**"Working with fossil fuel companies like Shell changes them for the better. As a result they will consider the climate crisis and incorporate that meaningfully into their policies"**

This claim is based on hope rather than fact. Fossil fuel companies like Shell knew about climate change for decades[1] and then have doubted its existence, and its impacts. They still work against emission control policy and energy pathways away from fossil fuels. University collaborations over the same decades are not stopping that from happening. Knowledge institutions like universities have to face up to the fact that the industry has chronically thwarted efforts towards a fossilfree future and has still to take its responsibility, rather than keep believing in a non-existent reality.

Despite collaborations, none of the large fossil fuel companies have plans even remotely compatible with a safe future. According to a recent study published in *Nature*, their decarbonisation scenarios, including those from BP, Shell, and Equinor, are "inconsistent with the Paris Agreement". "They fail to limit warming to "well below 2°C, let alone 1.5°C, and would exceed the 1.5C warming limit by a significant margin".[2][3]

Counter to statements of progress on renewable energy activities, fossil fuel companies are backtracking on their ambitions. Illustrative is Exxon's retreat from their major algae-to-biofuels efforts as it reaped Exxon Reaps $59bn in annual profits,[4] BP's group made a U-turn on its ambitions to reduce the group's emissions. From prior ambitions to cut oil and gas production by 40 percent the company now scaled back to a cut of just 25 percent, just as it reported annual profits of $27.7bn.[5] Similarly, despite Shell having registered a historic near profit of $40bn,[6] the company plans to keep its investments in renewables steady, indicating it won't accelerate its low-carbon ambitions.[7] This also is not in line of expectations, given that Shell's new CEO Wael Sawan's "fundamentally believe[s] in the role of oil and gas for a long, long time to come."[8]

Despite decades long of university collaborations with them, companies like Shell have not meaningfully pushed the needle on low-carbon development in line with a climate proof future. To not take critical stock of this inertia and hope this situation will somehow magically change is to live fact-free. A university cannot afford such.

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**"It is 'better' to keep investing in- and working with companies like Shell because stepping away from them will give chances for investors and parties disinterested in climate change to take places, and in this way turn companies like Shell into even worse climate offenders."**

The *theory of change* of dissociating from the fossil fuel industry points a very different outcome: that of enabling and speeding up the transition to an energy system away from fossil fuels. It works because demanding a stop to investments and collaboration helps

[1] https://www.desmog.com/2023/03/31/lost-decade-how-shell-downplayed-early-warnings-over-climate-change/
[2] https://www.imperial.ac.uk/news/239133/fossil-fuel-companies-projections-wont-meet/
[3] https://www.nature.com/articles/s41467-022-31734-1
[4] https://www.bloomberg.com/news/articles/2023-02-10/exxon-retreats-from-major-climate-effort-to-make-biofuels-from-algae
[5] https://www.ft.com/content/419f137c-3a83-4c9c-9957-34b6609bcdf7
[6] https://www.reuters.com/business/energy/shell-makes-record-40-billion-annual-profit-2023-02-02/
[7] https://www.bloomberg.com/news/articles/2023-02-02/shell-to-pause-renewables-unit-s-spending-growth-after-record-2022
[8] https://www.wsj.com/articles/new-shell-ceo-faces-big-dilemma-should-the-company-pump-more-oil-9fa35497

to strip away the social license to operate of companies like Shell. The company has acknowledged in various annual reports of the past decade that that is a risk to their business model.[9] In 2017 Ben van Beurden, former CEO at Shell, told a reporter that the societal acceptation is the "biggest challenge for Shell".[10] That is another indication that the theory of change of dissociation from fossil fuel companies like Shell can work and that it is a direct threat to the fossil fuel centered business model of companies like Shell.

