered by 100% renewable energy[17].

8. Brazil

Sanepar has achieved universal water access for the citizens of southern Brazil's Paraná state and has provided more than 3,000,000 water connections in the country[18].

9. Canada

Brookfield Renewable Partners owns and operates one of the world's largest renewable power portfolios, including more than 215 hydroelectric facilities. It has over 10,700 MW of installed capacity[19].

10. USA

NASDAQ-listed **Atlantica Yield**[20] was the first public US yieldco to join the UN Global Compact and their assets generate over 1,400 MW of renewable energy[21].

11. South Africa

Terraform Global owns three solar plants in South Africa, which provide a total generating capacity of over 66 MW[22].

[15] https://www.wsj.com/articles/volkswagen-plans-12-billion-electric-car-blitz-in-china-1510820168

[16] https://www.cdp.net/en/articles/media/low-carbon-and-high-tech-put-auto-sector-in-flux

[17] http://s3-ap-southeast-2.amazonaws.com/infigen/wp-content/uploads/2016/10/24101556/ESG-Report-2016.pdf

[18] http://www.globallegalchronicle.com/companhia-de-saneamento-do-parana-sanepars-315-million-follow-on-equity-offering/

[19] https://renewableops.brookfield.com

[20] https://www.atlanticayield.com/export/sites/yield/.content/galleries/downloads/news/20180117-Atlantica-Yield-joins-UN-Global-Compact.pdf

[21] https://www.atlanticayield.com/web/en/company-overview/overview/

[22] TerraForm Power & TerraForm Global Overview 2016

Impact Report
continued

The Portfolio Manager currently organises the Company's portfolio around four investment themes: i) clean energy production; ii) sustainable transport; iii) resource and energy efficiency; and iv) water and waste management.

Clean energy

Clean energy has the biggest share of the Company's portfolio compared with the other three themes, with over a third of holdings invested in this area. In total the seven clean energy companies in Menhaden's portfolio generated approximately 49 million MWh of electricity in 2017.

These include investments such as X-ELIO, a global leader in renewable energy which currently has 41 solar plants in operation across 12 countries and has built more 650 MW in solar photovoltaic plants[23].

As renewable electricity production is significantly less water-intensive than traditional types of generation (such as a coal-fired plant), we also estimate Menhaden's share of these portfolio companies helped save over 90,000m[3] water in 2017.

Sustainable transport

Planes and cars remain fundamental to the global economy and Menhaden is invested in transport companies with best-in-class approaches to fuel efficiency. For example, the Portfolio Manager has selected Airbus rather than a more fuel intensive rival such as Boeing to support fuel efficiency in the emissions-intensive aviation industry[24].

By providing fuel efficient alternatives we calculate that Menhaden's share in its portfolio companies has helped save over four million litres of fuel in 2017.

Resource and energy efficiency

From factories to freight systems this theme covers a wide range of companies that improve energy efficiency or create emissions reduction products or services. One of Menhaden's new allocations in 2017 was in Brazilian agribusiness company, **Terra Santa Agro**, whose use of natural byproducts from the production process of animal food helped create significant energy savings[25].

Menhaden's portfolio-wide CO_2 and other greenhouse gas emission savings in this field were over 40,000 tons of carbon emissions avoided in 2017, equivalent of taking over 27,000 cars off the road.

Waste & water management

This theme covers companies generating positive impacts from products or services that enable reductions in usage or volumes of water and waste, or finding smarter ways to manage water and waste. In 2017, two new additions to this theme were Brazilian water companies **Copasa** and **Sanepar** – both of which also use renewable energy widely in their operations.

Menhaden's share in its listed equity portfolio helps save over 90,000m[3] of water and prevented around 260 tonnes of waste from being sent to landfill.

[23] https://www.x-elio.com/en/who-we-are/
[24] http://www.airbus.com/company/responsibility-sustainability/minimising-environmental-impact.html
[25] http://www.terrasantaagro.com/conteudo_eni.asp?idioma=1&conta=46&tipo=61556

Investing in better water supplies

According to the UN two thirds of the world's population currently live in areas experiencing some significant water scarcity. This affects millions of people and businesses even in a water-abundant country like Brazil[26].

Yet water demand is also predicted to increase significantly over the coming decades, and this creates both a sustainable development requirement and a sound financial case for investment in high-quality water supply infrastructure.

This is why two notable additions to the Menhaden portfolio this year have been Brazilian firms Sanepar and Copasa, which specialise in the provision of services in water supply, sewage and solid waste. Both companies also use clean energy extensively. Copasa has an energy re-use process, and Sanepar purchases and uses electricity from renewable energy sources.

