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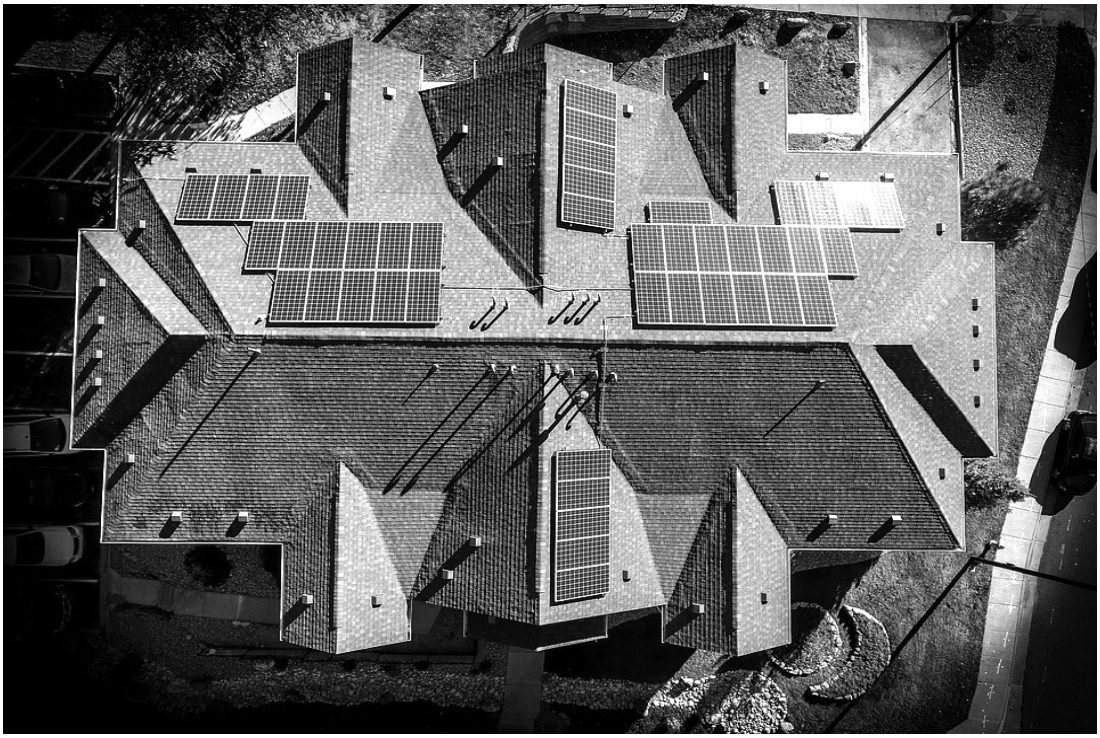
All that glitters is not green: debates surrounding energy transition



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With radical proclamations a thing of the past, the global energy transition towards renewable sources is gaining traction with and becoming a priority for the market´s heavy weights: the largest European bank, HSBC, and the World Bank are to cut fossil fuel financing; companies such as Total and Shell will partly diversify and electrify; the giant Norwegian sovereign wealth fund is to sell off its investments in hydrocarbons and coal; in 2017 there was more investment in solar than in fossil fuels and nuclear energy. The objective of all these measures is to achieve a "carbon neutral" economy by 2050, as defined in the Paris Agreement. Latin America is playing a prominent part in these efforts, as its renewable energy supply is double that of the global average. Almost half of Uruguay's energy supply is wind and solar, another important recent achievement.

Thus it would seem that our world is entering a "green" phase, with our region taking the lead. But is this really the case? Are renewables really taking over the market from fossil fuels? And if they are, at whose cost and whose gain? And what would it mean for the left, if sustainable capitalism were achieved through market mechanisms? Would that mean the only variable in the energy debate is climate change? Let us examine, therefore, why and for what the advancement of renewables is a strategic matter from a left-wing viewpoint, so that we can evaluate accurately both the transition towards a different energy matrix and the consequent impacts and risks. Let us look at why analyzing this change of scenario will improve the development of transition strategies and positions, many of which are already being formulated. We must simply remain vigilant.