In fact, the theory of change is working and has worked in the past. The international fossil fuel divestment movement is successfully using the same theory of change to chip away the social support for fossil fuel companies. In the past ten years, 'Fossilfree'campaigns have convinced pension funds, universities, cities, health organizations, and other institutions to collectively divest $40.51 trillion from fossil fuel companies.[11] In the Netherlands, ABPfossielvrij has convinced one of world's largest pension funds to divest €17 bln away from fossil fuel companies,[12] the ABP pension fund – responsible for the pension of around 3 million workers in the governmental and educational sector. Their specialists have acknowledged that their decades-long attempts of professional engagement has insufficiently pushed the needle.[13] They are now investing their time and money in business that are more deeply aligned with Paris' goals. More generally, as reported in the Financial Times of March 23rd, 2023, new research by Solvay Brussels School of Economics, Stockholm School of Economics and Harvard Law School found that "[t]he rising number of funds pledging to dump investments in carbon-intensive companies has led to more market participants grappling with the risks of holding fossil fuel assets", and reflects that such dissociation can be considered a "lead indicator for social and political change".[14]

Furthermore, should less green-minded investors take over, their association with fossil fuel companies will only accelerate the establishment of the fossil fuel industry as a pariah industry. In this way, the cultural support layer for these businesses will further erode, and in this way enable social cultural conditions for 'fossil free' energy futures.

Such a strategy for progressive cultural change has a proven track record also in context of anti-apartheids movement in South-Africa. It successfully turned the Apartheidsregime into a pariah and allowed for alternative, human rights-consistent pathways. Likewise, the international BDS campaign successfully uses it to bring to light the system of apartheid in Israel and occupied Palestine territories as never before. As a result of its pariah status, the tobacco industry, too, is being excluded as a investment target and barred from collaborations by many institutions (amongst which, the Erasmus University Rotterdam), aiding in a societal shift to more healthy lifestyles. In acknowledgment of the cultural role the Erasmus university of Rotterdam plays in promoting life in good health, the campus ground has been declared a smoke-free zone.

[9] https://www.shell.com/about-us/annual-publications/annual-reports-download-centre.html
[10] https://fd.nl/ondernemen/1192960/verdwenen-vertrouwen-wordt-serieus-probleem-voor-onze-langetermijntoekomst
[11] https://divestmentdatabase.org/
[12] https://www.abp.nl/content/dam/abp/nl/documents/abp-feiten-en-cijfers-dvb-november-2021%20.pdf
[13] https://fd.nl/financiele-markten/1462040/abp-doet-helft-bedrijven-van-de-hand-na-aanscherpen-beleggingsstrategie
[14] https://www.ft.com/content/a446f9a7-2fcb-4d48-bdd8-2ff1dcbe1bb3

In short, solving the climate crisis is also a social cultural challenge, as also acknowledged by the IPCC[15], and dissociating from fossil fuel companies can be a part of the solution just as it has been in other contexts.

Especially in view of the never-ending lack of climate positive results of collaborations between the university and the fossil fuel industry and the limited time left to turn the tide, this proven theory of change must be recognized as a radical – but nevertheless very practical – way to mitigate dangerous global warming.

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**"Shell is a contributor to the energy transition"**

This is a grave overstatement. Shell's 'contribution' is not meaningful in context of other company activities that work against the energy transition. Illustrative for this is that Shell, despite claiming to spend 12% of its annual expenditure on "Renewables and Energy Solutions", in reality only spends 1.5% of its overall expenditure, a paltry €288mln, on wind and solar power generation. This is amidst the climate crisis. A significant portion of Shell's spending on "Renewables and Energy Solutions" actually goes to investments in climate-wrecking gas. That's why in February 2022 Global Witness has filed a greenwashing complaint with the US Securities and Exchange Commission (SEC), the US agency charged with protecting investors, showing how Shell overstates its investments in renewable energy by including gas-related activities, such as integrated power, gas marketing and trading, hydrogen, and carbon capture and storage.[16]

BP, similarly able to misleadingly depict itself as a 'green' oil and gas company, spent over ten times more on oil and gas than on "low carbon" projects. Shell spent nearly five times more.[17]

This is at odds with a net-zero-by-2050 pathway of even the generally conservative International Energy Agency (IEA). The agency stated in a 2021 report that in their pathway to "give the world an even chance of limiting the global temperature rise to 1.5°C", "beyond projects already committed as of 2021, there are no new oil and gas fields approved for development".[18] Similarly, the United Nations has stated in their most recent Productions Gap report that "global fossil fuel production must start declining immediately and steeply to be consistent with limiting long-term warming to 1.5°C".[19] However, Shell and other fossil fuel companies keep developing new oil and gas projects.

