

The Institution of Chemical Engineers

This document provides an extension to information gathered for the report, *Irresponsible Science?: How the fossil fuel and arms industries finance professional engineering and science organizations*, published by Scientists for Global Responsibility (SGR) in October 2019.¹ Information sourced from the Institution of Chemical Engineer's publicly available documents is provided first, followed by commentary by SGR.

The Institution of Chemical Engineers—or simply the IChemE – is a large professional organization with over 35,000 members in around 100 countries.² Its creation dates to 1922 in the UK; since then, the organization has become multi-national with primary offices in Australia and the UK.³

Statement of purpose and values

IChemE summarises its purpose and vision as follows:

'Our purpose

IChemE exists to advance chemical engineering's contribution worldwide for the benefit of society. We support the development of chemical, biochemical and process engineering professionals and provide connections to a powerful network of over 30,000 members.

Our vision

We aspire to be a peer-group leader for all those delivering chemical engineering activities, regardless of discipline. We want to be recognised by our members globally as: 'Led by members, supporting members and serving society'.

Investments

According to its annual financial report, in December 2020 IChemE held £6.09m of investments in financial assets.⁴

Investment policy

Within IChemE's 2020 statement on climate change document, the organization commits to establishing investment criteria that “would enable the institution's funds to be invested in alignment with [its] climate change goals”.⁵

Transparency

In its latest financial report, IChemE discloses that it splits the management of its £6m investment portfolio between Rathbones Investment Management and Ruffers LLP.⁶

¹ <https://www.sgr.org.uk/publications/irresponsible-science/>

² <https://ichemeblog.org/about-icheme/>

³ <https://www.engineersaustralia.org.au/About-Us/Overview/History>

⁴ [https://acncpubfilesprodstorage.blob.core.windows.net/public/981075b9-38af-e811-a960-000d3ad24282-af16b295-0675-43ed-b4e8-6e3adfdc3695-Financial%20Report-3a28ed72-d0e9-eb11-bacb-000d3acc5591-ICHEME Accounts 2020 - Final signed.pdf](https://acncpubfilesprodstorage.blob.core.windows.net/public/981075b9-38af-e811-a960-000d3ad24282-af16b295-0675-43ed-b4e8-6e3adfdc3695-Financial%20Report-3a28ed72-d0e9-eb11-bacb-000d3acc5591-ICHEME%20Accounts%202020-Final%20signed.pdf)

⁵ <https://www.icheme.org/media/14873/icheme-climate-change-statement.pdf>

⁶ [https://acncpubfilesprodstorage.blob.core.windows.net/public/981075b9-38af-e811-a960-000d3ad24282-af16b295-0675-43ed-b4e8-6e3adfdc3695-Financial%20Report-3a28ed72-d0e9-eb11-bacb-000d3acc5591-ICHEME Accounts 2020 - Final signed.pdf](https://acncpubfilesprodstorage.blob.core.windows.net/public/981075b9-38af-e811-a960-000d3ad24282-af16b295-0675-43ed-b4e8-6e3adfdc3695-Financial%20Report-3a28ed72-d0e9-eb11-bacb-000d3acc5591-ICHEME%20Accounts%202020-Final%20signed.pdf)

IChemE does not disclose which fund(s) its portfolio is held in so we are unable to determine whether the IChemE has opted for funds with either investment manager that exclude fossil fuel companies.

Corporate Patrons

BP, ExxonMobil, and Shell are listed by IChemE as current “gold corporate partners”.⁷

Education programmes and grants

IChemE does not appear to be accepting corporate sponsorship from fossil fuel companies for its training courses.

Events sponsorship

IChemE has a history of having its Global Awards sponsored by fossil fuel firms. In 2020, the award ceremony was sponsored by ExxonMobil.⁸ In 2019 and 2018, the award was sponsored by BP and ExxonMobil.⁹ The 2021 Global Award was not sponsored by fossil fuel firms. The organization’s Malaysia award has also in the past been sponsored by Petronas, an oil and gas company.¹⁰

Environmental policy

IChemE has released a statement outlining its position on climate change, along with the organization’s commitments.¹¹ Of note, these include the following:

- “develop plans for achieving net zero carbon emissions from our direct operations globally by 2025 and publish greenhouse gas emissions data and progress against this target each year; this will include considerations of efficiencies, reductions and offsets.”
- “establish (practical) investment criteria that would enable the Institution’s funds to be invested in alignment with our climate change goals.”
- “align the medals and awards programmes to reward progress towards the zero-carbon economy and the UN SDGs.”
- “monitor and report progress on all commitments annually.”

