Scientists for Global Responsibility

The Carbon-OFF plan

A climate action guide for philanthropic organisations

The Carbon-OFF plan

A climate action guide for philanthropic organisations

Written by: Dr Liz Kalaugher with Dr Stuart Parkinson

Funded by: ClimateWorks Foundation

ABOUT THE AUTHORS

Dr Liz Kalaugher is responsible science campaigner at Scientists for Global Responsibility (SGR). Liz spent twelve years reporting on climate change and environmental science for IOP Publishing in Bristol, initially for environmentalresearchweb and then for Physics World Environment and Energy. Following her undergraduate degree in Metallurgy and Science of Materials from the University of Oxford, Liz moved to Bristol to study for a PhD in thin-film diamond at Bristol University, where she also gained a Certificate in Wildlife Biology.

Dr Stuart Parkinson is executive director of Scientists for Global Responsibility. He holds a PhD in climate science and has researched and written widely on a range of ethical issues related to science and technology, including climate change and military technology.

ACKNOWLEDGEMENTS

A huge thank you to the ClimateWorks Foundation for its generous funding, the team at SGR for input and feedback, especially Jan Maskell and Emily Heath, and the Argument by Design for layout.

Scientists for Global Responsibility (SGR) is a UK-based membership organisation which promotes responsible science and technology. Its membership includes hundreds of natural scientists, social scientists, engineers and professionals in related areas. It carries out research, education, and advocacy work centred around science and technology for peace, social justice and environmental sustainability. It is an active partner of ICAN, which was awarded the Nobel Peace Prize in 2017.

To join, see: https://www.sgr.org.uk/join

Design and typesetting by the Argument by Design.

ISBN: 978-1-8383986-0-6

Scientists for Global Responsibility,
2 West Road, Lancaster, Lancashire, LA1 5PG, UK