The tenacious belief that fossil fuel companies 'already do a lot' for the energy transition is nothing more than an indication of having fallen into the trap of believing their greenwashing. This greenwashing is effectively relayed to society through cultural productions such as advertisements which the industry spends billions on. [20][21][22] But in the Netherlands alone, Shell's green claims have been found to be misleading multiple times by

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15 https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf#page=568

16 https://www.globalwitness.org/en/campaigns/fossil-gas/shell-faces-groundbreaking-complaint-misleading-us-authorities-and-investors-its-energy-transition-efforts/

17 https://www.globalwitness.org/en/campaigns/greenwashing/fossil-fuel-greenwash-since-launch-of-green-claims-code/

18 https://www.iea.org/reports/net-zero-by-2050

19 https://productiongap.org/2021report/#R1

20 https://www.theguardian.com/business/2020/jan/08/oil-companies-climate-crisis-pr-spending

21 https://impakter.com/decade-of-anti-climate-action-oil-lobbies-outspend-clean-energy-allies-by-27-times/

22 https://www.desmog.com/2022/12/14/trade-associations-spend-billions-climate-politics-fossil-fuels-brulle-downie/

*Stichting Reclame Code*, the self-regulatory advertising organization. One claim Shell may not make any longer is that they can call themselves 'one of the biggest drivers of renewable energy'. They can also not continue to advertise the slogan 'make the difference. Compensate $CO_2$'. Shell is also prohibited from any longer using the slogan '$CO_2$-neutral driving'. Earlier the regulatory organization found Shell's green claims about one of its hydrogen projects misleading.[23]

At a more fundamental level the above means that Shell's investments in and promotion of renewable energy can at all be considered a contribution to an actual *transition* of the energy system. Nothing points to Shell's behavior reflecting a transition of any sorts.

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**"Fossil fuel companies need universities"**

They don't. Fossil fuel companies are rich enough to finance own in-house expertise, as they have historically done so with traditionally large expenditures on research and development. As an indication of their wealth, BP, Shell, ExxonMobil, Saudi Aramco, Chevron, ConocoPhillips, and Total together made €140.2 billion euro in profits 2021. In 2022 that had almost doubled to €259.1 billion.[24] Some fossil fuel companies' net profits are comparable or higher than some countries' governmental budget.

Shell and other oil and gas majors don't 'need' the expertise of universities. Collaboration is just a cheaper path towards making their hydrocarbon based business more efficient because taxpayers money helps cover the time professors put into such projects. To business models that rely on continued fossil fuel combustion for their bottom line it is only beneficial that in this way valuable research time is lost which could have been spent on true fossil free futures.

Given the ongoing climate-wrecking track record of companies like Shell, it is a given that no scientist has been able to make Shell change course. Despite claims that such is, in fact, the case, is historically simply not true. To think so is much more an expression of persistent academic delusion of grandeur than a reflection of fact and must be met with questions to point out how specific collaborations have *exactly* changed Shell's approach to climate change, and why that has then nevertheless allowed Shell to remain misaligned with Paris goals.

Furthermore, feedback from various academic staff shows that companies like Shell typically don't engage with universities to determine their corporate strategies. Furthermore, Shell predominantly engages with universities such as the Erasmus University through mid-level managers, who are not in the position of shifting corporate strategy within the meaningful timeframe, and order of scale needed to transform the business.[25]

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**"Many people depend on the fossil fuel industry for their livelihood."**

But that does not make it right. By that same argument child prostitution, just because money is made by some, would be acceptable as well. Uyghurs forced labor in China would then also be acceptable. Or the cluster bomb industry. Such a position is deplorable and unfit for any self-respecting university to embrace. Humans' financial dependency, annual turnover and profit figures – they are no reason to support any business model. Especially not if the business undermines the basic precondition for social life as we know it – a safe climate.

[23] https://verbiedfossielereclame.nl/
[24] https://nos.nl/artikel/2462165-topjaar-voor-shell-ruim-38-miljard-euro-winst
[25] http://changerism.com/wp-content/uploads/2015/09/A-Pipeline-of-Ideas.pdf

If anything, the 'positive' effect that people earn a living working in the oil and gas industry only reminds of the urgency to unwind the social economic embeddedness of companies like Shell.

