



CARBON MARKETS AFTER PARIS

Trading in Trouble



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Trade Unions for Energy Democracy (TUED) is a global, multi-sector initiative to advance democratic direction and control of energy in a way that promotes solutions to the climate crisis, energy poverty, the degradation of both land and people, and responds to the attacks on workers' rights and protections.



Carbon Markets After Paris

Trading in Trouble

The need to “put a price on carbon” in order to drive and incentivize low-carbon investment patterns and industrial practices has stood at the heart of neoliberal climate policy since the early 1990s. It is time to take a critical look at this core policy commitment, particularly emissions trading, and how unions have responded to it.

A lot is expected from carbon markets in the years ahead. The 2015 Paris Agreement has endorsed the expansion of carbon markets via the so-called “Sustainable Development Mechanism” and the Intended Nationally Determined Contributions (INDCs) that have been incorporated into the agreement. Moreover, a full ten years has passed since the 2005 launch of the European Union Emissions Trading Scheme (EU ETS), the largest of its kind in the world. Upon its launch, the scheme immediately became the designated flagship of what was expected to become, over time, a much larger and perhaps global carbon market.¹ Similarly, 2016 is the tenth anniversary of the landmark *Economics of Climate Change*, known as the Stern Review, which also identified carbon trading and carbon pricing in general as perhaps the primary policy mechanism to reduce emissions.² So enough time has passed to examine the hopes and expectations of ten years ago in the light of what has actually been achieved since.

In this context, an examination of trade union debates around this issue is needed. These debates have taken place mostly (but not entirely) within the European Union (see below), but they could be a precursor to a broader trade union discussion if, as seems likely, there are attempts to expand carbon markets in the years ahead. There is every possibility that

concerns about “carbon leakage”—which have been openly expressed by unions for over a decade—could conflict with trade union efforts to urge governments to raise their level of ambition in terms of reducing emissions.

The Paris Contradiction

The context for this discussion is, however, much broader than carbon markets themselves. The 2015 Paris Climate Agreement is now in place, and the tasks facing unions fighting for a truly climate-friendly and sustainable future have become even more clearly defined—albeit by way of a glaring contradiction in the agreement itself.

The agreement acknowledges the need for global warming to stay “well below 2 degrees Celsius” and states that efforts should be made to limit warming to 1.5 degrees Celsius. However, the INDCs, even if met by 2030, will set the world on a pathway towards 2.7–3.5 degrees Celsius of warming. The 1.5 degree Celsius threshold will therefore be breached before 2030. Thus the agreement recognizes the scientific reality and then institutionalizes “commitments” that are not even close to being consistent with that reality.

Instead of reducing emissions, the INDCs in the Paris Agreement will (if fully met) result in *an increase in emissions*—albeit at a slower rate than would be the case under a “business as usual” scenario. Examining the INDCs, the International Energy Agency (IEA) notes, “There is no peak in sight for world energy-related CO₂ emissions in the INDC Scenario: they are projected to be 8% higher than 2013 levels in 2030

(reaching 34.8 gigatons [Gt]), while primary energy demand grows by around 20%.³

This, then, is the “The Paris Contradiction.” Not only will this probably be the reference point for trade union work on climate at the global and also national levels in the years ahead, its very existence compels unions and their allies to develop a robust and well-rounded critique of neoliberal climate policy *in toto*. This paper is offered as a contribution to that broader and much-needed discussion.

The Structure of this Paper

Part One of this paper examines where things stand with carbon markets today. Is a global carbon market actually evolving? Are carbon markets in any way effective? As noted above, a full ten years has passed since the 2005 launch of the EU ETS,⁴ and 2016 is the tenth anniversary of the Stern Review, which also identified carbon trading and carbon pricing in general as perhaps the primary policy mechanism to

reduce emissions, change investment patterns, and drive the development of low-carbon technologies. For Stern and other leading neoliberal analysts, carbon trading remains crucial to achieving emissions reductions while allowing continued economic growth.

