Investigate Europe, 28.11.2023: ***European universities accept €260 million in fossil fuel money***

Full responses received from universities and companies.

The Norwegian University of Science and Technology

Your reasons for accepting this funding

“NTNU aims for and contributes to the transition towards renewable energy solutions. We have a long-standing collaboration with the petroleum industry, that now has put sustainable and renewable energy solutions on their agenda. NTNU is Equinor's largest partner among Norwegian universities. In 2021, NTNU signed an MoU with Equinor (https://khrono.no/files/2021/10/07/07.10.2021-MOU-Equinor-NTNU.pdf) enabling the transition to a net zero emission company for 2050. Our collaboration with the industry presents us with responsibilities, but also great opportunities. A green transformation of the petroleum industry is not possible without the education, research, development and use of new technologies that takes place in universities. Transformation requires research-based solutions and collaboration between the industry and universities.”

To what extent is money from oil and gas companies ear-marked for specific institutes or R&D projects?

“There are various projects and collaboration agreements, but most of the projects are related to renewable energy transitions. Some of the money is co-financing research centres and projects that are partially funded by the Research Council of Norway. These centres and projects have been through standard application processes managed by the research council.

The largest part of the Equinor collaboration is through the “Academy agreement”. In the “Academy agreement” NTNU decides what kind of research topics will be performed, and we include research areas such as biodiversity, renewable energy and artificial intelligence.

The companies are financing, among other things, professorships, PhD and postdoc scholarships, laboratory equipment and student activities. PhD, postdoc and research positions are classified as sponsored/grant research, not commissioned research, and we can publish the research results.”

To what extent does the money go to oil and gas-related projects?

“A majority of the projects relate to renewable energy. Many of the activities are concerned with technology development, but topics also include energy transition strategies, sustainable energy systems, carbon capture and storage (CCS), ecology, natural diversity and the social effects of energy transition.”

What do you do to prevent oil and gas companies' business agendas interfere with your academic independence?

“We are strongly promoting academic freedom, including the right to publish research results, and we practice openness in our external relations. This applies to our collaboration with companies and the public sector as well. Academic staff can decide if they want to take part in projects or activities that involve, for example, oil and gas companies. We also include sustainability as an overall goal in all collaborations.”

Do you aim to continue to take money from the oil and gas industry in the years ahead?

“Yes. Some of our contracts and agreements are long-term and we believe that through collaboration we can speed up the green energy transition and make more and better sustainable solutions.”

Imperial College London

“As part of our ongoing commitment to working towards a sustainable future, Imperial College pledged in 2020 that it will only engage in research partnerships with fossil fuel companies where the research forms part of their plans for decarbonisation, and only if the company demonstrates a credible strategic commitment to achieving net-zero by 2050. We will no longer accept funding from fossil fuel companies that is directed at propagating the existing extraction business.”

University of Milan-Bicocca

“Sustainability and the reduction of environmental impact are cornerstones of the University, increasingly present and protagonists in all academic and research activities. The projects that the University of Milan-Bicocca is currently developing, on the basis of agreements with leading Italian and international industries, aim to develop innovative solutions that are increasingly respectful of climate and environmental balance. Furthermore, every research project involving the University strictly complies with ethical criteria and is in line with the SDGs. The University will always support initiatives that respect these goals and will always be open to the contribution of all members of its academic community.

As regards collaboration with Eni, the main areas of research are: magnetic fusion, low environmental impact batteries, geothermal energy and hydrogeology, and geo-bio-hydro-chemical characterisation and modelling. In particular, only contracts on the topics of decarbonisation and ecological transition are active. These are all relevant topics within the energy transition and do not include any fossil applications.

As far as spaces for discussion and dialogue are concerned, we would like to point out that apart from discussion in institutional bodies, students have always been able to discuss in the university's spaces.

The university has always provided both institutional courses and training courses on issues related to environmental sustainability and energy transition, training activities that will be expanded in the near future.

In addition, there are numerous research centres and departments at Bicocca that have been dealing with issues related to environmental sustainability and climate change since its foundation."

