Education International Briefings

# Towards a Just Transition in Education

A STRATEGIC GUIDE ON FOSSIL FUEL DIVESTMENT FOR EDUCATION UNIONS



Education International Internationale de l'Education Internacional de la Educación Bildungsinternationale

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## **INTRODUCTION**

Every year, despite multiple declarations of a climate emergency<sup>1</sup>, the world consumes more fossil fuels than ever before<sup>2</sup>. The steady growth in renewable energy generation notwithstanding<sup>3</sup>, shifting away from fossil-fuel based energy systems remains laden with obstacles, primarily due to a socioeconomic system that openly favours the fossil fuel industry<sup>4</sup>. Greenhouse gas emissions are on a steady rise as coal and oil power plants continue to be expanded, causing the world's remaining carbon budget<sup>5</sup> to be depleted by as much as 36% in 2022<sup>6</sup>. At this rate, permissible emissions to limit warming to the 1.5°C safety threshold would be consumed in less than seven years<sup>7</sup>. Consequently, living conditions on the planet are changing fundamentally, rapidly, and constantly. In the climate emergency era, demanding the phaseout of fossil fuels and the acceleration of a just and rapid transition into a low-carbon economy is an urgent political task.

The science has been unequivocal on what must be done to tackle the climate crisis. According to the International Panel on Climate Change, the United Nations' largest consortium of scientists, extracting and burning fossil fuels must cease now to avoid dangerous climate change impacts<sup>8</sup>. To hit this critical mark, 80% of coal reserves, half of gas and a third of oil reserves must remain in the ground, unexplored<sup>9</sup>. Furthermore, this means that there should be no more investments in the fossil fuel industry beyond 2021<sup>10</sup>.

Amidst resounding calls to end fossil fuel dependence<sup>11</sup>, the fossil fuel industry continues to play an outsized role in the global economy. In 2022, a year marked by multiple extreme weather events, wars and a cost-of-living crisis, the top five western fossil fuel corporations registered a combined profit of \$200 billion<sup>12</sup>. For Exxon, Chevron, British Petroleum and Shell, it was their most lucrative year yet. To be clear, these corporations did not accumulate record profits in a level playing field. Rather, the industry's market domination was made possible by an economic infrastructure that permits the unabated extraction and destruction of nature in the service of the wealth accumulation of an elite few<sup>13</sup>. Aside from loose environmental regulations, the industry also now receives \$1 trillion in subsidies globally, which continues to rise each year<sup>14</sup>. Despite operating on a business model built on planetary destruction<sup>15</sup>, the industry continues to enjoy a social licence to operate even as the scientific community has repeatedly issued dire warnings about its role in the climate crisis. Among education unions, therefore, the political imperative is to join the movement dismantling the fossil fuel

industry's social legitimacy. This can begin through a strategic fossil fuel divestment campaign.

In line with its commitment to climate justice and advancing a just transition in the education sector, Education International launched this project to support education unionists with strategies to advance fossil fuel divestment within their unions, schools, communities, and governments. It begins with a critical analysis of the relationship between the education sector and the fossil fuel industry then moves on to the education sector's involvement in the fossil fuel divestment movement. Building on the strength of its *Teach for the Planet* network, this project gathered unionists from across the world to advance union-generated organising and mobilising tactics for fossil fuel divestment. Through this project, El hopes to highlight the capacity and commitment of education unionists to engage in climate action that is premised on justice, equity and solidarity.

### THE FOSSIL FUEL INDUSTRY'S INFLUENCE IN EDUCATION: THE CASE OF "PETRO-PEDAGOGY"

The fossil fuel industry's influence within education has been insidious yet undeniable. In many nations, especially those with weak corporate regulations, the industry has been able to set the agenda on science education curricula, influencing not just what students learn about urgent topics like climate change but also the function of education in society, in general<sup>16</sup>. In what has been termed as "petro-pedagogy," the industry has exerted its influence in the education sector by employing teaching techniques and resources that reproduce fossil fuel industry narratives, cementing their legitimacy in the public consciousness<sup>17</sup>.