⁷ <https://www.icheme.org/career/corporate-partners/>

⁸ https://www.icheme.org/media/13788/global-awards-2020-insert-tce_v4.pdf

⁹ https://www.icheme.org/media/11507/mb0141_19-awards-insert-tce_web.pdf,
https://www.icheme.org/media/7691/ichemeglobalawards_aftershowbrochure-2018_hc-1.pdf

¹⁰ <https://www.icheme.org/media/15378/malaysia-awards-sponsorship-guide-2021.pdf>

¹¹ <https://www.icheme.org/media/14873/icheme-climate-change-statement.pdf>

Other relevant information

In October 2021, IChemE held a Water Climate Discussion conference which sought to outline the relationship between the climate crisis and water crisis in the run up to COP26.¹²

IChemE representatives were involved as speakers at three events during COP26: “Climate Action, Resiliency, Ecosystem Restoration and Future Climate Engineering Solutions”, “Voices of a just and green transition – youth, workers and private sector”, “Evidence-based, deliverable national energy scenarios that help deliver agreed NDCs”.¹³

Learned Society and Policy Manager of IChemE, Alana Collis, is a team leader of the Future Climate – Engineering Solutions (FC-ES) steering group.¹⁴ This group also includes two other IChemE members.

IChemE has established an Environment Special Interest Group which has the following objectives:

- promote the application of chemical engineering principles and practice in protecting and improving the environment
- raise awareness of innovative environmental techniques and technologies, environmental policy developments and regulatory tools
- encourage investigation and design development in all aspects of environmental protection, pollution prevention and control
- promote contact, communication and sharing of best practice between professionals
- form links with other stakeholders in the field.¹⁵

The plan is to achieve these objectives through a combination of technical seminars, workshops and site visits, webinars and evening events held in association with IChemE member groups. The group will also hold an annual meeting with the first to be held in February 2022.¹⁶

SGR comments

SGR acknowledges that IChemE has, particularly over the past two years, gone to some effort to acknowledge the scientific consensus on climate change and the urgent societal actions required to meet this global challenge.

SGR has continuing concerns, however, on the following aspects:

Transparency

IChemE has very low public transparency on its company investments, with there being no accessible information available on where the £6m highlighted in the company’s 2020 financial

¹² <https://www.icheme.org/membership/communities/special-interest-groups/water/events/05-10-21-water-climate-discussion-conference/>

¹³ <https://www.icheme.org/knowledge/priority-topics/responsible-production/chemeng-at-cop26/icheme-attendance-at-cop26/>

¹⁴ <https://fc-es.net/fc-es-team/>

¹⁵ <https://www.icheme.org/membership/communities/special-interest-groups/environment/>

¹⁶ <https://www.icheme.org/membership/communities/special-interest-groups/environment/events/09-02-22-2022-annual-meeting/>

report is held. Without this information or further details of how the investment policy introduced in IChemE's position statement on climate change has been actioned, we are unable to determine whether investments are held in fossil fuel companies, either directly or indirectly..

While it is promising that the organization has committed to encouraging companies to engage in "transparent monitoring and regular reporting of performance on emission reduction and other climate change mitigation and adaptation measures", it is important that IChemE is similarly transparent in its own efforts, financially and otherwise.¹⁷

Given that many members of the public are deeply concerned about climate change and that those with a background in engineering have a current and future role in mitigating and adapting to the effects of climate change, any investment by the IChemE in fossil fuel companies would be concerning to say the least.