Part Two looks at the Paris Agreement, the role carbon trading is expected to play until 2030, and the challenges facing the EU ETS (which, if not resolved, could seal the fate of ETSs everywhere). It critically examines the most recent World Bank data on carbon markets and the analysis of both the Bank and that of the currently active Global Commission on Economy & Climate, co-chaired by Sir Nicholas Stern (hereafter the Stern Commission). Sharan Burrow, General Secretary of the International Trade Union Confederation (ITUC), is one of the members of the Stern Commission.⁵

Part Three examines past trade union debates, again with a focus on the EU ETS. As noted above, trade union discussions on carbon trading have thus far mostly taken place in the EU

Trading Fire – Supporters and Opponents of Carbon Trading

The battle lines around carbon markets have become more pronounced in recent years. Neoliberal policy makers and commentators profess an almost unshakable faith in carbon markets—and carbon pricing more generally—and regard pricing as the most important policy mechanism for reducing emissions while preserving (and even increasing) economic growth. According to this view, by sending a “strong carbon price signal,” markets can respond in an efficient cost-effective way, thus precluding the need for “command and control” government regulation or other interventions. Corporations and financial institutions, in particular, consider carbon trading to be more flexible than a carbon tax and therefore the preferred approach to reducing emissions.

But carbon markets have also attracted intense criticism from social movements, NGOs, the political left, and even some government leaders. They typically see carbon markets as a means to extend profit making, privatization, and commodification without producing any significant gains in terms of emissions reductions, let alone progress toward broader aims of environmental and social justice. In this view, carbon trading schemes are the epitome of all that is wrong with neoliberal climate policy, while carbon taxes are viewed with somewhat less hostility.

and around the EU ETS. These debates brought to the surface tensions between unions representing workers in energy-intensive sectors and those representing trade unions as “peak level” organizations. The basis of these tensions, “carbon leakage,” needs to be fully understood if efforts to avoid more of the same in the future are to be in any way fruitful.

The paper concludes by reiterating a point made at the outset: the Paris Contradiction compels unions and their allies to develop a robust and well-rounded critique of neoliberal climate policy—and to work with others to develop workable alternatives that are needs-based, democratic, and grounded in social solidarity.

Part One: Carbon Markets Today

Before the “Great Recession” of 2008–2009, neoliberal policymakers expressed almost unshakable confidence in the idea that carbon trading would play a major part in helping economies transition to a low carbon future. As noted above, it has been a decade since the launch of the EU ETS and the publication of the Stern Review. So where do things stand with carbon markets now? Is a global carbon

market actually evolving? Are carbon markets being shown to be in any way effective?

In 2015 the World Bank presented a detailed assessment of carbon markets in its *State and Trends of Carbon Pricing 2015*.⁷ The Bank’s assessment more or less coincided with Nicholas Stern’s *The 2015 New Climate Economy Report* that, in turn, drew on the data provided in a

Tax or Trade? Different Ways of Pricing Carbon⁶

“There are two main types of carbon pricing: emissions trading systems (ETSs) and carbon taxes.

An ETS—sometimes referred to as a cap-and-trade system—caps the total level of greenhouse gas emissions and allows those industries with low emissions to sell their extra allowances to larger emitters. By creating supply and demand for emissions allowances, an ETS establishes a market price for greenhouse gas emissions. The cap helps ensure that the required emission reductions will take place to keep the emitters (in aggregate) within their pre-allocated carbon budget.

A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or—more commonly—on the carbon content of fossil fuels. It is different from an ETS in that the emission reduction outcome of a carbon tax is not pre-defined but the carbon price is.

The choice of the instrument will depend on national and economic circumstances. There are also more indirect ways of more accurately pricing carbon, such as through fuel taxes, the removal of fossil fuel subsidies, and regulations that may incorporate a “social cost of carbon.” Greenhouse gas emissions can also be priced through payments for emission reductions. Private entities or sovereigns can purchase emission reductions to compensate for their own emissions (so-called offsets) or to support mitigation activities through results-based finance.”

contributing paper by James Rydge in *Implementing Effective Carbon Pricing (2015)*.⁸ Data from these sources are summarized and critically discussed below.