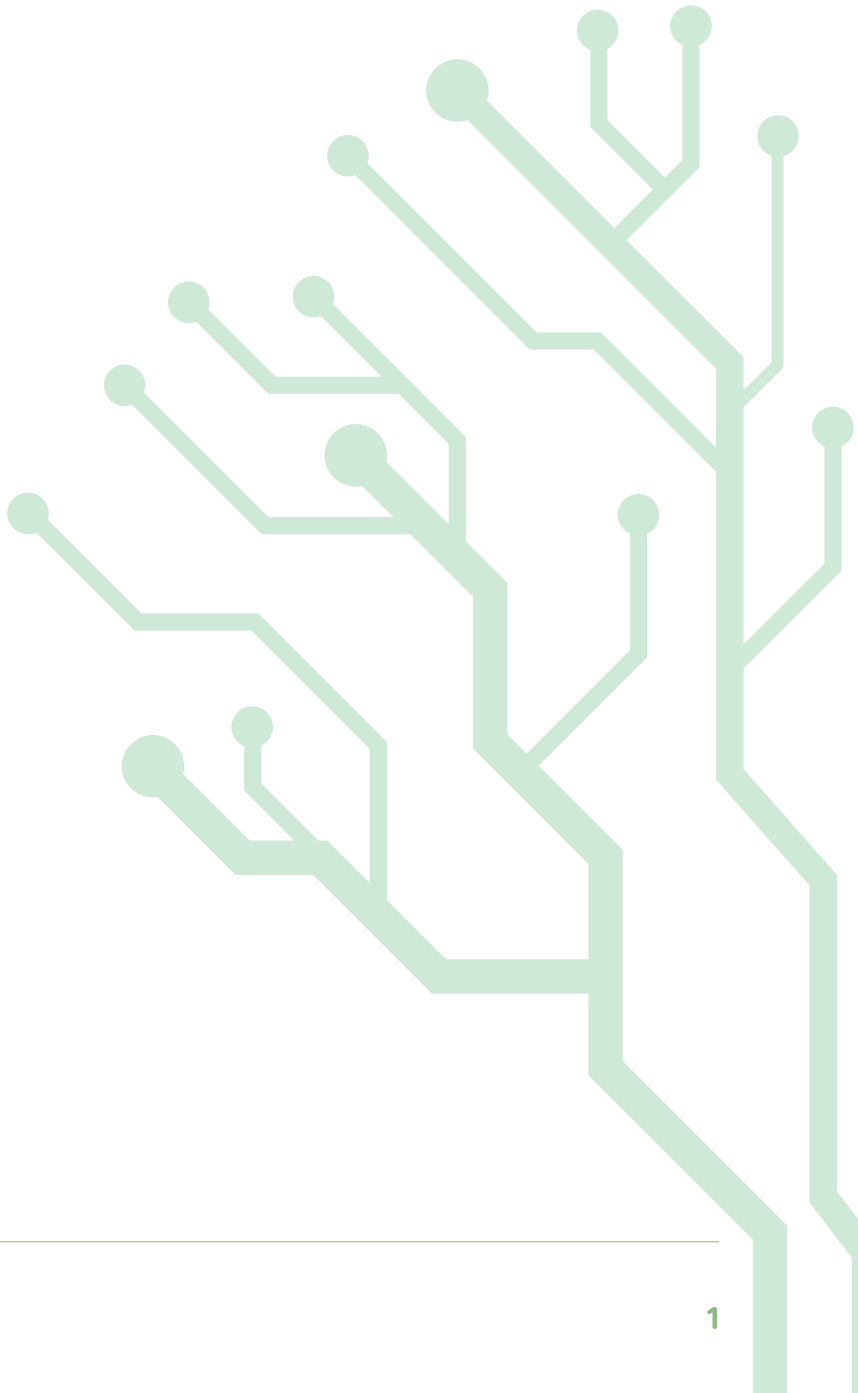
Email: info@sgr.org.uk

Electronic copies can be downloaded from: http://www.sgr.org.uk/

Cover and internal images: iStock

Contents

Introduction to the Carbon-OFF plan: Operations, Finances, Funding	2
Operations: Cutting your own emissions	3
Finances: Divesting from fossil fuels	6
Funding: Influencing your applicants and others	9



Introduction to the Carbon-OFF plan: Operations, Finances, Funding

At the climate negotiations in 2015, governments agreed a goal of limiting global heating to "well below 2°C" and ideally no more than 1.5°C above pre-industrial levels. In early 2022, the urgency and necessity of this goal, which was enshrined in the Paris Agreement, became even more apparent when the Intergovernmental Panel on Climate Change (IPCC) – the UN's scientific advisory body – published its latest round of reports. One of the IPCC's top scientists, Professor Jim Skea, said, "We need to take action now or 1.5°C will become out of reach, it will be physically impossible to get there". UN Secretary General António Guterres added that "It is time to stop burning our planet".

So how can philanthropic organisations make sure they're acting in line with their ethical founding principles and contributing to climate progress? In this introductory guide, Scientists for Global Responsibility (SGR) shows how such institutions can protect the climate in three key ways – by cutting the carbon footprint of their own operations, by divesting their finances from fossil fuels, and by influencing the organisations they fund.

Together, the three arms of this 'Carbon-OFF plan' will minimise your contribution to greenhouse gas emissions and the heating of the planet as far as possible.

OPERATIONS
Cutting your own emissions

To bring their own operations in line with the targets set in the Paris Agreement, we recommend that organisations follow the online guidelines for the Net Zero Standard created by the Science-Based Targets initiative (SBTi).[1]

This involves calculating your organisation's greenhouse gas emissions for the most recent year that you have data for. You then commit to reduce your emissions by at least 4.2% each year against this baseline level until a near-term target in 5–10 years' time. This will reduce your emissions in line with a scenario that is broadly compatible with meeting the 1.5°C target in the near-term (according to the absolution contraction approach proposed by the SBTi).

Your long-term science-based target, by 2050 at the latest but preferably much earlier, will be an emissions cut of at least 90% compared to the baseline. Recognising that it is generally not practical to reduce your greenhouse gas emissions to zero, you can then use 'carbon removal' to offset the remaining 5–10% of your baseline emissions. See below for a discussion of such offsetting.