Sanepar, for example, has this year begun work to transform water infrastructure in the city of Ponta Grossa in Southern Brazil, including construction of a new reservoir. The investment will increase access to safe drinking water and will benefit over 150,000 people[27]. Projects like this helped Sanepar record net income in excess of R$600m (US$190m) in 2017[28].

Menhaden's contribution to the SDGs

The UN Sustainable Development Goals (SDGs) offer a global framework for measuring progress towards all aspects of sustainability. There is a strong business case for getting behind them too, with research showing that achieving the SDGs could create economic opportunities worth US$12 trillion a year by 2030[29].

This year therefore, we piloted some analysis with sustainability analysts, Impact Cubed, to see which SDGs Menhaden's portfolio companies offered the most contribution to. Their analysis found it was the following eight goals:

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[26] UN World Water Development Report for 2017
[27] https://subscriber.bnamericas.com/en/news/brazils-sanepar-launches-water-improvement-works?position=1&aut=true&idioma=en
[28] http://www.4-traders.com/COMPANHIA-DE-SANEAMENTO-P-6496420/financials/
[29] http://businesscommission.org/news/release-sustainable-business-can-unlock-at-least-us-12-trillion-in-new-market-value-and-repair-economic-system

APPENDIX

Menhaden Capital PLC (the "Company" or "Menhaden") is a UK-listed investment company that seeks to generate long-term shareholder returns, by investing in companies and opportunities, which deliver or benefit from the efficient use of energy and resources.

To support our work Menhaden commissioned sustainability consultancy Carbon Smart to quantify the environmental benefits of each of the entities included in Menhaden's listed portfolio as of 31 December 2017. The biggest private holding, X-ELIO, is also included in the analysis. This is the second year Carbon Smart have quantified these benefits.

The following report details the approach taken to quantifying the environmental benefits for each company and documents the key assumptions made.

Approach

Carbon Smart reviewed each relevant company in Menhaden's investment portfolio to calculate the resource consumption (electricity, fuel, water and waste) and carbon avoided. All calculations have been based on publicly available information shared by the individual companies.

To arrive at an environment benefit calculation Carbon Smart followed one of the two approaches (in order of preference):

1. **Product/services** – Resource savings and carbon avoided due to the products and services the business offers

In cases where either:

- Insufficient information was publicly available to calculate the savings through the business' offerings or

- The products or services of the business did not have a specific environmental benefit (e.g. Copasa) the following alternative approach was applied:

2. **Internal savings** – resource savings and carbon avoided through internal, company-wide initiatives helping the organisation to produce or deliver their products and services more efficiently

To note it is to be expected that the savings from the product / services will significantly outweigh the benefits of the internal savings.

All environmental benefit figures have been calculated for the 2017 reporting year. Carbon Smart followed the DEFRA Environmental Reporting Guidelines and the GHG reporting protocol to calculate the emissions saved. The most recent available carbon conversion factors were used to calculate the carbon savings: for international electricity generated the 2015 IEA grid average factors were applied and for all other resources the 2017 DEFRA carbon conversion factors were used.

Menhaden share of avoided resource consumption and emissions production

The following table provides a breakdown of Menhaden's share of avoided resource consumption and emissions production for each organisation by theme. Private equity companies have not been included in this analysis with the exception of X-ELIO

Theme	Company	% ownership	Electricity (kWh)	Fuel (litres)	Waste (tonnes avoided to landfill)	Water (cubic meters)	Carbon (tCO$_2$e
Clean energy	X-Elio	2.93%	13,323,912	–	–	17,321	5,679
	Atlantica Yield	0.15%	4,750,925	–	–	6,176	1,851
	Atlantica Yield - Bonds	0.05%	1,514,114	–	–	1,968	590
	Brookfield Renewable Energy	0.07%	27,022,439	–	–	35,535	7,295
	Terraform Power	0.23%	8,680,286	–	–	11,41	3,895
	Infigen Energy	1.17%	13,819,448	–	–	18,173	10,475
	Senvion	0.60%	138,703	–	–	182	46
Sustainable transport	Adient[1]	0.04%	–	–	–	–	–
	Airbus	0.01%	–	204,026	4	–	460
	First Group	0.16%	–	3,957,425	28	–	10,296
	Volkswagen	0.01%	–	11,634	220	–	30
Resource and energy	Air Products and Chemicals	0.01%	–	–	–	387	8
	Safran	0.02%	–	–	8	–	6
	Terra Santa Agro[1]	0.53%	–	–	–	–	–
Water and Waste	Copasa	0.03%	2	–	–	–	<1
	Sanepar	0.05%	2,316	–	–	3	<1
	Total		**69,252,144**	**4,173,085**	**260**	**91,159**	**40,635**

[1] There are no environment benefit figures for Adient or Terra Santa Agro due to insufficient publicly available information on the sustainability benefits of their products or their company emissions and reduction activities

Calculation approach and assumptions

The following section details the calculations carried out (whether they are product / service or internal savings) the approach taken and the assumptions made for each company.