Overall, these very recent assessments reflect the capacity of neoliberal institutions and policy advisors to over-emphasize positive developments and to largely sidestep or understate the significance of developments that are unambiguously negative. In so doing, they play the role of accessories to the perpetuation of both failed policies and a failed overall approach.

Developments in China

The World Bank's *State and Trends* report points to the geographical spread of carbon pricing (through trading or taxes) since the launch of the EU ETS in 2005. In 2015, approximately 40 national jurisdictions and over 20 cities, states, and regions either implemented or scheduled an explicit price on carbon, covering an estimated seven gigatons CO₂ equivalent (CO₂e). This is about 12% of annual global greenhouse gas (GHG) emissions, up from 4% of annual emissions in 2005. As the Bank notes, "This is triple the coverage of a decade ago." Of this 12%, two thirds (8%) are covered by ETSs and one third (4%) by carbon taxes.¹⁰

The World Bank discusses where and how carbon pricing has been introduced in recent years. In terms of new ETSs, developments in China were considered to have been particularly significant. In 2013-14 pilot ETSs were launched in Beijing, Guangdong, Shanghai, Shenzhen, Tianjin, Chongqing, and Hubei. The Bank notes how,

the designs of some of these systems have been rapidly evolving—their scope has been expanding and their stringency has been increasing. For example, Shenzhen is planning to expand its ETS to include transport; Guangdong is considering

*including more industrial sectors, buildings, and transport; and Hubei is adding 49 new companies to its pilot ETS. In addition, Chongqing has reduced its cap at a greater rate than anticipated, lowering the number of allowances freely allocated by 7 percent with respect to the 2013 level.*¹¹

The inclusion of a national ETS in China's INDC was also noted as particularly encouraging.¹² And by the end of 2015, Chinese government officials were predicting that China's national carbon market would be launched in 2017 and would regulate twice the volume of emissions as the EU ETS.¹³

Beyond China, an ETS was also launched in the Republic of Korea and, at the beginning of 2015, ETSs covering California and Quebec were expanded. Taiwan and Ontario also announced that ETSs would be launched during the next few years. During 2014, carbon taxes were introduced in France, Mexico, and Portugal, and Chile passed legislation for a carbon tax that will become effective in 2017.¹⁴

The World Bank goes into some detail in its description of the economic benefits resulting from carbon pricing, stating that "it is estimated that in 2014 over US\$15 billion in government revenue was raised through carbon taxes and ETS sales [...]. The total revenue in 2014 raised through carbon taxes implemented around the world is estimated at over US\$10 billion." This revenue has often been used to support other policies and initiatives aimed at reducing emissions, but in other instances it has been converted to a dividend paid out to companies, individual citizens, or both.

In terms of making carbon markets more effective, the World Bank and the Stern Commission speak with one voice: Governments need to reform existing ETSs in order to deal with the problem of the over-allocation of pollution permits (discussed below in the context of the EU ETS), foster international cooperation to relieve competitive pressures on companies

constrained by a carbon price, and generally ramp up the price of carbon to levels that can actually change investment patterns and other business decisions.

Business Support for Carbon Pricing

The geographical spread of carbon markets and taxes has been accompanied by rising levels of political support from a growing section of the world's largest corporations. Both the World Bank and the Stern Commission find this particularly encouraging and view this support as a clear sign that "they (the corporations) see it as a way to drive efficiency and profitable new business opportunities."¹⁵

One of the most impressive recent examples was the *Global Investor Statement on Climate Change*, which was signed by 409 investors representing more than US\$24 trillion in assets. But the thrust of the statement did not revolve around "business opportunities" at all. The December 2014 statement opened with these words: "We, the institutional investors that are signatories to this Statement, are acutely aware of the risks climate change presents to our investments." The statement also referred to the "significant gap between the amount of capital that will be required to finance the transition to a low carbon and climate resilient economy and the amount currently being invested."¹⁶ This difference of emphasis may sound innocuous, but it is consistent with Stern's increasingly unconvincing message that climate protection will open up new business opportunities everywhere—when in fact a large portion of the investor community appear to be primarily concerned with protecting the investments they have already made.