It's also worth noting that the absolute contraction approach divides up the carbon budget according to current emissions and does not consider responsibility for earlier climate change or allow developing countries to emit more.[2] Many consider this approach unjust. It is, however, one of the most straightforward calculations. An alternative tool, from CSO, considers whether an institution is from a developed or developing country but the technique also requires a calculation of 'baseline year emissions per unit value added' which seems hard to measure for philanthropic organisations, non-governmental organisations (NGOs) and other organisations that do not make a profit. Whilst CSO does provide spreadsheets that incorporate equity and work per headcount for municipalities these too appear less suitable for such organisations.[3] As a result, SGR recommends using the minimum absolute contraction approach for pragmatic reasons. However, we do strongly encourage organisations to help to counteract this historic injustice by striving to exceed the 4.2% annual reduction goal.

Full details of the SBTi Net Zero Standard are quite technical, and it splits emissions into Scope 1, Scope 2 or Scope 3. In summary, Scope 1 emissions are those your organisation produces directly on site, for example by burning fuel for a boiler or in an engine of a vehicle your organisation owns. Scope 2 emissions are for services you buy in and use on site, such as electricity. And Scope 3 emissions are those that are either created before the goods (such as raw materials) and services (such as accounting or legal services) are used by your organisation (known as upstream emissions) or after the goods or services leave and are shipped to or used by customers (downstream emissions). Scope 3 also covers investments, employee commuting, business travel, waste disposal and leased assets and franchises. See section 3 for further discussion of investments.

1 https://sciencebasedtargets.org/net-zero/

2 From Bjørn, A. *et al* (2021) The Paris Agreement to corporate climate commitments: evaluation of seven methods for setting 'science-based' emission targets, *Environ. Res. Lett.* 16 054019 https://iopscience.iop.org/article/10.1088/1748-9326/abe57b

3 https://www.sustainableorganisations.org/context-based-metrics-public-domain/

The Net Zero Standard covers Scope 1, 2 and 3 emissions although it sets slightly different targets for Scope 3 emissions (which need only be aligned to a temperature goal of 'well below' 2°C) to Scope 1 and 2 emissions (which must be aligned to 1.5°C). Please see SBTi's website for the finer points.

SGR suggests using an environmental consultant to help you measure your greenhouse gas emissions and set targets in line with this approach. It's good practice to report on your emissions annually so that you can track your progress and promote your activities to others – but small organisations, i.e. those whose Scope 1 and 2 emissions total less than about five tonnes per year, may find it more efficient to report every two or three years. Obtaining external certification of your emissions and targets by a third party is essential for credibility, but please be aware that this area of consultancy is still developing and standards vary. The case study – see Box – shows an example of the process that a small non-profit organisation can go through. Please also note that SBTi does not offer a target-setting validation service to philanthropic organisations.

Key areas for cutting your greenhouse gas emissions are likely to include:

- Energy consumption in the office for heating, air-conditioning, lighting and IT equipment
- Energy consumption by remote workers
- Business travel
- Employee commuting
- Publication and distribution of printed materials such as reports
- Purchase of capital goods such as new IT equipment and office furniture
- Investments in fossil fuel companies and other high greenhouse gas emitting companies
- Purchase of services, for example data storage in the cloud

SGR also recommends instigating an environmental policy for your organisation if you don't have one already. As an example, please see SGR's policy.[4]

Offsetting residual emissions in your net-zero year

All current offset options have significant physical and/or environmental limitations, which is why reducing emissions by at least 90% is the priority. By the time organisations reach their net-zero year, by or before 2050, it's likely that the outlook for carbon removal options will have changed considerably. Currently, in the UK, it appears that woodland creation (which removes carbon emissions) and upland peat restoration (which reduces and potentially removes carbon emissions) are two of the most effective nature-based solutions for offsetting residual greenhouse gas emissions and each has an accredited standard.[5] In the US, saltmarsh restoration also has an accredited carbon code. And by 2050 it's possible that other carbon removal options may have been made available at a larger scale.