This type of pedagogical influence is not just confined to the anti-science and climate denialist propaganda of fossil fuel companies. It also extends into the reinforcement of neoliberal attitudes towards education. The introduction of a STEM (Science, Technology, Engineering and Mathematics) orientation in science education, for instance, has meant the addition in the curriculum of engineering and high-technology courses that have been specifically tailored to the labour requirements of predominant industries<sup>18</sup>. In the case of the fossil fuel industry, STEM programs can serve as a "pipeline" between educational institutions and fossil fuel corporations<sup>19</sup>. While preparing students for the world of work is, indeed, a vital function of education, STEM education rests on the undercurrent of "human capital theory," in which state education systems are organised solely for the purpose of producing commodified workers for the supposed free market<sup>20</sup>. However, given the highly speculative nature of labour markets, only 25 percent of STEM graduates actually go on to find STEM jobs<sup>21</sup>, lending credence to allegations of STEM education merely producing a bubble of human capital — an oversupply of graduates amidst a dearth of STEM sector jobs<sup>22</sup>.

As such, education is also a site for the fossil fuel industry to consolidate its hegemonic power — a vital component to the sector's regime of obstruction which includes corporate control of the energy industry, political interference and pedagogical manipulation<sup>23</sup>. Petro-pedagogy can contribute to the fossil fuel industry's ability to impede progress towards climate action and a just transition by shaping students' opinions of the sector.

### Petro-pedagogy in action

In the US and UK, where some of the largest private oil companies are based, Exxon Mobil and British Petroleum (BP) have been known to spread pro-petroleum and anti-science propaganda in primary and secondary education. As recently as 2016 in the US, for example, the Oklahoma Energy Resources Board (OERB) produced a children's book titled "Petro Pete's Big Bad Dream," which was distributed among elementary school children<sup>24</sup>. In the story, a school-age boy finds himself in a bizarre dream, where oil had been scrubbed off the face of the earth. Petro Pete begins to despair as he realizes that a "world without oil" would mean his football and favorite ice cream would be extinct, as these are products that have been in one or way another developed through petroleum. When the boy awakes from his dream, he is relieved to find that the world is "normal" and still filled with his favorite petroleum-derived objects. "All of my petroleum by-products are back!" he even exclaims<sup>25</sup>. The OERB distributed the storybook to school-age children as part of an afterschool program, but evidently it was intended to indoctrinate students into the belief that fossil fuels are indispensable in a modern, comfortable society — a patently false and climate denialist claim<sup>26</sup>.

In the UK, BP began its work in education through the creation of the BP Educational Services in the 1970s<sup>27</sup>. Initially conceived as a recruitment tool, BP's educational program was soon expanded to promote free market ideas in schools<sup>28</sup>. Among its first works was a children's book titled "Children and Oil," which much like the OERB's Petro Pete, aimed to instill a profound notion of oil dependency among students and teachers<sup>29</sup>. BP's educational programme would go on to produce countless propaganda materials, including a secondary curriculum unit called "BP in Business" which deliberately told students that "BP has a big responsibility...to ensure security of [energy] supply...[and] make sure it is always able to provide enough oil and gas for its customers...shaped by legal conditions to which it must adhere"<sup>30</sup>. BP's influence in STEM education policy has also extended into the development of continuing professional development programs (CPD) for teachers<sup>31</sup>. In 2008, the Wellcome Trust, the country's largest charitable institution, created Project Enthuse<sup>32</sup>, a funding partnership between the government, philanthropic institutions and businesses that granted an initial investment of £30 million for training programmes in science teaching that was "underpinned by industry experience"<sup>33</sup>. BP's UK Head of Community Development is part of the governing board of STEM Learning as well as Project Enthuse, virtually ensuring that the company had direct influence on the country's STEM education programme. As of 2019, BP's Educational Services features hundreds of free online teaching resources aimed at students aged 4 to 19, with subjects ranging from science, geography, business, design and technology<sup>34</sup>.

In Australia, the oil, gas and mining industries have peddled anti-science and climate disinformation in schools and universities with moderate success<sup>35</sup>. In 2021, for instance, during the review of the science curriculum, at least five organizations with ties to the Australian fossil fuel industry raised objections regarding the expanded materials on climate change<sup>36</sup>. However, owing to the country's stringent regulations on lobbying groups, some fossil fuel companies have chosen modes of education influencing that circumvented government safeguards, such as distributing lesson plans, offering workshops, conferences and class materials to teachers<sup>37</sup>. These materials include information on climate change that muddles the role of fossil fuels in climate change as "up for debate"<sup>38</sup>. For the Australian fossil fuel sector, schools and universities are a battleground for negotiating their social license to operate, amidst dwindling enrolment numbers in courses associated with fossil fuels<sup>39</sup>.