Other examples of large corporations expressing support for an effective carbon price are revealing in different ways. Launched in 2012, the Prince of Wales Corporate Leaders Group

(which includes the likes of Shell and Heathrow Airport) issued the *Carbon Price Communiqué*. The statement noted that "the private sector invests trillions of dollars into energy and other infrastructure projects, but in most cases the goal of reducing GHG emissions does not guide such spending." This problem could be solved by

putting a clear, transparent and unambiguous price on carbon emissions [...]. Although there are a number of mechanisms that can be used to do this, as businesses we would focus on working through the market, utilizing approaches such as emissions trading which offer both environmental integrity and flexibility for business. A price on carbon will reveal the lowest cost pathway to existing emissions reduction goals and can open the door to increased ambition.¹⁷

In reporting on global energy trends and projections in February 2015, British Petroleum's Chief Economist Spencer Dale described in detail how, after factoring in a steady rise in both renewable energy and energy efficiency, CO₂ emissions would still grow 25% during the period 2015–2035. This, he said, meant that climate goals could not be reached. Therefore "policy makers may wish to impose additional policies," principal among them being a "meaningful global price for carbon." This would allow for "market forces to play a role in moving resources and not leaving policy makers to pick winners and losers."¹⁸

These statements reveal a number of significant things. They show how investors and companies are concerned about stranded investments and assets and the potential impact of climate change on those investments. In this respect, support for carbon pricing is driven by a desire to protect future profit by addressing the systemic threat posed by climate change. Secondly, ETSs are preferred to carbon taxes, but both (in theory at least) are supported because of their "flexibility and efficiency" and because they do not disrupt the dominant structures of political economy

based on private ownership and private investment. Carbon pricing situates the government as the rule maker that, so to speak, “takes the carbon out of competition,” but in so doing it constrains or undermines the potential for government to be a more assertive actor, one that is able to shape key economic sectors according to different criteria—such as social and environmental needs. Nevertheless, such statements on the part of some of the largest polluters amount to an attempt to shift responsibility for reducing emissions away from the polluters themselves toward governments or “policy makers.”

Unions will understand the core meaning of these statements. The imperatives of profit and growth will continue to drive business decisions. Corporations cannot be expected to address the climate crisis and the need to reduce CO₂ levels. This task must fall to governments (or “policy makers”)—but governments must act in a way that does not impede future growth and profits and does not involve heavy regulation. Ruled out completely, of course, is the option of public ownership of key industries and companies in order to manage emissions directly on the basis of a public goods approach.

A Global Price on Carbon: Are We There Yet?

According to the World Bank, significant progress towards a “meaningful global price for carbon” has been made. The fact that 12% of global GHGs was in 2015 covered (or “scheduled” to be covered) by a carbon tax or ETS—a threefold increase in ten years—is presented by the Bank as an extremely positive sign that the political momentum behind carbon markets is driving their growth and development.

But there is no hiding from the obvious fact that, more than 20 years after the Kyoto Agree-

ment established carbon trading as the principal policy instrument for reducing emissions, 88% of global GHGs are still *not* covered by a price. Meanwhile emissions from fossil fuel use have risen a staggering 61% since 1990.¹⁹