The contributors to this edition of Punto de Debate are Argentine researcher Bruno Fornillo and Nadja Charaby, global affairs advisor at the Rosa Luxemburg Foundation. Focusing on the Southern Cone and Germany respectively, they detail what is happening in these contrasting regions, where there are a number of noteworthy overlaps.

Where is the energy transition in Argentina, Chile and Uruguay heading?

BY BRUNO FORNILLO*

A major transformation of the Southern Cone's predominantly fossil fuel-based energy pattern is underway. The "Uruguayan success story" has gained international recognition: positioned among the top four countries with the highest percentage of wind energy in the world, its electricity grid is fueled almost exclusively by renewable energy. Chile, influenced by the neoliberal tradition and by its desire to view itself as a "modern" country, saw Sebastián Piñera take office in March 2018 and immediately announce that the country would have a 100% decarbonized electricity grid by 2040. In Argentina, a program incorporating wind and solar energy has had relative success for the first time, and the goal was established for at least 20% of the nation´s electricity to come from alternative energy sources by 2025. With a green-friendly aura of clean energy and a commitment to combating climate change, these Southern Cone countries seem to be changing course. However, in spite of clear indications that the "black gold" era is coming to an end, in all three countries energy consumption has continued to grow and the burning of hydrocarbons still predominates, accounting for over 70% of the total supply in Chile and 80% in Argentina. This begs the question: Are we really heading towards transition? And if so, is it a comprehensive one?

THE TWILIGHT OF FOSSIL FUELS

Historically, the drive towards alternative sources in the Southern Cone has been linked to the current depletion of conventional oil and gas reserves, the neoliberal pillaging of resources in Argentina and the breakdown of the regional energy market. In fact, in 2004 Argentina began to experience domestic energy supply shortages, had to import energy - which over time completely upset its balance of trade - and stopped gas shipments to both neighboring countries, despite commitments made in the 1990s. As a consequence, Chile and Uruguay suddenly had to start importing fuel at high prices in order to meet domestic demand. It didn't take long for both countries to realize that the potential use of the energy circulating in their biosphere contrasted with the almost total absence of fossil fuel reserves. Although the current energy transition in all three countries is linked to global trends, it especially falls within the framework of the supremacy of market-based dynamics and the relationship of the energy sector with the extractive pattern that predominates in South American "growth" models.

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DEVELOPMENT PROFILE: DECARBONIZATION, PROPERTY AND TECHNOLOGY

To critically assess the energy transition process in the Southern Cone it is crucial to ask to what extent policies designed to reduce energy consumption have been implemented, 'energy justice' promoted, or technological innovations and synergies established in local areas.

In Chile, attention is often drawn to the speed with which wind, solar and mini hydro power was established. While in 2012 non-conventional renewable energy sources generated 0.95 gigawatts (GW), five years later that number climbed to 4.8 GW. These data are significant, but wider issues need to be considered ¬- although wind generation increased by 422% in the last ten years, it produces only 2,109 tera calories (Tc). In contrast, coal increased by less, 150%, but generated an astonishing 86,113 Tc - forty times more. In short, solar and wind power currently account for less than 1.5% of Chile's primary energy sources.

At the same time, if we look at the whole picture, the fact is that between 2006 and 2016, consumption increased steadily, showing an 18% increase by the end of the period. This growth was based on coal - essentially imported from Colombia -, which increased from 6 to 26% and became the main factor in the current scenario. Consequently, ten years after Argentina made that cut, greenhouse gas emissions increased by 30%. In this regard, Chile's expectations with respect to the virtues of its transition must be qualified: there has been no mass introduction of alternative sources, no consequent decarbonization, no combating of climate change and no decrease in consumption - in fact, quite the opposite. Furthermore, the construction of small and medium-sized hydropower plants in the south of the country brought with it serious socio-environmental consequences, such as the flooding of Mapuche lands, which sparked fierce resistance from indigenous peoples.