However, if one *does* decide to evaluate a company according to its impacts on society, a *fair* impact assessment must be made – one that includes *all* hidden social and ecological costs, rather than one where positive impacts are cherry-picked and then used to argue in favor of companies like Shell.

Amongst the 'true costs' of fossil fuel companies are future costs caused by their business. For example, Rotterdam – the home of the Erasmus University Rotterdam - is projected to pay an annual bill of up to €237 million by 2030 for people and assets at risk as a result of unabated fossil fuel use, ranking 1st among European coastal cities by amount of average climate losses in 2030.[26]

Impacts on lost livelihood opportunities should also be taken into account when considering 'positive' societal effects of the fossil fuel industry are drawn on. On 2nd February, 2023, 13,652 people from two Nigerian communities lodged claims seeking justice in the high court in London against the fossil fuel giant Shell. The individuals, also from churches and schools, ask the oil giant to clean up the pollution which they say has devastated their communities. They are also asking for compensation for the resulting loss of their ability to farm and fish by the continuing oil spills from Shell operations.

'Positive' effects such as the livelihood that the fossil fuel industry brings are only temporary and superficial in light of impacts of the unfolding climate crisis, especially amongst marginalized groups of people. Fossil fuel companies know this. BP, for example, in their own 1991 documentary 'What makes Weather' depicts various 'devastating consequences' of a disrupted climate such as 'catastrophic floods', against which it identifies low-lying countries like Bangladesh as 'defenceless'.[27] Similarly, in 1988, Shell pointed out in a confidential report called "The GreenHouse Effect", that "Large low-lying areas could be inundated (e.g. Bangladesh) and might have to be abandoned or protected effectively."

This is without taking into account other effects, such as the 7 million people that are killed each year because of the toxic air pollution created when fossil fuels are burned. The *World Health Organization* (WHO) states this health effect to be equivalent to that of smoking tobacco.[28] Also, fossil fuel subsidies in the Netherlands amount to up to €17.5bln – which is not spent on poverty reduction, higher salaries in care, or, for example, better education.[29] The International Monetary Fund (IMF) has calculated that globally, fossil fuel subsidies were $5.9 trillion or 6.8 percent of GDP in 2020 and are expected to increase to 7,4 percent of GDP in 2025.[30]

These sort of aspects must be included if the fossil fuel industry is subjected to impact measurement.

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**"Universities have the responsibility to bring together students and employers. Universities are not political institutions"**

This position reflects an overly narrow view of the (intended) role of a university and a naïve

[26] https://www.frontiersin.org/articles/10.3389/fmars.2016.00265/full

[27] https://www.ftm.eu/articles/bp-video-climate-change-1990-engels

[28] https://www.who.int/news-room/spotlight/how-air-pollution-is-destroying-our-health

[29] https://gofossilfree.org/nl/fossiele-subsidies-wat-zijn-het-en-hoe-komen-we-ervanaf/

[30] https://www.imf.org/en/Topics/climate-change/energy-subsidies

view on politics. Universities are not merely brokers between students and multinational companies and the campus not a free-for-all for climate wrecking companies like Shell to engage with. Universities also play a deeply societal role. That is why universities like the Erasmus University Rotterdam typically doesn't work together with nuclear weapons- and cluster bomb manufacturers, the tobacco industry, or the porn industry.

It does so *precisely* because the university is aware that it is – at all times –a site of politics. Everything that happens at the university bears a political weight off-campus. That is true both when a lecture or event *is* held and when it's *not* held, both when corporate collaboration *are* had and are *not* had. The university always contributes to a social reality, regardless of whether stage is or is not given to it. The university is embroiled in politics, always and by default.

In this sense the cutting of ties with the fossil fuel industry would not represent a fundamental departure from the current situation which is falsely assumed to be 'neutral', or 'devoid of politics', or 'amoral', but much rather a continuation of universities acting out their societal role.