ETH Zurich

What are the reasons for your decision to accept funds from the above companies?

"ETH Zurich has worked closely with industry since its foundation. ETH Zurich conducts research and teaches for the benefit of society and has the mission of transferring research findings to society and bringing innovations to the market. The projects with the above-mentioned companies deal with topics such as the maintenance of infrastructure (e.g. pipelines) or how required chemicals can be made more environmentally friendly and sustainable, or the avoidance and storage of CO emissions."

To what extent are the projects you have informed us about related to the gas and oil industry?

"As already mentioned in the original answer, the vast majority of the research work supported at ETH by the oil and gas sector is not directly related to oil and gas or their extraction. Rather, they centre on topics such as CO2 storage or the conversion of simpler chemicals into higher-value ones."

What was the subject and aim of the above-mentioned project?

"The aim of this project was the further development of Reaktoro, an open-source chemical reaction simulator that can be used for chemical reaction simulations of various kinds. See possible applications at: https://reaktoro.org"

What is the connection between the above-mentioned project and the reservoir simulation technology used by Shell in its oil and gas projects?

"Reaktoro can generally be used for chemical reaction simulations. We do not know whether Shell actually uses Reaktoro and for what exactly. Shell supports the open source software development of Reaktoro. As open-source software, Reaktoro can be used by the whole world for all kinds of chemical reaction simulations, even commercially (here is the licence information from Reaktoro: https://reaktoro.org/general/license.html)."

How do you ensure that the economic interests of oil and gas companies do not compromise your scientific independence?

"Maintaining the independence of teaching and research is a top priority for ETH Zurich. ETH Zurich provides its members with clear guidelines in the Integrity Guidelines with regard to the basic principles of scientific integrity in research and education. Researchers at ETH Zurich are free to decide which specific questions they wish to pursue and whether and in which projects they wish to collaborate with companies."

Do you intend to continue accepting funds from the oil and gas industry in the coming years?

“The content of the research, which is being investigated in collaboration with companies from the oil and gas industry, concerns topics relevant to the future, such as greener chemistry or the avoidance or storage of CO2. These are relevant topics for ETH Zurich and therefore comparable projects in co-operation with companies from this sector are also conceivable in the future. However, decisions on co-operation are always made on a case-by-case basis and independently of the specific sector.”

Eni

“Eni forges partnership agreements with academic institutions in order to realize its strategic pathway to zero net Scope 1, 2 and 3 emissions by 2050, based mainly on the development and use of diversified technologies and industrial initiatives, to arrive at impacting the decarbonization of the equally diversified spheres of economic and industrial systems, thus contributing to the global energy transition.

In the specific merit of partnerships, Eni closes agreements with universities and research centers to combine the knowledge of the academic world with the design capabilities of the Company's researchers, so as to accelerate the development of new technologies to support the transition. Eni also activates collaborations with universities in the field of training with the intent, on the one hand, to bridge the skills gap of its resources, investing in their specialization in order to achieve the transition goals that the company has set for itself in the near future, and on the other hand to bridge the gap between academic training and the skills required by the labor market.

Regarding investments, as reported in the Q&A related to the 2023 Shareholders' Meeting, funding in 2022 to Italian state universities amounted to about €10 million.

As requested in the Q&A submitted, we highlight that Eni does not see any conflict between creating partnerships and making investments in technological research to support the transition, and continuing to ensure the supply of traditional energy, especially gas, to meet its still growing global demand, which if not met would generate risks of security of supply and price increases, with serious inflationary consequences for businesses and households (see last year's crisis generated by the shortage of Russian gas). Eni's strategy aims to balance precisely these three elements: environment, security and affordability of energy, with a gradual reduction of net emissions to zero over the course of the Plan. So not only do we not find this coexistence contradictory, we see it as absolutely necessary.

At the research level, in the field of renewable energy we are developing technologies ranging from next-generation solar to biofuels, from storage of surplus electrical and thermal energy to electricity generation from wave and floating wind.