On the other hand, Argentina was a pioneer of a policy of self-sufficiency and public control when it created the company Yacimientos Petrolíferos Fiscales (YPF) in the 1920s. However, in the 1990s YPF was privatized and the sector as a whole deregulated; a similar situation to what happened in the electricity sector. A wave of privatization was experienced that Chile had undergone years before under Augusto Pinochet. Government policies on renewable energy continue in this vein, in the context of a clear predominance of the private sector.

In terms of investment, the relatively successful alternative energy bidding rounds launched by Argentina in 2016 and 2017 aimed to open up "future energy revenue" to capital and to achieving low generation prices. The winners were a combination of local and international companies, financed in international markets or in China, which are guaranteed a return on investment because the payments are ultimately backed by the World Bank. If Argentina's target is achieved by 2025 (20% alternative and renewable energy use), only 2.8% of the total grid will be clean, because the real stakes are on the exploitation of Vaca Muerta, the world´s third-largest non-conventional gas reservoir. Other factors that threaten the target include the fact that the same amount of thermal energy as renewable energy has been granted contracts, while fossil fuel subsidies in 2017 amounted to almost 9.5 billion dollars (5.6% of the national budget), accounting for 1.74 of the GDP.

Finally, Uruguay is no stranger to this general trend of the increasing importance of private capital in energy generation, with the introduction of alternative energy resulting in privatization in a country that prided itself on not having sold its public companies: only a small number of the newly installed wind turbines - 5.5% of capacity - are in the hands of the state-owned National Administration of Power Plants and Power Transmissions (UTE). It is because of this green capital income that the powerful local union - UATE - has strongly resisted the process, criticizing the more expensive electricity bills, which transfer the cost of renewable energy production under private control to the population.

At the same time, the Southern Cone as a whole has yet to get behind a strategy to establish the base industry of the new and emerging energy paradigm. The use of national industry or policies that foment "technological equalization" is almost completely absent in Argentina (approximately 10%) and non-existent in Chile, while in Uruguay efforts were directed towards services and civil infrastructure rather than to technological packages made in or created by China, the United States, Spain, or others. In the region, only Brazil tried to draw a national technological border by demanding a qualitative and increasing share of complex parts, something that the government of Michel Temer cast aside.

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ABYSS OF FOSSIL FUELS, SOCIETY AND TRANSITION

Ultimately, the power supply was neither decentralized nor de-commodified, and nor was a strategy for developing local technology designed. So let's ask ourselves: For what and for whom do we want renewable energy?

Let's go back to the example of Uruguay, which is perhaps the most advanced, in order to rethink this process. The first point to note is that the country increased its consumption significantly: an item that in 2006 required 2,400 ktoe (thousands of tonnes of oil equivalent), ten years later needed almost twice as much energy: 4,600 ktoe. What happened in between? In essence, industrial growth of a very particular kind. In that first year, the industry´s consumption accounted for 23%; a decade later, 42%. Within this, the consumption of pulp and paper went from zero to 1,300 ktoe, accounting for almost a third of Uruguay's entire energy requirements.

Where did these copious amounts of energy come from? In 2006, biomass - organic matter originating from photosynthesis – generated less than 50 ktoe, but ten years later it generated 1,200 ktoe. In a nutshell, Uruguay now uses more biomass-based energy than oil, but one third of the renewable energy introduced goes directly to the pulp and paper industry (which in turn sells the surplus energy to the system, making it a business unit in itself).

A similar picture could be painted for Argentina or Chile. In the latter, for example, a large part of the energy produced is used to sustain the maelstrom of the extractive industries: the transport and mining sectors account for 71% of consumption. Such phenomena and data show the intrinsic and crucial link between energy trends and the accumulation of capital in the Southern Cone, where low levels of industrialization or pure "export of nature" prevails.