Sponsorship (education, corporate)

IChemE lists ExxonMobil, BP and Shell as Gold Corporate Partners and has received sponsorship from both BP and Shell for its Global Awards despite indicating the magnitude and immediacy of action required by all to meet the IPCC goal of limiting warming to 1.5°C: "We agree that serious action to combat climate change is urgent and must start immediately and accelerate."¹⁸

According to the Transition Pathway Initiative (TPI), ExxonMobil, Shell and BP do not align with a pathway that would limit global warming to 1.5°C or below.¹⁹ Please see the SGR document *Data on fossil fuel companies* for further details.²⁰

What's more, none of the companies listed above has committed to meeting the rigorous criteria set by the Science Based Targets initiative for emissions reductions, which numerous other leading corporations have signed up to.²¹ Until fossil fuel companies meet the criteria of the Science Based Targets initiative and have set targets to limit their emissions by 2050 in line with a 1.5°C limit to warming, we are urging thought leaders such as IChemE to divest from these companies to keep up the pressure on them.

SGR has concerns about investments in and financial ties to fossil fuel companies by professional science and engineering organizations for these reasons:

- Professional science and engineering organizations have considerable influence with politicians and the public and it's crucial that they put in place robust science-based targets and plans that are compatible with the goals of the Paris Agreement - and end lobbying behaviour that could undermine it;
- As the UK Health Alliance on Climate Change puts it, "engaging with companies whose business model relies on fuel extraction is of limited use—only divestment will stop extraction".²² Worldwide, according to the Alliance, over 1,000 organizations with £7 trillion assets have committed to divesting from fossil fuels and instead investing in climate

¹⁷ <https://www.icheme.org/media/14873/icheme-climate-change-statement.pdf>

¹⁸ <https://www.icheme.org/media/14873/icheme-climate-change-statement.pdf>

¹⁹ <https://www.transitionpathwayinitiative.org/>

²⁰ https://www.sgr.org.uk/sites/default/files/2021-06/Data_on_fossil_fuel_companies.pdf

²¹ <https://sciencebasedtargets.org/companies-taking-action#table>

²² <http://ukhealthalliance.org/divestment>

solutions.²³ Research indicates that divestment reduces the price of fossil fuel shares. According to a team at the University of Waterloo in Canada, "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".²⁴ 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 below 2°C target, only one-fifth of known fossil fuel reserves can be burned, putting these assets at risk of becoming stranded. 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. "Divestment announcements by prominent investors signal financial risks to the market, which in turn depress share prices," say the University of Waterloo researchers. "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.²⁵ In 2020 fund manager CCLA, which invests on behalf of charities including Church of England dioceses, dropped its investments in oil giants Shell and Total for financial reasons.²⁶ On January 27th 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.²⁷ There are also signs that oil companies may struggle to recruit employees with the skills they need.²⁸
- 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.²⁹ 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 an international group of 41 scientists and academics, such technologies are "expensive, energy intensive, risky, and their deployment at scale is unproven."³⁰ It is irresponsible to base net zero targets on the assumption that uncertain future technologies will compensate for present day emissions."

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 Siemens³¹ and E.ON, have also made major shifts away from fossil-fuel related work.

²³ <https://www.divestinvest.org/11-trillion-counting-divestinvest/>

²⁴ <https://theconversation.com/how-divesting-of-fossil-fuels-could-help-save-the-planet-88147>

²⁵ <https://www.theguardian.com/commentisfree/2019/oct/13/divestment-bank-european-investment-fossil-fuels>

²⁶ <https://www.divestinvest.org/church-of-england-fund-drops-remaining-fossil-fuel-investments/>

²⁷ <https://www.theguardian.com/business/2021/jan/27/rating-agency-sp-warns-13-oil-and-gas-companies-they>

²⁸ <https://www.ft.com/content/3b53f1bd-4625-4733-afb9-af4301257506/>

²⁹ <https://insideclimatenews.org/news/16072020/oil-gas-climate-pledges-bp-shell-exxon/>

³⁰ <https://www.climatechangenews.com/2020/12/11/10-myths-net-zero-targets-carbon-offsetting-busted/>

³¹ 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 TPI.

There is, of course, a 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 for geologists, investment in green chemistry would promote the use of alternative renewable feedstocks, and investment in energy conservation measures would reduce the energy demand.

As with the long-term financial risk associated with investing in fossil fuels, we propose that divesting fossil fuel firms as corporate patrons for the IChemE will make this income stream more sustainable as a long-term proposition, as well as minimizing risk to the IChemE's reputation.