Eni, however, which also through Plenitude is growing significantly in renewable capacity and is installing significant amounts of electric car charging stations, reiterates that these sources cannot be seen as the only tool that can be used, however fundamental, but that there needs to be a mix of industrial initiatives alongside: from biofuels to gas, which will have to grow more and more in the production mix at the expense of oil (more impactful in terms of emissions) and

which will have to undergo the gradual lowering of emission intensity (an area in which Eni today leads the way with an upstream emission intensity of 0.08%); and from CO2 capture and storage projects to decarbonize hard-to-abate industries (and not to extend the life of fossil fuels, as they would have us believe), which otherwise would not currently have solutions, to chemistry from renewables and so on. And to further enrich this list of opportunities, we need to continue to invest in research and development, including focusing on partnerships with universities.

The contents of the agreements in question have multiple profiles of confidentiality and privacy, related to the circumstance that the revelation and consequent disclosure of their contents could jeopardize the successful outcome of the research activities being implemented, with consequent serious damage for Eni, which has been investing billions of euros (with related business risk) in research and development of technologies related to the energy transition for the past 10 years.

Moreover, Eni's technologies in question are proprietary technologies, based on its 7 research centers and precisely on its numerous agreements with more than 70 research centers and universities worldwide. Eni currently has about 8,000 technology patents. As an example, by leveraging these proprietary technologies, as the first company in the world we have initiated the conversion of the Venice refinery into a biorefinery, followed in 2019 by Gela, opening up a new avenue in the biofuels business and moreover avoiding the employment impact that would have resulted from the closure of traditional refineries, which have been in crisis for years. In this respect, too, there is a need for industrial property protection."

Total

"TotalEnergies invests over a billion dollars in R&D and employs 4,000 people. Today, TotalEnergies has more than 1,000 research partners, 23 joint laboratories and chairs, 100 PhDs, 18 research centers around the world, and files around 250 patents a year. The interdisciplinarity and excellence of these laboratories in France and abroad make them key partners in supporting TotalEnergies' transformation and training TotalEnergies employees in new professions. The challenges facing society and the Company's transformation are such that they cannot be carried out using the company's internal resources alone.

Indeed, we need top-notch R&D in interaction with the best research teams in the world to develop sustainable, affordable, available and clean energy solutions, and to lower our environmental footprint as we have committed to do.

Over the past years, the Company has strongly re-oriented its R&D to support its strategy of transformation. Compared to 28% in 2017, TotalEnergies has decided in 2022 to devote 65% of the 2023 R&D budget to low-carbon energies (renewables, biomass, batteries, etc.) and to reducing the environmental footprint through CCUS and sustainable development programs. All new R&D projects are weighed up against three criteria: to position TotalEnergies among the world's Top 5 players in renewable energies, to move towards carbon neutrality, and to improve the sustainability of our products and solutions.

The laboratories are not selling their souls to the devil by joining forces with TotalEnergies: we work with them to define research projects based on their areas of expertise. Their independence is guaranteed. TotalEnergies in no way intervenes in their strategy or governance, which are the responsibility of their supervisory authorities. Partnership agreements always set the framework for our collaborations: we define with our partners a common strategy, the objectives of the research program, which are regularly reviewed and adjusted if necessary, the rules for commercializing collaborative research and the sharing of intellectual property. Each partner pools human, material and intangible resources.

The longevity of some of our partnerships is concrete proof of the interest shared by the various parties and of the mutual trust that has been built up between the academic research teams and TotalEnergies. The Company, by providing use cases, is an accelerator for the development for laboratories. We offer them the opportunity to test or deploy their solutions on a very large scale, to access data to make their models more reliable, or to mobilize additional human and financial resources.

TotalEnergies R&D also funds open science, through sponsorship initiatives. At the Collège de France, for example, TotalEnergies' sponsorship supports French fundamental research. Finally, it is important to emphasize that, in general, research laboratories regularly call on private partners such as TotalEnergies to help them build research projects with a view to their application, and to submit them to calls for projects financed by Europe or national agencies such as the Agence Nationale de la Recherche, Ademe, etc., which, if the projects are selected, will enable them to use public funds to finance staff and equipment in the laboratories."