The limited geographical spread of carbon markets underscores the failure of emissions trading and carbon pricing more generally as an emissions mitigation tool. But the problem does not end here. An equally large problem is the universally low price of carbon even in areas where a price exists. As the World Bank notes, “Placing an *adequate price* (emphasis added) on GHG emissions helps mobilize the financial investments required to support diverse actions, such as fuel switching from coal to natural gas, renewable energy deployment, the adoption of energy efficiency measures and the use of low-carbon technologies in industry.” So what is an adequate price? “Most scenario analyses,” the Bank tells us, “indicate a global average carbon price of between US\$80 and US\$120 (per ton of CO₂) [...] would be consistent with the goal of limiting the global warming to 2°C.”²⁰ How much more the price would need to be in order to limit warming to “well below 2°C” or even 1.5°C per the Paris Agreement has still to be calculated—but it is reasonable to assume that the price would need to be considerably higher than the US\$80 to US\$120 range. To be consistent with the 2°C target, the US\$80 to US\$120 price “would need to be *universally in place by 2030*” (emphasis added). But in 2015 carbon prices in 85% of instances stood at *less than \$10 per ton*, and 99% percent of emissions were priced at less than \$30 per ton.

Are carbon prices generally rising? The 2015 prices per ton of carbon suggest that the price is *not* rising, even incrementally, and ETS prices per ton are far lower than the EU ETS peak of 30 euros per ton achieved in 2006. California’s 2015 carbon price stands at around \$12 per ton, Korea around \$9, Europe around \$7.30,

and China between \$3 and \$7 depending on the city or region. According to the World Bank, “the difference between this range (\$80–\$120 per ton for an effective carbon price) and the prices currently observed gives an indication of *the scale of the challenge lying ahead*” (emphasis added).

The point is underscored by James Rydge’s study for the Stern Commission, *Implementing Effective Carbon Pricing* (2015):

*Weak carbon prices, including fossil fuel subsidies, also fail to send clear low-carbon signals to investors. This is reflected in the continued high levels of investment in fossil fuel-based energy, around US\$950 billion in 2013. Price floors, as used in the UK, California and in the seven Chinese pilot schemes, can ensure a minimum price level in emissions trading, providing greater certainty and more consistent policy signals. [...] However, with or without price floors, current prices are likely to be too low to send clear and sufficient signals to investors, consumers and technology providers.*²¹

This puts into perspective the statements of support for carbon trading by large companies, including energy companies like BP. While asking “policy makers” to take steps towards introducing a global carbon price, they continue to invest hundreds of billions of dollars in the exploration and extraction of fossil fuels. And if they are not investing in fossil fuels themselves, they tolerate a situation that allows other corporations to do so. Instead of confronting this problem, they repeat calls for a government to establish a “global carbon price” fully aware of the fact that installing an effective global carbon price is highly improbable.

The Effectiveness Problem

One of the most remarkable features of the World Bank’s *State and Trends* report is that it neglects to offer even a broad estimate that might help readers understand how effective

carbon pricing has been in terms of reducing emissions thus far. The Stern Commission is equally silent in this respect (other than making an unsubstantiated claim that the ETS known as the Regional Greenhouse Gas Initiative in parts of the US and Canada has helped bring down emissions).²²

This silence is easily explained. There is little evidence that pricing carbon at today’s levels has had any appreciable impact on emissions levels. Where emissions have fallen, as in the U.S. or the EU, the impact of carbon pricing is widely understood to have been negligible. As the European Trade Union Initiative notes, “The (EU’s) 40% target for reduction of GHGs fails to take account of the fact that, to a very considerable extent, past ‘achievements’ on this score were merely attributable to sluggish growth or recession.”²³

New carbon taxes and ETSs in countries like China and Korea have only recently been introduced, and the price of carbon is so low that the effect on emissions levels or investment behavior has almost certainly been minimal. By failing to acknowledge the (at best) extremely small contribution carbon pricing has made either to reducing emissions or flattening emissions trajectories, both the World Bank and the Stern Commission appear to be trying to protect a key pillar of the neoliberal policy framework from serious scrutiny. In so doing, they help to confirm suspicions that they, along with others, are conscious accessories to the perpetuation of both failed policies and a failed overall approach.