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**"A moratorium on collaborating with any industry is a threat to academic freedom"**

No it is not. A relationship with Shell has previously been terminated without having infringed on academic freedom, instead only augmenting it.[31]

Furthermore, academics follow many rules every day such as those explicated in scientific integrity codes. These behavioural limitations aren't infringements on academic freedom, but ethical guide lines turned into concrete rules for moral engagement. Medical research for example typically has to pass ethical checks and balances before it can ensue (although these, too, can be shortcoming). Those checks and balances do not automatically infringe academic freedom. They are house rules.

OccupyEUR's demand to cut ties with fossil fuel companies has to be seen in this light. It reflects the position that collaborations with the corporate world should be subjected to ethical guidelines, and asserts at the same time that the fossil fuel industry would clearly fail any serious test for ethical university-corporation collaborations: fossil fuel companies kill off the future social life universities depends on.

Therefore, it is not a moratorium on university collaborations with fossil fuel companies that will, in the future, inhibit the university's capacity to carry out its scientific research freely but precisely the very continuation thereof. Academic research funded by fossil fuel companies is biased against renewables and toward the promotion of fossil gas.[32][33]

Recognizing the threat of this to our collective future, if anything, it are these collaborations that represent a threat to the future freedom of academics to engage in science.

But what makes the fossil fuel industry so unique is the historical threat it has been to the credibility of science. Research has showcased time and again how the fossil fuel energy industry has encouraged

[31] https://www.nrc.nl/nieuws/2019/03/13/in-stilte-brak-de-erasmus-universiteit-met-shell-a3952618

[32] https://www.nature.com/articles/s41558-022-01521-3.epdf?sharing_token=D2ijiLDUrVKjvp4lWR0jI9RgN0jAjWel9jnR3ZoTv0PFHvJlHvJ_ACmLOp1FbbeYeAN0FZ-dIWQpA4MBYz2Zrpy4jj5yv6Hm7ZgoKLtba3FIPiFselrafER0WcAC33XMGomHo7Qs4oQQJpf0kvXec4WrEe83zRuRQz_esatAW1o%3D

[33] https://www.nature.com/articles/s41558-022-01522-2

disinformation about the reality and dangers of climate change, as well as its solutions.[34]

The knee-jerk reaction to argue that the demand to cut ties with the fossil fuel industry would mean that 'other industries are next' is misguided: the fossil fuel industry is not just 'any' industry. It has been uniquely anti-scientific as is more and more understood.[35]

And, of course, what further sets this industry apart from others it that its core product drives extinction on a global level. It is an industry, as philosophers would say, *sui generis* ('of its own kind'). At most, it shares some similarity with the tobacco industry. That industry, too, sows death, and that industry, too, has a well-documented, deeply troubled historic relationship with truth and fact. That industry is put off-limits on the campus, while the fossil fuel industry is not.

Lastly, the reasoning behind the demand to cut ties with companies like Shell are very specific to the fossil fuel industry and to be understood in light of the unfolding climate crisis. They don't 'automatically' apply to other industries, and therefore fears that some other industry will be the next to be banned is unfounded. However, of course, if in the future it is argued by some that other industries should also fail a yet-to-be-drafted ethical 'test' for university-corporation collaborations - so be it.

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**"There will be negative consequences if we stop collaborating with fossil fuel companies"**

That will be an exaggeration. According to the daily newspaper *Financieele Dagblad*, Shell finances 8 professors at universities in the Netherlands.[36] The financial effect of not renewing these won't be insurmountable.

A total moratorium on collaborations with fossil fuel companies also means to not accept money from them via research projects. The financial effect of that is limited, in most universities, too.

If companies like Shell *do* provide a university with a substantial source of income, then that must be mapped as soon as possible as part of basic good governance.[37]

However, whether a university depends on fossil fuel money to a large degree or not, it is wrongful to interpret that as a reason to maintain the status quo. Instead, the degree to which university income depends on fossil fuel money only shows how big the problem of fossil fuel money dependency has gotten. And, of course, how big the challenge is to get rid of it and then also informs steps that need to be taken to change that status quo. These will probably include engaging with entities such as *Universiteiten van Nederland*, *Ministerie van Onderwijs, Cultuur en Wetenschap*, *Koninklijke Nederlandse Akademie van Wetenschappen*, *Nederlandse Organisatie voor Wetenschappelijk Onderzoek*, and others.

