

## **The American Astronomical Society**

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.<sup>1</sup> Information sourced from the American Astronomical Society (AAS)'s publicly available documents is provided first, followed by commentary by SGR.

The American Astronomical Society – or simply the AAS – is a large professional organization with 7,240 members in the US and 760 from outside the US.<sup>2</sup> Its creation dates to 1899 through the efforts of astronomer George Ellery Hale.<sup>3</sup>

### *Statement of purpose and values*

The AAS summarises its main goals on its website as follows.<sup>4</sup>

#### *Mission*

“...to enhance and share humanity’s scientific understanding of the universe as a diverse and inclusive astronomical community.”

#### *Vision*

“To create a world where all people value and benefit from a scientific understanding of our universe.”

The AAS has five “values” through which it pursues its main goals. It interprets these as follows.

- “Curiosity: We conduct research driven by our curiosity about the Universe.
- Integrity: We act with integrity, ethical behavior, and transparency as we perform our investigations and share our results.
- Inclusivity: We use fair and accessible practices to create a diverse and welcoming scientific community.
- Empowerment: We mentor and support our early career members, using our resources to create a positive environment for them and for our astronomical community.
- Sustainability: We accomplish our work using environmentally sensitive actions rooted in scientific understanding.”

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

<sup>2</sup> <https://aas.org/sites/default/files/2020-09/2019-Annual-Report.pdf>

<sup>3</sup> <https://aas.org/about/origins-aas>

<sup>4</sup> <https://aas.org/about/mission-and-vision-statement>

## **Investments**

According to its Form 990 tax return information obtained via ProPublica, in December 2019 the AAS held \$14.5m in publicly traded securities.<sup>5</sup> We were unable to obtain further details about these investments.

## **Investment policy**

The AAS does not appear to hold an ethical investment policy.

## **Transparency**

The AAS does not publicly disclose where it holds any of its \$14.5m in investments, giving it zero transparency.

## **Corporate Patrons**

The AAS does not appear to have any corporate patrons from the fossil fuel industry.<sup>6</sup> In the organization's 2019 annual report, one company involved in arms manufacturing, Ball Technologies, was listed as an 'institutional sponsor'.<sup>7</sup>

While this does not directly indicate that the AAS holds direct or indirect investments in fossil fuels, it is concerning that the organization is willing to accept financial support from companies involved in industries many consider unethical.

## **Education programmes and grants**

The AAS does not appear to accept corporate sponsorship for its education programmes and grants.

## **Events sponsorship**

The AAS does not have any events sponsored by fossil fuel corporations.

As mentioned above, however, a number of companies involved in the arms industry, including Northrop Grumman<sup>8</sup>, Ball Technologies<sup>9</sup> and L3Harris<sup>10</sup>, do sponsor AAS events.

## **Environmental policy**

The AAS has made steps towards being sustainable as an organization, including moving to a building that is rated "Silver" by the US Green Building Council's LEED certification.<sup>11</sup>

## **Other relevant information**

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<sup>5</sup> <https://projects.propublica.org/nonprofits/organizations/210735173/202033189349305653/full>

<sup>6</sup> <https://aas.org/join/corporate-members>

<sup>7</sup> [https://www.agu.org/-/media/Files/AGU\\_Organizational\\_Support\\_Policy\\_Updated\\_June\\_2020.pdf](https://www.agu.org/-/media/Files/AGU_Organizational_Support_Policy_Updated_June_2020.pdf)

<sup>8</sup> <https://aas.org/meetings/aas237/exhibits-sponsors>; Northrop Grumman is in the Top 5 of global military sales (<https://people.defensenews.com/top-100/>) and involved in US nuclear weapons (<https://www.dontbankonthebomb.com/nwproducers/>)

<sup>9</sup> <https://aas.org/meetings/aas237/exhibits-sponsors>

<sup>10</sup> <https://aas.org/meetings/aas235/exhibiting-sponsorship/exhibit-sponsors>; L3Harris is in the Top 10 of global military sales and is involved in US nuclear weapons (<https://www.dontbankonthebomb.com/nwproducers/>)

<sup>11</sup> <https://aas.org/posts/news/2016/05/aas-executive-office-moving>; <https://www.usgbc.org/leed>

AAS has a Sustainability Committee to achieve the following:<sup>12</sup>

*“To review and recommend plans to reduce the carbon footprint of AAS activities.*

*To help AAS members be more knowledgeable about the causes and consequences of climate change.*

*To help AAS members be better advocates for solutions to climate change.”*

In 2017 the committee set up a carbon offset program for those travelling to AAS meetings.<sup>13</sup> The AAS has not reported on any further sustainability actions since this date.<sup>14</sup>

In the AAS “Strategic Plan 2021-26”, the organization states that it will do the following:

*“Charge a task force to identify the Paris Agreement goals the Society can address and implement measures to meet them.”<sup>15</sup>*

In 2012, the AAS endorsed the AGU’s “Statement on Climate Change”.<sup>16</sup> This endorsement is summarised in the following statement:

*“The AAS joins the AGU in calling for continued peer-reviewed climate research to inform climate-related policy decisions, to provide a basis for mitigating the harmful effects of global change, and to help communities adapt and become resilient to extreme climatic events.”<sup>17</sup>*

The AAS Sustainability Committee has also put together a page of resources on climate change.<sup>18</sup>

## **SGR comments**

SGR acknowledges that the AAS has made some effort to improve its sustainability and has acknowledged the importance of environmental awareness by establishing its own Sustainability Committee.