In Canada, where "petro-nationalism" has culminated into the absolute protection of the fossil fuel and extractivist industries as a public good and the demonization of their critics as "anti-Canadian,"<sup>40</sup> petro-pedagogy is succeeding in steering educators into an insular view of climate action. For example, the SEEDS organisation, which was originally founded to address industry panic caused by the OPEC oil shocks in the 90s, has been revived to run a Green Schools programme that encourages individual actions such as recycling and conservation projects by students and teachers as a way to promote individual actions in solving the climate crisis<sup>41</sup>. Here, the fossil fuel industry's classic tactic of insulating itself from discussions of its responsibility to the climate crisis by promoting individual consumption as the cause of and solution to the crisis, is markedly being promoted in Canadian schools, especially in provinces that are historically enmeshed with the fossil fuel industry<sup>42</sup>. In Saskatchewan, for instance, organisations with links to fossil fuel corporations are sponsoring educators on "educational tours" to fracking sites to show the economic benefits of this industry as well as the supposed self-regulatory practices being practiced by these corporations<sup>43</sup>. Subsequently, this can result in the valorisation and misrepresentation of fossil fuels as integral to modern life and prosperity. Such sentiments can lead many educators to oversimplify the complexities of historical accountability and the disproportionate impacts of climate change, and instead promote an atomised approach to climate solutions by focusing on individualistic consumption responses — a veritable signal that environmental education has been co-opted by neoliberalism<sup>44</sup>.

### Fossil fuel financing in academic research

In higher education, fossil fuel corporations have exerted influence in even more covert ways. For instance, between 2010 and 2020, universities and colleges in the US received \$700 million in research funding from six major fossil fuel companies<sup>45</sup>. Harvard University alone received at least \$20 million<sup>46</sup>. Most of the funding was funneled into climate research, where agendas have shifted to benefit the fossil fuel industry as well as steer policy recommendations into those endorsed by the sector<sup>47</sup>. These include the promotion of biofuels, rebranding "natural gas" as a bridge fuel and legitimising carbon capture storage technologies, even as scientists and climate activists have warned that these unproven technologies only prolong fossil fuel dependence and obfuscate the culpability of the industry as benevolent and socially responsible actors<sup>49</sup> despite only donating a trivial amount from their massive profits.

As voiced by El union representatives from higher education themselves, the increasing difficulty of securing research funding in academia means that outrightly rejecting funding from fossil fuel companies is a contentious issue. It is imperative, therefore, for education unions to lead the conversation about a just transition in academic research: how can these fields of study transfer their experience and skills in knowledge production into research

areas related to sustainability? What kinds of institutional support do they need? What does a just transition plan in these sectors look like? There is no singular clear-cut answer to this dilemma. Instead, it is important to uphold the democratic process in unions to arrive at a comprehensive and equitable response to these inevitable questions in higher education.

### TOWARDS AN EDUCATION SECTOR COMMITTED TO CLIMATE ACTION

The above examples of fossil fuel interference are in no way exhaustive, as there are many other examples in other countries. Specifically, owing to a lack of academic studies exploring petro-pedagogy in fossil fuel-producing and high-emitting nations in the Global South, the examples cited in this guide are all from wealthy countries from the Northern hemisphere. However, growing concerns over the rise of climate nationalism and eco-fascism<sup>50</sup>, will likely court scrutiny into the influence that institutions such as the media and the education sector have in shaping public opinion and perceptions of policies aimed at curbing climate change. As has been demonstrated above, the education sector has been instrumentalised to reproduce fossil fuel narratives that feed into nationalistic and patriarchal attitudes in climate politics<sup>51</sup>. These nationalist attitudes — espoused even by moderate governments and not just those on the extreme ends of the political spectrum —have been proven to be a stumbling block in advancing multilateral cooperation, a vital component in climate action<sup>52</sup>.

Moreover, these examples are meant to illustrate the different ways in which fossil fuel companies use the education sector to spread propaganda and entrench their legitimacy. As such, this type of corporate meddling can seriously derail efforts to push for quality climate education for all. It can also contribute to a political climate that normalises privatization among students and their communities. Hence, it is important for education unionists to be critical of corporate sponsorships, donations and funding seeping into their respective institutions. In line with their commitment to curtail the commercialisation of education, education unionists must also resist the incursion of the fossil fuel industry into education, both financially and epistemically, through a strategic fossil fuel divestment.