Clean Energy theme

X-Elio

Calculation: product/service
Annual energy generated and total carbon emissions avoided using renewable energy rather than energy from a local grid and water use avoided when compared to coal fired generation.

Approach
X-Elio disclose the GJ of energy generated for 2016. This figure was used to calculate the kWh generated, carbon and water avoided.

Key assumptions
- Assuming 2016 generation figure is the most up to date and accurate figure for X-Elio's portfolio
- Assumed solar PV facilities replaced coal fired stations to calculate water avoided

Atlantica Yield and Atlantica Yield - Bonds

Calculation: product/service
Annual energy generated and total carbon emissions avoided using renewable energy rather than energy from a local grid and water use avoided when compared to coal fired generation.

Approach
Atlantica Yield disclose the total energy generated figure in 2016. This figure was used to calculate the total carbon and water avoided figure if this energy was purchased from the national grid instead. The approach remains the same as last year and with updated figures.

Key assumptions
- Only 2016 data was disclosed for the whole year, therefore the 2016 figure has been used to calculate this year's savings

- The solar and wind projects have been replacing electricity generated from coal fired gas stations. Assumed solar PV facilities replaced coal fired stations to calculate water avoided
- Calculations have been based on the GWH produced per asset and per location provided by Atlantica Yield

Brookfield Renewable Energy

Calculation: product/service
Annual energy generated and total carbon emissions avoided using renewable energy rather than energy from a local grid and water use avoided when compared to coal fired generation.

Approach
Brookfield Renewable Energy does not disclose the total energy generated for the year, but they do state their generation capacity. Using industry standard renewable energy calculation tools Carbon Smart calculated annual consumption estimates based on the type of facility, the generation capacity and the location of the system. The approach remains the same as last year and with updated figures.

Key assumptions
- Solar: standard fixed open rack array with 14% system losses, operating at 100% efficiency (i.e. new)
- Wind: location of the wind farms is state or country central
- Hydroelectricity: assumes an average efficiency rating between 40 -60% depending on location of the hydro plant
- Water avoided calculations: calculation has been based on the assumption that the energy produced by Terraform has replaced energy generated by a coal fired station

Terraform Power

Calculation: product/service
Annual energy generated and total carbon emissions avoided using renewable energy rather than energy from a local grid and water use avoided when compared to coal fired generation.

Approach

Terraform Power do not disclose the total energy generated for the year, but they do state their generation capacity. Using industry standard renewable energy calculation tools Carbon Smart calculated annual consumption estimates based on the type of facility, the generation capacity and the location of the system. The approach remains the same as last year and with updated figures.

Key assumptions
- Solar: standard fixed open rack array with 14% system losses, operating at 100% efficiency (i.e. new)

- Wind: location of the wind farms is state or country central

- Water avoided calculations: calculation has been based on the assumption that the energy produced by Terraform has replaced energy generated by a coal fired station

Infigen Energy

Calculation: product/service

Annual energy generated and total carbon emissions avoided using renewable energy rather than energy from a local grid and water use avoided when compared to coal fired generation.

Approach

Terraform Power do not disclose the total energy generated for the year, but they do state their generation capacity. Using industry standard renewable energy calculation tools Carbon Smart calculated annual consumption estimates based on the type of facility, the generation capacity and the location of the system.

Key assumptions
- Solar: standard fixed open rack array with 14% system losses, operating at 100% efficiency (i.e. new)

- Wind: location of the wind farms is state or country central

- Water avoided calculations: calculation has been based on the assumption that the energy produced by Terraform has replaced energy generated by a coal fired station

Senvion

Calculation: product/service

Annual energy generated and total carbon emissions avoided using renewable energy rather than energy from a local grid and water use avoided when compared to coal fired generation.

Approach

Senvion manufacture wind turbines. To calculate the environmental benefits of their products Carbon Smart used the total number of wind plants installed in 2016 to estimate their annual energy generation. The energy figure generated was used to calculate the carbon and water avoided. Double counting of Senvion wind turbines used by either Infigen Energy, Terraform Power, Atlantica Yield or Brookfield energy has not been included in the calculations as a result of limited data available.

Key assumptions
- Assuming the facility location and climate data location chosen provides a good representation of the wind turbine facilities

- Assuming the energy generated by the wind turbine facilities are replacing electricity generated from coal fired gas stations

- Assuming the generation capacity split per country for Senvion's wind turbines installed for 2016 is equivalent to the split disclosed for their total wind turbine portfolio

Sustainable Transport theme

Airbus

Calculation: peer comparison

Annual carbon avoided using Airbus compared to Boeing airplanes.