Only removing carbon emissions from the atmosphere will make an organisation's emissions net zero but there is arguably still a role for reducing carbon emissions elsewhere, for example by restoring peatlands or helping others insulate their building, as the current capacity for removing carbon emissions is limited and reducing others' emissions has an immediate climate benefit even if it doesn't meet net zero criteria.[6]

4 https://www.sgr.org.uk/pages/environmental-policy

5 https://www.gov.uk/flood-and-coastal-erosion-risk-management-research-reports/achieving-net-zero-carbon-emissions-a-review-of-the-evidence-behind-carbon-offsetting

6 From Bjørn, A. *et al* (2021) *Op cit.* p3.

CASE STUDY: SCIENTISTS FOR GLOBAL RESPONSIBILITY (SGR)

SGR is a small non-governmental organisation with six part-time employees at the time of writing. Carbon emissions result mainly from its office base and work-related travel, with lesser contributions from home-workers, printed publications, and online resources.

From 2021 to 2022, SGR commissioned environmental consultancy, Investors in the Environment (iiE),[1] to accredit its Environment Management System, part of which was to measure its resource use and greenhouse gas emissions and set targets for lowering these emissions.

SGR's estimate of its carbon emissions in its base year (2019/20) was 1.7 tonnes (of carbon dioxide equivalent[2]). Activities covered by this estimate included office energy consumption (Scopes 1 and 2), business travel (Scope 3), and commuter travel (Scope 3). Targets were set for reductions in these areas such that these carbon emissions would be reduced by 60% by 2022–23 (much faster than the SBTi Net Zero Standard). Actions to reduce emissions included moving to a city centre location to reduce commuter travel, moving to an office with high energy efficiency standards and that is part-supplied by onsite renewable energy technologies, and greater use of home-working and online meetings.

SGR is examining the potential for further reductions in future years, including investigating those related to home-working and printed/ online materials. As SGR already has very low emissions, further gains may be limited and effort may better be directed towards encouraging larger reductions in other organisations such as suppliers.

1 https://www.iie.uk.com

2 Tonnes of carbon dioxide equivalent is the standard measure for greenhouse gas emissions and carbon footprint.

Indeed, the SBTi recommends that companies go further by making investments outside their science-based targets to help mitigate climate change elsewhere. "There is an urgent need to scale up near-term climate finance," the organisation says, "however, these investments should be in addition to deep emission cuts, not instead of them". SBTi recommends that companies follow the mitigation hierarchy, committing to reduce their value chain emissions before investing to mitigate emissions outside their value chains.

The restoration of peatlands can help reduce national carbon emissions

FINANCES
Divesting from fossil fuels

There are three ways in which you can take climate action through your finances:

1. Divesting your investments from fossil fuels[7] (and so reducing your Scope 3 emissions as discussed above);
2. Switching to or continuing to use an ethical bank that has divested from fossil fuels and does not fund fossil fuel projects or companies; and
3. Divesting your employee pension scheme from fossil fuels.

SGR thinks divestment from fossil fuels by philanthropy organisations and financial institutions is important because:

- Such organisations have considerable influence with politicians and the public
- As the UK Health Alliance on Climate Change[8] puts it, "engaging with companies whose business model relies on fuel extraction is of limited use—only divestment will stop extraction". Worldwide, according to the Alliance, over 1,000 organisations with £7 trillion of assets have committed to divesting from fossil fuels and instead investing in climate solutions.[9] Research indicates that divestment reduces the price of fossil fuel shares. According to a team at the University of Waterloo in Canada,[10] "lower share prices increase the costs of capital for the fossil fuel industry, which in turn decreases their ability to explore new resources and exploit proven resources". The greater the likelihood of these fossil fuel resources staying in the ground, the more likely we are to meet the international climate change targets agreed under the Paris Agreement in order to prevent potentially catastrophic climate change.
- In order to keep to the 'well below 2°C' target, only one-fifth of known fossil fuel reserves can be burned, putting these assets at risk of becoming stranded.[11] The fraction is even smaller when considering how to meet the 1.5°C target. According to the UK Health Alliance on Climate Change, fossil fuels are an increasingly risky investment and fossil fuel free indexes equalled or outperformed unsustainable alternatives for 5–10 years. In 2020 fund manager CCLA, which invests on behalf of charities including Church of England dioceses and the Institution of Mechanical Engineers, dropped its investments in oil giants Shell and Total[12] for financial reasons. In January 2021, ratings agency S&P warned 13 oil and gas companies, including Royal Dutch Shell and Total, that it is considering downgrading their credit ratings. The agency has increased its risk rating for the oil and gas sector as a whole from "intermediate" to "moderately high" because of the move away from fossil fuels, poor profitability and volatile prices, according to news reports.[13] "Divestment