# The education sector and the fossil fuel divestment movement

The education sector has always been at the forefront of the fossil fuel divestment movement. Mainly emanating from student groups in higher education, demands to sever the financial links of colleges and universities

with the fossil fuel industry began when student groups in the US called for six universities to divest their endowments from coal in 2011<sup>53</sup>. These were some of the first articulations of fossil fuel divestment<sup>54</sup>. A fundamentally political strategy, divestment not only aims to constrain the fossil fuel industry's capacity to generate profits by restraining capital flows into the sector<sup>55</sup>, it also aims to send a powerful signal that global finance must be redirected into sustainable businesses and industries to accelerate the low-carbon transformation of the global economy. As a primary sector devoted to the formation of citizens with critical thinking skills, a sense of civic duty and social responsibility, the education sector, especially unionists, are well positioned to advance this political task.

# Effects of divestment on investment portfolios: Will it make a difference?

The worldwide value of pension funds has grown tremendously over the years. In 2021, global pension fund assets exceeded \$35 trillion, even as economies ground to a halt because of the COVID-19 pandemic<sup>56</sup>. High-income countries, particularly, hold \$34.2 trillion of these assets, with an elite subset owning a substantial share. In the US, for example, the top 1% of the population controls 39% of all its financial assets, while the bottom 50% owns a mere 4%<sup>57</sup>. This has myriad implications on the financial impacts of fossil fuel divestment.

One of the most common arguments for and against fossil fuel divestment is the risk of stranded assets. Stranded assets are invested capital whose projected profits are thwarted by disruptive technological advances or new public policies<sup>58</sup>. Fossil fuel divestment advocates have argued that the Paris Agreement<sup>59</sup> has encouraged more governments to pass laws and regulations promoting renewable energy, such that when combined with the defraying costs of renewable energy technologies, this new regime will render fossil fuel investments unviable in the foreseeable future. For instance, if net zero initiatives<sup>60</sup> are implemented successfully, half of global fossil fuel assets could be worthless by 2036<sup>61</sup>. The logical action for investors to these risks, it is assumed, is to withdraw assets from fossil fuel companies and reinvest in sustainable, climate policy-aligned sectors such as renewable energy.

Pro-fossil fuel entities, however, have cited the same risk of stranded assets in arguing against fossil fuel divestment and even calling for the expansion of investments in the sector. They contend that stranded assets resulting from such a move could lead to financial ruin for many governments and trigger social unrest<sup>62</sup>. They cite pension funds, particularly, to likely underperform or fail to produce promised pay-outs should the fossil fuel industry collapse.

A recent study, however, has debunked this central argument. According to Semieniuk et. al.<sup>63</sup>, governments must not be dissuaded from pursuing bold and decisive climate action due to the risk of stranded assets because fossil fuel investments are concentrated in the hands of the wealthy. This implies that financial losses resulting from fossil fuel divestment will be shouldered mostly by a minority affluent population. For context, in a scenario of \$350

billion in stranded assets in the US, the brunt of losses will be borne by the top 1%, whose wealth might only contract insubstantially<sup>64</sup>. In Europe, where losses are estimated to be \$200 billion, wealth losses are comparable<sup>65</sup>. Furthermore, even in an extreme asset-stranding projection resulting from the full enforcement of policies aligned with the Paris Agreement, this affluent subset would only lose 2% of their accumulated wealth<sup>66</sup>. Hence, the brunt of the effects of a concerted fossil fuel divestment will not hit pension funds, as previously argued.

Inversely, this also suggests that only the wealthiest class, who own a substantial share of fossil fuel assets globally, have been gaining from the fossil fuel industry's recent profit resurgence. This means that the fossil fuel industry's vaunted capacity for economic growth that could trickle down to the majority is a myth.

In the Global South, however, less wealthy and oil-producing nations will likely experience more severe macroeconomic impacts<sup>67</sup>, suggesting that just transition plans will be more challenging in these countries. Owing to the material realities of economic dependence on fossil fuels, coal-producing nations such as India and Indonesia will face multiple challenges in allaying concerns regarding energy security and economic stability<sup>68</sup>. However, several factors such as the increasing competitiveness of renewable energy, the duty to improve the lives of coal-affected communities, the growing risk of stranded assets in the fossil fuel industry and the urgency of the climate crisis must prompt governments in the fossil fuel-dependent Global South nations to pursue just transition programmes<sup>69</sup>. In this regard, the coming years will be crucial for the global effort to shift to a low-carbon economy as the Just Transition Energy Partnerships, a major outcome of the climate negotiations in Glasgow, Scotland in 2021, begin to be implemented<sup>70</sup>.