Heroic Interventions and Neoliberal Denial

Faced with both the price problem and the effectiveness problem, the Stern Commission resorts to reminding us how carbon markets *should* work:

A strong, predictable and rising carbon price—applied through a carbon tax or a cap-and-trade system—is a particularly efficient way to advance climate and fiscal goals. It sends important signals across the economy, helping to guide consumption choices and investments towards low-carbon and away from carbon-intensive activities. It can also raise fiscal revenues for productive uses.²⁴

But the distance between the *should* and the *actual* continues to be vast. Presently 12% of global GHGs are covered by a carbon price that is today perhaps barely 10% of where it needs to be to drive the required changes in investments and industrial practices. This is hardly a cause for celebration. Add to this the obvious fact that 88% of GHG emissions remain “unpriced,” and the problem becomes glaringly obvious. The Paris Contradiction will need to be resolved in a matter of a decade or two at the most in order to reach the “far lower than two degrees Celsius” target. When viewed in the context of such a time frame, the anticipated contribution of carbon pricing is likely to be negligible—unless, of course, a “heroic intervention” occurs and world leaders expedite a rapid introduction of a global carbon market accompanied by a dramatic increase in the price of carbon.

But the lack of an effective price is quite easily explained. Those companies subjected to a price on carbon want to preserve their competitive position *vis-à-vis* those who are not similarly subjected by way of free allowances or

other price-depressing measures. Meanwhile, those not subjected to a price on carbon are for the most part content to take full competitive advantage of the fact that they are not paying while their competitors are. The idea that this can be resolved through “international cooperation” is illusory. Secondly, a price on carbon is essentially a price on doing business—it is not, as many critics of carbon trading believe, a new frontier of accumulation for capital. It is undeniable that speculators and traders have made money from handling emissions permits, often fraudulently. But a global carbon price is actually a barrier to the accumulation of capital.²⁵ To stay within two degrees Celsius, let alone “well below two degrees” or even 1.5 degrees, the price of carbon would need to be *very high*—and thus the barrier to accumulation becomes even more formidable. The “systemic” dilemma is therefore clear: Reducing emissions by pricing carbon will (perhaps) “save” the regime of accumulation (“our economy”) for generations to come, but the economic effects of a high carbon price will, in the relatively near future, seriously undermine the regime of accumulation.

Either way, the World Bank and the Stern Commission have packaged the data on carbon markets in a manner that gives an impression that, while there are still major challenges to be negotiated, there has been enough progress to suggest that carbon markets are developing more or less as planned. The evidence, however, suggests the opposite is true.

Part Two: Carbon Trading and the Paris Agreement

INDCs and the Sustainable Development Mechanism

When COP 21 in Paris commenced in late November 2015, none of the fundamental problems associated with carbon trading and the

missing “price signal” more generally had been resolved. The World Bank, backed by the IMF and many large corporations, appealed to more international cooperation aimed at expanding the reach, extending the connectedness, and improving the effectiveness of car-

bon markets. Such appeals are unlikely to have any impact on the problems of over-allocation of permits, fragmented and disconnected markets, and weak price signals—all of which reflect the desire on the part of large sections of big business *not* to be constrained by anything resembling an effective price on carbon.

Nevertheless, many of the INDCs submitted to the UNFCCC and incorporated into the Paris Agreement identified an important role for carbon pricing and carbon trading. Significantly, the United States' INDC specifically states that it "does not intend to utilize international market mechanisms to implement its 2025 target."²⁶ However, under the United States' Clean Power Plan, individual states have the flexibility to choose their own compliance mechanisms, including emissions trading schemes. Some states already have ETs called "Regional Greenhouse Gas Initiatives" in place.

Meanwhile the "Sustainable Development Mechanism" (SDM) in Article 6 of the Paris Agreement also provides for a UN-controlled international market mechanism. According to *Carbon Pulse* (a London-based proponent of carbon markets), the SDM signaled the beginning of "a new era of international carbon trading," allowing the linking of existing national and regional trading schemes—a giant step

toward realizing the goal of globally integrated carbon markets.²⁷ Under the SDM provision, all countries will be able to trade carbon with each other, helping each to achieve their national targets for emissions cuts. The SDM is the successor to the "Kyoto mechanisms" proposed to facilitate emissions reductions, which were named "international emissions trading" (IET), the Clean Development Mechanism (CDM), and Joint Implementation (JI).²⁸ Article 6 refers to "voluntary cooperation" between countries in the implementation of their emissions targets "to allow for higher ambition in their mitigation and adaptation actions."