7 The quick definition of what constitutes a fossil fuel company is having 'a majority of its activities focused on the exploration, extraction, processing, transport or sale of fossil fuels'. This includes the sale of electricity generated using fossil fuels. For a fuller definition, please see p21 of https://www.sgr.org.uk/sites/default/files/2019-10/SGR_IrresponsibleScience.pdf

8 ukhealthalliance.org/divestment

9 https://www.divestinvest.org/11-trillion-counting-divestinvest/

10 https://theconversation.com/how-divesting-of-fossil-fuels-could-help-save-the-planet-88147

11 https://www.banktrack.org/download/unburnable_carbon/unburnablecarbonfullrev2.pdf

12 https://www.divestinvest.org/church-of-england-fund-drops-remaining-fossil-fuel-investments/

13 https://www.theguardian.com/business/2021/jan/27/rating-agency-sp-warns-13-oil-and-gas-companies-they-risk-downgrades-as-renewables-pick-up-steam

announcements by prominent investors signal financial risks to the market, which in turn depress share prices," say the University of Waterloo researchers.[14] "Therefore, divestment announcements can have a measurable impact on the fossil fuel industry." Shell said in 2018 that divestment had become a material risk to its business.[15] Recently, a team from the University of Augsburg, Germany, found that when equity mutual funds decarbonize by selling climate-damaging shares, the resulting "decarbonization selling pressure" pushes the price of these stocks downwards. What's more, when divested firms experience a stock price decline, they reduce their carbon emissions more than non-divested firms do.[16]

- Many fossil fuel companies are relying on carbon capture technology and nature-based solutions being deployed at a huge scale to offset their planned emissions.[17] Heavy reliance on the global scale deployment of carbon capture and storage technologies is misplaced given the lack of progress in this area for the last 20 years. According to scientists,[18] such technologies are being developed but are "expensive, energy intensive, risky, and their deployment at scale is unproven. It is irresponsible to base net zero targets on the assumption that uncertain future technologies will compensate for present day emissions".
- In addition to global climate change, the extraction and use of fossil fuels have played a central role in a wide range of other major environmental problems, including marine oil spills, poor air quality, acid rain, plastic pollution, ocean acidification, and contaminated land and fresh water. These have caused huge impacts to human health and natural ecosystems over the past decades. What's more, there have been numerous cases of human rights violations related to projects which extract fossil fuels, especially in countries that already have human rights problems. And there are major links between the political and economic control of (especially) international oil and gas resources and the use of military force, sometimes leading to war.[19]
- Use of fossil fuel sponsors for educational materials is likely to alienate young people and present them with difficult ethical choices, particularly given the high participation in the Youth Strike 4 Climate movement.

For those keen to retain support for the energy sector, there are plenty of companies that are much more progressive than fossil fuel companies in which to invest. For example, Orsted (formerly DONG, Danish Oil and Natural Gas) has shifted from being a fossil fuel dominated company to one heavily focused on renewable energy. Similarly, some large German engineering companies, such as Siemens and E.ON,[20] have also made major shifts away from fossil-fuel related work.