Colectivx Fotográfico Veinticuatro/Tres. Antofagasta, Chile

In addition to this structural issue, socio-territorial conflicts come into play, conflicts that are continuously on the rise, especially in light of the scope of the energy and mining model. At the same time, energy poverty is increasing under the current model of renewable energy expansion. Virtually the entire Uruguayan population - who pay the most expensive rates in South America - is poor in this regard since more than 10% of its income is allocated to it. The problem of high rates is another one of the central points of debate in Argentina, where the recent increase in rates averaged 900%, and provoked intense protests. Of course, this onslaught is being analyzed by the social and union movements; meanwhile alternatives are being sought: for example, in Argentina about 400 cooperatives are seeking to establish their own power generation. However, there is still a long way to go until energy becomes a topic of organic public and cultural debate in civil society, where how to introduce distributed power generation on a large scale is discussed - the three countries featured in this article have laws to make this possible, but they are not yet in force. There is also still a long way to go until public policies change, and until energy is conceived of not only as a universal right but also as a political weapon for radical democratization.

In short, if the energy transition has really begun, the key questions to address are where it is heading, how it will happen, who stands to win and who to lose. A "comprehensive" approach, which is currently lacking, must be adopted. Thus it would seem we are faced with two potential and contrasting scenarios: on the one hand, the chasm between the increase in consumption and shortage of energy, conceived of as a commodity, could widen, and as a consequence "extreme energies" such as fracking could be resorted to, and an external technological neo-dependence could be created under a pattern of regional disintegration. On the other hand, as an alternative, the Southern Cone could head down the path towards renewable and sustainable energies, heightening industrial density and local technological frontiers on the premise of democratizing the system and creating local solutions with a regional vision; because, ultimately, energy is a human right and a pillar of the design of future autonomy.

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Lost in transition: EU and Germany fail on new energy path

BY NADJA CHARABY**

The European Union (EU) will not reach its climate targets and Germany will remain a climate criminal: the energy transition is failing, including the most recent and widely celebrated Energiewende. Once upon a time, Energiewende gave us glimpses of hope for a fundamental change in the system, namely a democratization of the energy sector that would challenge neoliberal privatization hype. However, nowadays not only have we not seen an increase in the share of renewables, but political ignorance regarding the urgency to take imminent action for our planet prevails. This teaches us two things: firstly, that climate energy policies remain under the control of corporate lobbyists or even, as cynical as it might sound, under the influence of coal companies. Secondly, the market-based approach to developing the renewable energy sector that has been adopted over recent years has not resulted in any kind of profound transformation towards a more climate-friendly or 'socially just' energy and economic model. The same applies to the situation in the EU as a whole.

THE SITUATION IN THE EU: RENEWABLES, GAS AND PRIVATIZATION ON THE RISE

To reach its target of at least 40% cuts in carbon dioxide emissions for the year 2030 compared to 1990 levels, the EU recently set a more ambitious objective: to increase the share of renewable energy from 17% to 32%. This decision could be seen as a small success on the path towards more climate-friendly energy policies. However, an examination of the reality of climate action in Europe reveals a sad picture. According to a recent study by Climate Action Network Europe, all EU member states are failing to meet their pledges to reduce greenhouse gases as established in the Paris Agreement. Furthermore, the former poster child of climate action, Germany, is ranked only at number seven, according to the report.