These findings imply that divestment can have genuine and massive potential in ending fossil fuel dependence, particularly if Global North actors such as governments, industry leaders and private pension fund holders, lead the way and enact climate justice at this level. It also means that workers, and especially trade unions, should take the fossil fuel divestment movement seriously and incorporate strategies to lead their unions into standing firmly for a fossil fuel phaseout and a just transition.

### FOSSIL FUEL DIVESTMENT STRATEGIES: BY UNIONS, FOR UNIONS

Through two strategic meetings conducted in May 2023, education union representatives from the Pacific, North America, Europe, and Africa discussed their union-led initiatives on climate action, movement building and fossil fuel divestment. These meetings sought not only to collate best practices and union-generated strategies for advancing fossil fuel divestment but also to gain valuable insight into the concerns and anxieties of unions regarding an energy transition. Additional research and analysis were provided by the research author. Thus, these strategies are offered with the intention of addressing concerns, allaying anxieties, and debunking misinformation regarding the urgent task of transitioning away from a fossil fuel-based economy. They are not intended to be prescriptive, but rather to be taken as a primary step in raising important conversations regarding fossil fuel dependence within unions and the broader public.

### Investigate where union, pension and other funds are being invested.

 Raising awareness of where funds are invested is the first step in any divestment campaign. Unions can generate awareness among members by initiating a thorough accounting of their investment portfolios, taking care to investigate if and how much of their funds are currently invested in fossil fuel industries. These findings should be disseminated to members as widely as possible.

In 2019, the Education Institute of Scotland (EIS) began its own process of fossil fuel divestment, according to John McLeod, accountant at the EIS. The EIS, he said, did a proper scoping of the institute's investment portfolio and carefully studied the financial and tax implications of a fossil fuel divestment, as part of due diligence and to minimise negative impacts to the union's fund. He said that in a fossil fuel divestment campaign, raising awareness is the first step as many union members might not even be aware of where union funds are being invested. A proper scoping of investments could also be the starting point of discussions among members on their questions regarding potential loss of profits and other financial concerns.

# Present alternative and sustainable (re)investment opportunities.

 Providing alternative and sustainable re-investment opportunities should be part of any fossil fuel divestment proposal. Unions can consult with members as well as credible fund managers on possible options. Additionally, presenting the potential economic and health benefits from an energy transition via fossil fuel divestment such as jobs generation, lessening pollution and energy security demonstrates long term benefits for members and their communities.

Creating an alternative investment strategy plan is important, according to Rob McCafferty, climate justice representative and national executive of the New Zealand Post Primary Teachers' Association (NZPPTA), as this can allay fears of funds not earning income in the interim. It is worth mentioning that divesting from fossil fuels should not mean disinvesting from the energy sector in general. On the contrary, this should mean redirecting investments into renewable energy systems and other sustainable sectors that align with the values of the union, McCafferty said.

Likewise, in Fiji, Rosalia Fatiaki, General Secretary of the Association of the University of South Pacific Staff (AUSPS) said that a lack of awareness on available renewable energy systems is hindering campaigns on fossil fuel divestment, and a just transition, in general. This can be part of a union's awareness raising efforts in advancing a just transition in the education sector, she said. Examining the energy policy of your country, especially on energy transition, can shed a light on the structural barriers hindering a renewable energy transition, she added.

#### Utilise the union's democratic processes.

 The democratic process is key in advancing divestment dialogue. During a congress or general meeting, unionists can propose a resolution on fossil fuel divestment to formalise commitments and present a just transition action plan. Democratic consultations with members should also be conducted to address concerns and generate recommendations.

In July 2022, during its 87<sup>th</sup> convention, the American Federation of Teachers (AFT) passed a resolution on fossil fuel divestment and renewable energy reinvestment<sup>71</sup>. According to David Hughes, a professor at Rutgers University and a member of the AFT, the resolution was passed with the intention of building power and appealing to educators' sense of responsibility to tackle the climate crisis. "Teachers have a triple responsibility in the climate crisis. First, we teach climate change, then we are stewards of the future through our students. More than any other profession, we have a high stake in the outcomes of the next generation, because this is where we see the fruits of our labor. And our students demand an alliance with educators [on climate action]," he added.