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

### *Transparency*

The AAS has very low transparency on its company investments, with there being no public information available on where the \$14.5m highlighted in the company’s 990 form for 2019 is held. It is, therefore, impossible to ascertain the extent to which the AAS is conducting its investments in a manner that complies with the spirit of its “Strategic Plan: 2021-26” which emphasises the importance of meeting the goals set out in the Paris Climate Agreement. Without this information, the AAS’s stated ambition of climate action cannot be verified in its financial actions.

Given that many members of the public are deeply concerned about climate change and that those with a background in astronomy have a role to play in measuring the effects of climate change, any

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<sup>12</sup> <https://aas.org/comms/sustainability-committee>

<sup>13</sup> <https://aas.org/posts/news/2017/04/aas-sustainability-committee-carbon-offset-program-update>

<sup>14</sup> <https://aas.org/subjects/sustainability>

<sup>15</sup> <https://aas.org/sites/default/files/2021-07/AAS-Strategic-Plan-2021-26.pdf>

<sup>16</sup> [http://sciencepolicy.agu.org/files/2013/07/AGU-Climate-Change-Position-Statement\\_August-2013.pdf](http://sciencepolicy.agu.org/files/2013/07/AGU-Climate-Change-Position-Statement_August-2013.pdf)

<sup>17</sup> <https://aas.org/about/governance/society-resolutions#climate>

<sup>18</sup> <https://aas.org/comms/sustainability-committee/resources>

investment by the AAS in fossil fuel companies would be concerning. Furthermore, there is significant public concern about investments in arms corporations.

Without full transparency regarding the AAS's investments or the public availability of an AAS ethical investment policy, it is impossible to rule out that the AAS is investing in fossil fuel or arms companies, either directly or indirectly through alternative investment funds. Given the current state of the investment market, unless an organization actively makes efforts to exclude fossil fuel or arms companies the chances are that it is investing in them. Within the AAS's Strategic Plan for 2021-2026, the company states that improving "transparency and efficiency within the AAS" is one of its five strategic priorities. Despite this goal, there is very little transparency in AAS investments.

#### *Financial links to fossil fuel corporations*

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".<sup>19</sup> 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 solutions.<sup>20</sup> 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".<sup>21</sup> 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.<sup>22</sup> 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.<sup>23</sup> On January 27<sup>th</sup> 2021, ratings agency S&P warned 13 oil and gas companies, including Royal Dutch Shell and Total, that it is considering downgrading

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<sup>19</sup> <http://ukhealthalliance.org/divestment>

<sup>20</sup> <https://www.divestinvest.org/11-trillion-counting-divestinvest/>

<sup>21</sup> <https://theconversation.com/how-divesting-of-fossil-fuels-could-help-save-the-planet-88147>

<sup>22</sup> <https://www.theguardian.com/commentisfree/2019/oct/13/divestment-bank-european-investment-fossil-fuels>

<sup>23</sup> <https://www.divestinvest.org/church-of-england-fund-drops-remaining-fossil-fuel-investments/>

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.<sup>24</sup> There are also signs that oil companies may struggle to recruit employees with the skills they need.<sup>25</sup>

- 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.<sup>26</sup> 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.”<sup>27</sup> 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 Siemens and E.ON, have also made major shifts away from fossil-fuel related work.<sup>28</sup>

There is, of course, an extremely 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 and investment in energy conservation measures would reduce the energy demand.

#### *Financial links to arms corporations*

We have also identified that AAS has recent financial links with (at least) the following companies in the arms sector:

- Northrop Grumman
- L3Harris
- Ball Technologies

SGR has ethical concerns about investments in and other financial ties to arms companies by professional science and engineering organizations, especially those that export to nations with poor human rights records or are involved in the development and production of nuclear weapons systems. Hence we also urge professional bodies to minimise their financial links with this sector.

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<sup>24</sup> <https://www.theguardian.com/business/2021/jan/27/rating-agency-sp-warns-13-oil-and-gas-companies-they>

<sup>25</sup> <https://www.ft.com/content/3b53f1bd-4625-4733-afb9-af4301257506>

<sup>26</sup> <https://insideclimatenews.org/news/16072020/oil-gas-climate-pledges-bp-shell-exxon/>

<sup>27</sup> <https://www.climatechangenews.com/2020/12/11/10-myths-net-zero-targets-carbon-offsetting-busted/>

<sup>28</sup> 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.