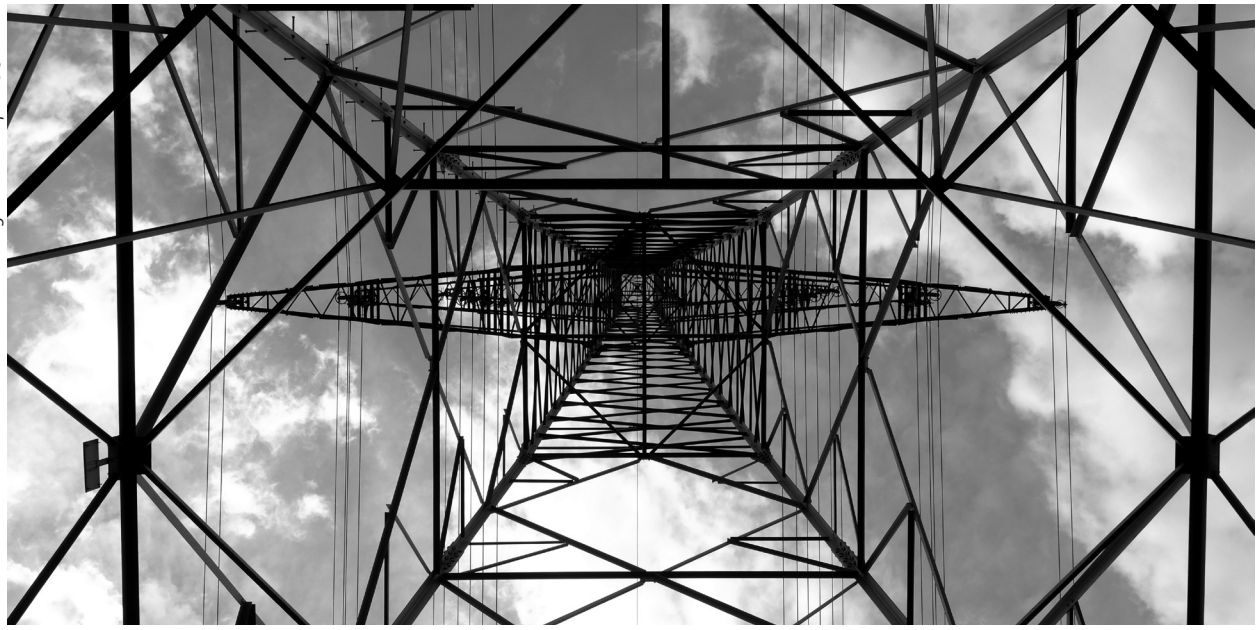
This critical situation is underpinned by two other significant issues. The first is the labeling of gas as "bridge fuel," promoting it as climate-friendly or a necessary partner for the development of renewables, despite the fact it has been proven to have a greater impact on the climate than coal, and despite the damage caused by pipelines to the environment and to nearby communities. To this end, reports show that the gas industry spent approximately 100 million euros in 2016 on lobbying decision makers in Brussels. The second issue is the EU's push for further neoliberal privatization of public services in general, including the renewable energy sector, as demonstrated by its recent austerity policies in, for example, Greece, Portugal or Spain. Recent developments in Spain, where the green energy sector has more or less been completely liberalized, show a run of international investment companies on Spanish wind and solar farms, from investment company KKR & Co. to Blackrock and German investors.

These trends show us the limitations of the transformative nature of renewables per se, as we will continue to detail. Furthermore, it is evident that the renewable energy sector is not immune to capitalist market-based approaches, having instead become a most welcome asset for investment sector stakeholders. Furthermore, to address energy transition as a whole, a rather complex analysis of European and German politics would be necessary. We would have to take a closer look at the spin for privatizing the energy sector, at the corrupt car industry, at the blindness or ignorance of the aviation and agricultural sector regarding reducing emissions, as well as the influence of fossil-fuel industries within Europe. This goes beyond the scope of this contribution. The main argument we want to analyze here is the failure of Energiewende as a result of its reliance on a market-driven energy transition and its sole focus on electricity production, neglecting to take other sectors into account.