The risk that every unethical company and cause could turn into a boycott proposal among union members was also raised during the strategic meetings. It is important, then, to turn to the democratic process in identifying which causes deserve to be elevated to a boycott or divestment campaign. Moreover, boycotts or divestment campaigns should always be executed in accordance with the demands of the most affected communities. For instance, affected Starbucks workers in several US states have called for the boycott of their local stores in response to the conglomerate's union-busting tactics<sup>72</sup>. In the case of the climate emergency, frontline communities, the scientific community, and the climate justice movement have been vocal in calling for the end of fossil fuel domination as a response to the climate crisis. This should be taken

as an explicit endorsement of fossil fuel divestment as disinvesting from the industry will be necessary for its demise. It is also important to note that fossil fuel divestment should be viewed as part of a broader project to reconfigure the world's uneven financial system rather than a mere signal of ethical consumption.

#### Empower a "just transition" champion within the union.

• Survey the membership for an expert who can lead conversations regarding a fossil fuel divestment and its relevance to a just transition for the education sector. Empower these members to lead just transition related campaigns.

Based on experience, unionists tend to trust fellow members who have shown dedication, credibility and expertise on climate change, according to McCafferty. This was valuable in convincing members to support efforts within the NZPPTA to adopt a carbon neutral policy that included fossil fuel divestment, he added.

# Build your union's fossil fuel divestment talking points and arguments.

 Build a set of fact-based and data-driven talking points on fossil fuel divestment that is context appropriate to your union, target community and country. Provide trainings and workshops to members as part of your campaign.

For Shayne Curtin, chair of the climate action committee of the Teachers' Union of Ireland (TUI), using data to support the case for fossil fuel divestment or any kind of climate action is vital. It is important to develop a set of talking points that is not only factbased but also context specific as this shows a comprehensive understanding of national and local issues connected to the climate crisis.

However, there are a few general arguments that can be used by most, if not all, unions to debunk misinformation on fossil fuel dependence and the divestment movement. Below are a few counterarguments to common statements regarding fossil fuel divestment.

# "Fossil fuel divestment will disrupt modern life and result in more hardships."

• Fossil fuel divestment is not arguing for the immediate end of all fossil fuel consumption. Rather, it is contending that disinvesting from fossil fuel corporations will signal the urgency of a just transition into a low-carbon economy. Diverting finances away from industries whose

business model is built on planetary destruction will be crucial in effectively curbing the greenhouse gas emissions required to stave off runaway climate change.

#### "Renewable energy is too expensive. It cannot be deployed at the scale needed to power modern societies."

It is true that initial investments for solar and wind power plant generation are expensive<sup>73</sup>. However, this is true for any kind of initial investment in power generation, regardless of the type of energy source, as fixed costs such as capital and land are always expensive<sup>74</sup>. Besides, in the case of many privately-owned fossil fuel-based power plants, government subsidies were infused to defray investment costs which has had the effect of making these power sources appear to be affordable. On the other hand, the maintenance and operations costs for renewable energy electricity are cheaper than fossil fuels<sup>75</sup>. Renewable energy is also becoming cheaper, with electricity generation costs falling over 80% since 2010, and lithium-ion batteries which are crucial for energy storage, now 97% cheaper than they were 32 years ago<sup>76</sup>. Deploying renewable energy at scale will require massive political effort, but it is not physically or logistically impossible.

#### "Most fossil fuel companies are state-owned and are not publicly traded so divestment is pointless. The financial and emissions impacts are miniscule."

 While this might be true in certain countries, divestment can still have substantial financial impact in markets that are dominated by fossil fuels. According to David Hughes of the AFT, for instance, public sector pensions systems in the US can have significant impact on fossil fuel assets as these amount to USD 5.6 trillion<sup>77</sup>. However, it is true that divestment today will not remove or stop emissions immediately. But the broader goal of the movement is to abrogate the legitimacy of fossil fuel corporations, hindering its expansion and accelerating its eventual demise.

# "Divesting pension funds from fossil fuel corporations will doom them to failure."

 Pension funds will only be marginally affected by divestment and governments can compensate for the resulting minor financial losses with relative ease. Moreover, the risk of stranding assets in fossil fuels is becoming a more prominent fiduciary concern as the transformation of energy systems is already well under way<sup>78</sup>. If climate policy goals such as limiting global temperature rise to the critical 1.5°C threshold are to be achieved, large reserves of fossil fuels will have to be left in the ground, halting the values in these assets<sup>79</sup>. Divesting pension funds from fossil fuel corporations and planning for the inevitable shift to renewable energies is the fiscally responsible thing to do.