Approach

Fuel and carbon saved by using Airbus airplanes rather than Boeing airplanes flying for one year. These calculations have been based on all Airbus aircraft delivered in 2016. The approach remains the same as last year and comparisons of new aircraft models have been included.

Key assumptions

- Carbon saved is the difference in CO2 emissions caused by flights made by Airbus aircraft and by comparable Boeing aircraft (Carbon Smart assumption)

- Flight distance: Weighted average annual distance flown in the US by aircraft of each type is a reasonable proxy for the average distance flown world wide

- Aircraft numbers: The delivered volume of aircraft for 2016 is a reasonable representation of the new aircraft in operation in 2016

- Comparable aircrafts: Carbon Smart have selected comparable aircrafts between Airbus and Boeing

First Group

Calculation: peer comparison
Carbon avoided from First Group public transportation as alternative to private passenger cars.

Approach
It was assumed that 1 in 4 of First Group customers have switched from using their private passenger cars to using their transportation facilities. As such, the calculations compare the avoided fuel and carbon from ¼ of First Group passengers. The calculations were carried out separately for the five business divisions (First Bus, First Rail, First Student, First Transit & Greyhound) to take into account the different transport modes (bus, rail), efficiency of the average vehicle (published online by First Group) and the location (UK, US). The approach remains the same as last year and with updated figures.

Key assumptions
- 1 in 4 passengers have switched from private passenger cars to First Group transportation due to the service that they provide (Carbon Smart/ Industry)

- Average UK car efficiency: 205 grams of CO_2e per passenger km

- Average US car efficiency: 661 grams of CO_2e per passenger km

- All cars are diesel (Carbon Smart)

- Average occupancy of buses is 70-80% (Carbon Smart/ Industry)

- Average UK bus journey: 6.24 km (Bus travel survey)

Volkswagen

Calculation: flagship model
Annual fuel and carbon avoided purchasing a VW electric car compared with a standard VM fuel car & internal recycling tonnage included

Approach
Carbon Smart estimated the annual distance travelled and electricity consumption of the electric vehicles over a year for the total number of electric VW vehicles sold in 2016 and compared this to the CO2e consumption and fuel usage if those cars were VW standard vehicles (with average new VW expected emissions 120 grams per km)

Key assumptions
- Average distance travelled by car per year: 12,553km

- VW's most sold electric vehicle (Golf) uses 28kWh/100miles

- The average carbon impact of kWh consumption across key markets: 0.495kWh/kgCO2e

- The estimated number of VW electric vehicles sold in 2016: 235,891 units. VW do not disclose the number of electric car sales, but they disclose total 2016 car sales. Carbon Smart applied the proportion of global electric car sales (2%) to VW's total car sales to estimate the number of VW electric cars sold in 2016

Resources and Energy Theme

Air Products & Chemicals

Calculation: internal
Annual water and carbon saved through company-wide initiatives.

Approach
Air Products & Chemical publicly state their avoided water consumption and carbon emitted. An annual water and carbon avoided figure was calculated based on the stated figures. The approach remains the same as last year and with updated figures.

Key assumptions
- The total CO2e emissions saved and water saved figure in the report is representative for the whole business

Safran

Calculation: internal

Sum of annual carbon savings of the company-wide carbon reduction initiatives implemented in the previous reporting year. The approach remains the same as last year and with updated figures.

Approach

Internal savings - calculated based on tonnage recycled, carbon reduction initiatives and water reduction stated in Safran's annual report

Assumptions
• The total CO2e emissions saved and water saved figure in the report is representative for the whole business

Water and waste theme

Copasa

Calculation: internal

Total carbon and water avoided from energy re-use process

Approach

Copasa re-use energy produced by their thermoelectric power plant. The tCO2e avoided from their energy re-use process is disclosed and used to find the total carbon savings for Copasa. Avoided figure is for 2015 (most up to date figure). Copasa have decreased their energy consumption from 2015 to 2016. The kWh saved has been calculated and the tCO2e saved from this reduction has been calculated.

Assumptions
• Assuming the energy re-use process and reduction for the energy consumption is representative for the business

• The carbon avoided figure is for 2015. Assumed to be the most up to date figure.

Sanepar

Calculation: internal

Total carbon and water avoided from using renewable energy sources

Approach

Internal savings - Sanepar disclose the percentage of renewable to non-renewable energy used for the electricity powering their operations and the total energy used for 2016. Carbon, energy and water saved has been calculated based on the total use of renewable energy Sanepar in their operations.

Assumptions
• Assuming the energy re-use process and reduction for the energy consumption is representative for the business

About Carbon Smart

Carbon Smart, founded in 2007, is a well-established, independent sustainability consultancy working across the environmental and social agenda with private and public sector organisations across the globe. Carbon Smart has previously worked with distinguished clients such as the UK Home Office, BNP Paribas and RBS to help them track their environmental performance.