ENERGY TRANSITION MADE IN GERMANY – WHAT STARTED OUT AS A SUCCESS MODEL

In order to grasp the initial success of Energiewende we must understand that the whole project was a result of social struggles that began back in the 1970s. Since then, environmentalists, especially anti-nuclear activists, together with progressive scientists, have fought for an alternative to the existing nuclear-based energy production. As early as 1991, an initial law was enforced that subsidized renewables with a special feed-in tariff. The following revisions of the Renewable Energy Act in the year 2000 managed to establish a foundation for the further development of the renewable energy sector, although the sole focus was electricity production. The 2009 version of the Act set the target of reaching 30% renewables in the German electricity mix and 14% in heat production by 2020. Since 2002 the share of renewables in the German energy mix has risen continuously. While Germany´s electricity needs remains, on average, 500 terawatt hours (TWh), wind power generated electricity has risen from 15.8 TWh in 2002 to over 80 TWh in 2017, and solar energy has risen from 0.16 TWh to more than 37 TWh in the same period.

But not only the technical numbers must be considered when evaluating Energiewende's success. If we want to discuss its positive aspects, it must first be emphasized that the decision to transform German's energy system was a political decision, not a market-based one. As a result of pressure from society and progressive political decision-making, the development of new technologies and their economic competitiveness led to this large-scale shift, not the other way around. Furthermore, this technological development brought with it a change in the ownership structure of electricity production sites. Due to the feed-in tariff system, as well as favorable loans, suddenly every homeowner could become an electricity producer by installing solar panels on their roof top. Since 2009 it has been possible to observe an in the establishment of energy cooperatives or community energy companies; local governments started to re-municipalize the energy supply and even the electricity grids that had been privatized throughout Germany following the neoliberal energy sector reforms of the EU in the 1990s and 2000s. By the end of 2016, for example, a study by the Leuphana (University of Lüneburg) counted more than 1,700 community energy companies in Germany. The overall conclusion drawn is that these companies and the energy cooperatives have been the driving force behind the development of renewables.



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RENEWABLES ARE NOT BEATING FOSSIL FUELS, NOR HAS THE OLIGOPOLY BEEN DISMANTLED

Despite the initial success of the renewable energy sector, fossil fuel energy production has not decreased accordingly: the share of lignite only sank from 140.5 TWh in 2002 to 134.9 TWh in 2016 and the share of hard coal fell by about a tenth, to approximately 100 TWh in Germany. And it is still an oligopoly of the four so-called energy giants (E.ON, RWE, EnBW and Vattenfall) that dominate energy and electricity production and supply in Germany. Although their market share is slowly decreasing, they are the ones who are mainly responsible for nuclear and coal-fired energy production in Germany. In essence, this means that Germany is going to miss its climate protection targets since it not addressing the core problem.

As stated above, the reasons for this are manifold. On the one hand it has become obvious that Energiewende did not dare challenge the market-obsessed paradigm that dominates the energy sector, meaning that renewables are accepted as long as they can compete with the (neo)liberalized energy market. It was the consumer, then, specifically at the household level, who had to subsidize Energiewende through skyrocketing electricity bills. An average household in 2014 had to pay around 70% more for its electricity than in 1998 despite the continued decrease in the production costs of renewable energy. This absurd development is caused by a complex electricity price exchange, which has decoupled the reality of electricity generation prices from the prices paid by the small-scale end user. This development can be viewed even more cynically when we understand who actually profits from it: energy suppliers, who do not immediately transfer reduced prices to the end user; and large-scale consumers, such as the German car industry or chemical industry, who directly purchase the electricity from the exchange market at lower prices. Therefore, we can even go so far as to say that Energiewende has actually subsidized German pollution industries.

GREEN JOBS WERE AN EMPTY PROMISE AND A JUST TRANSITION IS NOT ON THE HORIZON

Furthermore, we are dealing with a one-way discourse as the decision to phase out coal in Germany is closely and comprehensibly linked to the question of jobs. The number of workers affected, who depend directly or indirectly on coal-fired electricity production varies from, depending on the source, between 21,000 and 70,000 people. The 'green jobs' argument, i.e. that the renewable sector would also create jobs, has failed to fulfil its promise so far. It has not only – due to the German solar industry's economic problems, for instance – failed to create enough jobs, but those that were created are rather precarious compared to those in the traditional energy sector.