There is, of course, a very narrow window of opportunity to keep global temperature rise below 1.5°C that warrants a fast transition away from fossil fuel dependency. We think that investment in the renewable energy and energy storage sectors would meet demand for energy more cost-effectively and more sustainably whilst continuing to provide jobs

14 https://theconversation.com/how-divesting-of-fossil-fuels-could-help-save-the-planet-88147

15 https://www.theguardian.com/commentisfree/2019/oct/13/divestment-bank-european-investment-fossil-fuels

16 Rohleder, M., Wilkens, M. and Zink, J. (2022) The Effects of Mutual Fund Decarbonization on Stock Prices and Carbon Emissions, *Journal of Banking and Finance*, Volume 134, January, 106352, http://dx.doi.org/10.2139/ssrn.3612630 See also author explainer at https://www.youtube.com/watch?v=dorMMn2BBn4

17 https://insideclimatenews.org/news/16072020/oil-gas-climate-pledges-bp-shell-exxon/

18 https://www.climatechangenews.com/2020/12/11/10-myths-net-zero-targets-carbon-offsetting-busted/

19 https://www.sgr.org.uk/publications/irresponsible-science, p11.

20 Siemens has committed to the 1.5°C target under the SBTi and E.ON's carbon emissions are aligned with the below 2°C pathway according to the Transition Pathway Initiative (TPI).

A biogas plant in the Czech Republic. Investment in alternative renewable feedstocks can provide jobs and meet energy demands sustainably.

for those in the energy sector, investment in green chemistry would promote the use of alternative renewable feedstocks, and investment in energy conservation measures would reduce the energy demand.

Again, especially for organisations holding high levels of investments, we advise seeking professional advice before taking action. Ethical investment advisors are becoming more common and range from large, e.g. Moody's ESG,[21] to small, e.g. Investing Ethically.[22]

21 https://esg.moodys.io/

22 https://www.investing-ethically.co.uk/

FUNDING
Influencing your applicants and others

Philanthropic organisations exert a powerful influence through their funding activities. We make the following recommendations:

- Request all applicants for funding do one of the following:
  - Provide details of their science-based net-zero standard (see section 2); or
  - Commit to providing a science-based net-zero standard should their funding application be successful; or
  - Commit to investigating net-zero targets for their Scope 1 and 2 emissions.
- Request all applicants for funding provide details of any greenhouse gas emissions related to the activities they are requesting funding for, along with a plan for minimizing these emissions as far as possible.
- Request all applicants for funding disclose any investments in fossil fuel companies they may hold and commit to divesting from these should their funding application be successful. Funders could go further by requiring that all grant applicants commit to divesting from fossil fuels as a condition of their application.
- Consider promoting 1.5°C lifestyles[23] to funding applicants, your employees and your other spheres of influence.
- Promote divestment from fossil fuels to your peers and discuss why you have done so with policymakers.
- Speak about your actions and promote similar climate change action and net-zero targets to your peer philanthropic organisations, senior policymakers and business leaders in order to lead systemic change.

Note that the decision on which options to apply in relation to grant applicants could be made dependent on the size of the grant/applicant, especially as small applicants such as community groups may have very limited emissions and/or limited capacity to assess them.

23 https://www.sgr.org.uk/projects/living-targets

SGR
responsible science

The Carbon-OFF plan

A climate action guide for philanthropic organisations

Philanthropic organisations have a huge influence worldwide and it's crucial that they take action on the climate emergency that will have an increasing impact on their work. In this introductory guide, Scientists for Global Responsibility (SGR) shows how such institutions can protect the climate in three key ways – by cutting the carbon footprint of their own operations, by divesting their finances from fossil fuels, and by influencing the organisations they fund. Together, the three arms of this 'Carbon-OFF plan' will minimise your contribution to greenhouse gas emissions and the heating of the planet.

Scientists for Global Responsibility (SGR) is a UK-based membership organisation which promotes responsible science and technology. Its membership includes hundreds of natural scientists, social scientists, engineers and professionals in related areas. It carries out research, education, and advocacy work centred around science and technology for peace, social justice and environmental sustainability. It is an active partner of ICAN, which was awarded the Nobel Peace Prize in 2017.

To join, see: https://www.sgr.org.uk/join