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**"The projects we do with industry only contribute to the energy transition"**

This sort of claim remains without grounding in fact. It is uncertain if knowledge created through collaborations that look green at face value are actually used in the real world to mitigate climate change and accelerate the

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[34] https://www.theguardian.com/environment/2011/apr/20/fossil-fuel-lobbying-shale-gas

[35] https://www.nrc.nl/nieuws/2023/04/05/het-slechte-huwelijk-tussen-universiteit-en-fossiele-industrie-a4161371

[36] https://fd.nl/samenleving/1459676/voor-het-eerst-in-kaart-gebracht-wie-betalen-onze-hoogleraren#:~:text=De%20grootste%20financiers%20zijn%20Philips,gefinancierde%20hoogleraren%20in%20kaart%20bracht.

[37] https://www.volkskrant.nl/nieuws-achtergrond/onderwijsminister-dijkgraaf-onbegrijpelijk-dat-universiteiten-niet-weten-hoe-ze-worden-gefinancierd~b55921ae/

energy transition. Notable examples are knowledge created through collaborations on carbon capture (utilisation) and storage (CC(U)S),[38] bioenergy with carbon capture and storage (BECCS),[39] 'natural' gas projects, blue and green hydrogen projects,[4041] and carbon-offsetting schemes.[42] These are fields Shell is active in when it says it is working on solutions for the global warming but they all have unresolved issues such as technical, economic, legal, social, ecological, and legal ones. These range from methane and hydrogen leakages all along the product chain, to energy conversion inefficiencies, to the capture of green energy generated with renewable energy, to large project carbon footprints, to consequences of global upscaling for displacements of agricultural lands and destruction of forests, and ecosystem risks, to associated issues with regards to human rights, and legal embeddedness of unaccounted long-term liabilities for $CO_2$, and dependency of public funding.

Because of this, although some of these technologies have been touted as 'transitional bridges' to a future energy system based on renewable sources, they have been explained as 'bridges to nowhere' that delay climate action and continue fossil fuel consumption.[43]

The dual-use nature of such 'green' collaborations with companies like Shell – will society transition away from fossil fuels, because of it? Or will it society still remain hooked on fossil fuels, despite it? – is insufficiently checked for to claim the collaborations are net positive for global warming mitigation. Academics who claim such is the case, typically have little to back up this claim, and typically have no means to hedge against the risk of dual-use of the supposedly green knowledge they have co-produced.

Universities have to take stock of the objective fact that so far, despite decades of talk about deployment of such 'transitional' sources of energy, fossil fuel energy companies are proven unable to do business in line with a safe future climate.

Green knowledge can be produced without having to work together with companies that spend almost exclusively on fossil fuel upstream and downstream activities.

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**"Even if we would stop collaborating with fossil fuel companies, then still the world would need fossil fuels for the foreseeable future".**

These two things – universities collaborating with fossil fuel companies on the one hand, and the world's current and future energy mix on the other - are unrelated. The question at hand here is whether or not a specific university should lend itself to benefit the social license to operate of the industry or take responsibility to change that. Broader conversations about the energy mix are interesting and relevant, but in no way part of the very specific discussion at hand. Whatever source of energy people use now and in the future does not justify universities' continued collaborations with fossil fuel companies.

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[38] https://www.nature.com/articles/d41586-023-00953-x

[39] https://www.fern.org/publications-insight/six-problems-with-beccs-57/

[40] https://www.globalwitness.org/en/press-releases/shell-plant-emissions-million-cars/

[41] https://fd.nl/bedrijfsleven/1466407/pas-op-de-plaats-nodig-bij-grootschalige-inzet-waterstof#:~:text=Voordat%20er%20een%20nieuwe%20industrie,moeten%20we%20dat%20voor%20zijn.

[42] https://www.climatechangenews.com/2023/03/28/revealed-how-shell-cashed-in-on-dubious-carbon-offsets-from-chinese-rice-paddies/

[43] https://www.sciencedirect.com/science/article/abs/pii/S2214629619306796