When Mr Pouyanné sits in board meetings at Polytechnique, does he represent the interests of TotalEnergies? How can he avoid conflict of interests in this position?

"Mr. Pouyanné was appointed in his personal capacity as a member of the Ecole Polytechnique board in September 2018 by the minister of economy and finance as a "personnalité qualifiée" (qualified personality), after his tenure as chairman of the board of the engineers' school of "Les Mines d'Alès" had come to an end. Mr. Pouyanné does not represent the interests of TotalEnergies on the board of Ecole Polytechnique. However, in order to avoid any conflict of interests, his role as

chairman and chief executive officer of TotalEnergies was disclosed (and actually known) to the Polytechnique board of directors, and Mr. Pouyanné has always recused himself from participating in any discussions or votes at the Polytechnique board in respect of the relations between Polytechnique and TotalEnergies.

In September 2021, it was announced that the parquet national financier (PNF) opened a preliminary investigation into Mr Pouyanné for alleged "unlawful taking of interest" in his position at Polytechnique. What can you say of the investigation? What can you say of TotalEnergies' and Mr Pouyanné's positions at this stage?

TotalEnergies' and Mr Pouyanné's positions at this stage? At no time was there any confusion between his functions as CEO of TotalEnergies and as a member of the Board of Directors of Polytechnique, where he was appointed as a qualified personality. The project for a TotalEnergies research center in Saclay was initiated

before he joined the Polytechnique board and was actually no longer on the agenda of the Polytechnique board when Mr. Pouyanné joined in September 2018, until it came back to the board's agenda in 2020. As stated above, he has always recused himself from discussions or deliberations in relation to the TotalEnergies research center. Only once did he intervene in his capacity as CEO of TotalEnergies before the Board of Directors of Polytechnique, at the request of the chairman of Polytechnique's board, to give TotalEnergies' point of view on the project, and then withdrew from the meeting. There was not any instance where Mr. Pouyanné, acting as board member of Polytechnique, intervened on this topic. Since then, in order to overcome a number of delays that were affecting the research center project even after it was relocated outside of the Polytechnique campus, the research center has eventually been set up in the Saclay ecosystem, which was already the rationale of this project."

Equinor

"Equinor is a broad energy company that is investing in renewables, hydrogen, carbon capture and storage, oil and gas, and battery storage projects in the UK and elsewhere. Equinor has a strong commitment to research and education in general and promoting STEM subjects in particular. We are proud to collaborate with universities in developing talented young people who will become the energy leaders of tomorrow.

Between 2019-2023, Equinor provided over £6 million in funding for UK universities.

Equinor has been part of Geosciences Advisory Boards to share views on future competence needs, or relevant research themes, from an industrial and businessperspective. This is a common practice across various industries.

One of our renowned Equinor's subsurface expert previously had a role of external examiner at the University of Aberdeen between 2018-2022.

Equinor currently sponsors the Integrated Petroleum Geology Masters Course at the University of Aberdeen.

Equinor is also a sponsor of GeoNetZero Centre for Doctoral Training, a program of PhD research and training set up to address key areas in geoscience and their role in the energy transition and reaching net zero. It involves 12 academic institutions comprising Aberdeen, Birmingham, Dundee, Durham, Exeter (Camborne), Heriot-Watt, Keele, Newcastle, Nottingham, Plymouth, Royal Holloway (RHUL) and Strathclyde. Between them, these universities provide funding for up to a further 8 studentships.

Equinor is not regularly consulted over Freedom of Information requests. However, parties that are subject to a Freedom of Information request might consult over disclosing commercially sensitive information that may affect a business' commercial interests."

Shell

“Shell has long and valued relationships with a number of higher education institutions in the UK that have driven research supporting the energy transition and UK energy security. Our collaborations aim to combine the brightest minds, with the right resources, as well as the commercial ability to scale-up and implement new lower-carbon energy solutions. Shell aims to become a net-zero emissions energy business by 2050, delivering energy security today while helping shape and scale up the lower-carbon energy system of the future. Our partnerships aim to help advance the UK towards its net zero goal.