We consider this to be another argument that proves the market cannot regulate everything, or even anything. However, the newly established coal commission is tasked with establishing a date for the German coal phase-out in addition to a just transition for the affected workers. Given that commission members from political parties and representatives of federal governments who have thus far neglected to accompany the energy transition with a fundamental structural transformation of the economy, and in light of the fact that representatives of the fossil fuel industry itself are negotiating this decision, we do not have much hope that a decision will be made that takes into consideration the global responsibility for ecological justice. What can be expected is, once again, a decision that places much higher value on jobs in Germany than on the lives of the people and communities who suffer the impacts of climate change directly, even if those in question are German.

CURTAILING THE SCOPE: FOSSILS FUELS AS 'BRIDGE TECHNOLOGIES,' AND THE ATTACK ON COMMUNITY ENERGY

Driven by high electricity prices and probably also influenced by the coal lobby, the German Renewable Energy Sources Act was revised in 2014 and 2016/17, with the effect of limiting the continued development of renewables. The critics' main argument was that the new targets for the development of renewables' share in the German electricity mix (capped expansion to a maximum of 45% in 2025 and a maximum of 55% in 2035) would not be sufficient to cover the electricity need upon completing the nuclear phase-out. Critics also feared that this decision would automatically lead to an increase in the share of climate-hostile coal-fired energy generation, branded as a 'bridge technology,' in order to substitute nuclear power. Additionally, the 2014 version of the Renewable Energy Sources Act strongly disfavors the development of community energy companies, thereby taking a direct shot at the heart of Energiewende's original success story. First of all, the Act introduced a new rule that also obliged small-scale producers, such as energy cooperatives, to directly market their electricity, which many producers feared to be too complicated for them administratively, since they were usually managed by honorary boards. Secondly, a bidding procedure was established for new renewable energy projects that favored large-scale producers and put too much bureaucratic burden on small-scale producers. Overall, the uncertainty caused by the capped renewable expansion plans, the direct marketing obligation and the new bidding procedure led to decreased investments by cooperatives. It became obvious that the German government was willing to abandon its own climate protection plans. Apart from some positive effects, for example, for community energy projects, the latest revision of the Renewable Energy Sources Act of 2017 was, essentially, unable to achieve a change of direction.

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ENERGY JUSTICE THROUGHOUT THE VALUE CHAIN: RENEWABLES ARE INCREASING GLOBAL MINING ACTIVITIES

When discussing energy transition as a potential savior in our climate or environmental dilemma, there is still one other elephant in the room: the resources used for producing the renewable technology. A recent study by Misereor has shown that the resources needed for wind mills and solar panels, such as bauxite, copper ore, iron ore or silica sand, are also leading to increased growth in the global mining sector. Most of these resources are extracted in countries with problematic human rights records or even in regions with ongoing wars or armed conflicts. German suppliers of renewable electricity, usually companies with a strong commitment to environmental standards and sustainability, have not paid enough attention so far to the problematic origins of their technologies.

Photo by Jeswin Thomas from Pexels

SYSTEM CHANGE IS NEEDED – INCLUDING IN THE (RENEWABLE) ENERGY SECTOR

If we want to save our planet and create justice on it, burning fossils fuels is not an option. However, a lot remains to be done in order to turn the energy transition into a successful project that subscribes to the principles of climate, environmental and social justice. Accordingly, it is the task of progressive institutions such as the Rosa Luxemburg Foundation to work together with partners and projects that are strongly committed to a democratized, non-commodified energy sector. We conclude that energy has to be regarded as a public good. It needs to be democratically managed, to provide decent work and to be held to environmental, social and human rights standards from the stage of resource extraction up to the moment of energy supply. The mere availability of affordable and efficient technology that can compete financially with other technologies will not help to save the planet. What is needed is a fundamental system change – including in the energy sector.

By Nadja Charaby

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