# Highlight the granular connections between a fossil fuel divestment campaign and longstanding campaigns against privatization in education.

 To build discursive cohesion within unions, fossil fuel divestment should also be connected to longstanding campaigns against privatization.
Forging the granular connections between a just transition, fossil fuel divestment and the fight for more resilient public education systems can only generate higher engagement among members and build synergies on existing education union campaigns.

#### Know and build relationships with allies in the community.

 In campaigning for fossil fuel divestment among publicly held funds such as pension and Superannuation funds, allies will be crucial. As public funds are usually governed by trustees, consultants and fund managers, ordinary workers and unions have limited power over investment decisions. However, concerted efforts among trade unions, climate justice groups, youth groups and allied politicians can have the potential to advance fossil fuel divestment in legislation, as in the case of the New Zealand Superannuation fund which has committed to fossil fuel divestment from fossil fuels by 2050<sup>80</sup>. Good faith implementation of these pronouncements, however, should be monitored by concerned citizens and social movements.

#### Fortify international solidarity.

 Building international solidarity in pushing for fossil fuel divestment will also be key. Strengthening the movement's capacity for demanding governments, education institutions and industries to forge international cooperation is critical in addressing a transnational problem like climate change. The trade union movement, for instance, has been a key player among social movements active in international climate negotiations, where multilateral cooperation regarding climate finance, net zero policies and just transition programmes are being discussed.

### Sharpen your union's social dialogue tactics regarding climate action.

• As a social movement, unions have a unique tool in their arsenal in pushing for climate action: social dialogue. Hence, unions are well placed to access government and education officials and demand climate action at varying levels.

Rob McCafferty of the NZPPTA believes that unions should use their access to government officials and industry leaders through social dialogue to advance negotiations on fossil fuel divestment. Unions can also use this position to advocate for bolder climate action, as in the case of the Teachers' Union of Ireland. According to Shayne Curtin of TUI, the Irish government had recently announced that every school rooftop will be installed with solar panels within the next year<sup>81</sup>. However, unionists agreed that the policy could be improved. "In our congress in April, as a union, we were able to agree and say that 'that's not enough.' We saw that we needed to push the envelope in terms of forging a connection with the community. [We were able to ask] 'Where is the connection there to the community and community power schemes?' In our case, schools are largely closed in July and August, when sunshine is strongest...it would be a missed opportunity to not connect this project with the communities that we serve," he said. As a result, TUI passed a resolution during its congress that promotes community connection in the government's solarization project. Curtin believes that unions should be critical of government's climate policies, always thinking of ways to improve it and make it just and equitable.

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# CONCLUSION

In the climate emergency era, a just transition into a low-carbon economy is the world's only hope of averting planetary destruction and the further suffering of the most vulnerable. Among social movements, including education unions, the political task is to harness collective action in pursuing justice and equity in climate action. This must mean mobilising to demand decisive policies and responses from governments as well as holding the fossil fuel industry accountable. Likewise, abrogating the fossil fuel industry's social license to operate will be essential to this end. Hence, a fossil fuel divestment campaign can be a viewed as a tool of resistance against fossil corporate power.

As has been demonstrated, the education sector is an important domain through which the fossil fuel industry has consolidated its hegemonic power. This can be seen in the myriad ways that petro-pedagogy has infiltrated education, influencing not just what students learn in school but also the way that science education is perceived in general. But it is also vital to recognise that education is also a locus where social change can be sparked. The education sector, with students leading the charge, has been at the forefront of the fossil fuel divestment movement. Divestment strategies have empowered student movements, with many activists seeing it as a gateway for more engagement in climate justice issues by affording them a platform for direct action<sup>82</sup>. Thus, one of the most important effects of the fossil fuel divestment is its impact on public discourse as various campaigns have raised the profile of the issue in the public consciousness.

Given the urgencies of climate change, educators and their unions are enjoined to actively reject the influence of the fossil fuel industry in education and link this to their longstanding struggles against neoliberal policies in the sector. As El's affiliates have shown, educators are ready to take on this challenge as the storied experiences of education unions are also an important basis through which fossil fuel divestment campaigns can be launched. Through collective action among social movement actors, with education unions making their presence heard, a just transition into a lowcarbon world is not only possible, it is also immanent.

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