Can Europe's ETS Finally Produce?

The post-Paris future of carbon markets, many believe, is closely tied to the fate of the EU ETS. Still the world's largest and most developed carbon market by far, if the EU ETS can become a better functioning market then this will give enormous impetus to those who hope to see progress toward more integrated and effective carbon markets in different parts of the world.

The 2005 launch of the EU ETS, which covers 45% of the EU's GHG emissions, was hailed as a precursor for carbon markets emerging in different parts of the world, and it was hoped

About the EU ETS

"The EU-ETS was set up in 2005 to reduce greenhouse gas emissions from energy generation and most of the manufacturing sectors, which correspond to about 45% of gas emissions. It covers CO₂, nitric oxide (N₂O) and perfluorinated hydrocarbon (PFC) emissions from more than 12,000 electric power stations and industrial sites in 28 Member States as well as Iceland, Lichtenstein and Norway. Based on the cap and trade model, the EU-ETS limits the volume of annual emissions whilst authorising emitters to trade their emission quotas. This volume is reduced annually by a certain percentage (1.74% at present). The price signal from the cap must guide investments to the technologies with the lowest emissions whereas the flexibility left to the participants in the system helps reduce the cost of emission reduction measures."

*European Trade Union Confederation*²⁹

that these markets would, over time, be linked together in the form of a fully integrated global carbon market.

But the EU ETS has itself been plagued with problems in recent years—and this has impeded the spread of carbon markets elsewhere. The large surplus of emissions allowances led to a dramatic fall in the price of carbon from a high of more than €30 per ton in 2008 to a low of €2.63 per ton in 2013.³⁰ This all but extinguished the “price signal” that the ETS was set up to project. The current surplus of ETS allowances is estimated to amount to as much as 2 billion tons of CO₂, roughly equivalent to an entire year’s requirement under the scheme. At the end of 2015, the price had risen to a little over €8 per ton—still far too low to drive any meaningful change in investment patterns or decisions.

With the world’s flagship ETS floating aimlessly, in early 2014 the EU took steps to keep the system afloat and to address the problem of over-allocation of permits. Nine hundred million permits were removed from the market, with the idea of re-introducing them again in 2019–2020 when market demand is expected to be stronger. This “backloading” was accompanied by the creation of the Market Stability Reserve (MSR), which is expected to come into force in 2019.³¹ It is hoped that the MSR will “make the ETS more resilient to any potential future large-scale event that may severely disturb the supply-demand balance.”³²

Whereas most countries submitted their INDCs to the UNFCCC in the months leading up to COP 21 in Paris, the EU made a collective submission outlining its commitments for emissions reductions to 2030. In the period before COP 21, the European Council endorsed a binding EU target of at least a 40% domestic reduction in GHGs by 2030 compared to 1990. According to the Council, “the target will be delivered collectively by the EU in the most cost-effective manner possible, with the reductions in the

(EU) ETS and non-ETS sectors amounting to 43% and 30% by 2030 compared to 2005, respectively.” The Council declared “a well-functioning, reformed Emissions Trading System (ETS) with an instrument to stabilize the market in line with the commission proposal will be the *main European instrument to achieve this target*” (emphasis added).³³ *The 2030 commitment will require the sectors covered by the ETS reducing their emissions by 43% compared to 2005 levels. The overall number of allowances will decline at an annual rate of 2.2% from 2021 onwards, compared to 1.74% currently.*³⁴

Given the present condition of the EU ETS, describing it as the “main instrument” for the EU to reach its target amounts to a baseless and risky vote of confidence for a policy that has thus far done little to generate very much confidence at all. If the EU is to actually raise its level of ambition and go beyond the pledge presented in Paris, then this will require an even tighter cap for the ETS. Not surprisingly, calls for reform of the EU ETS after 2020 have already been made since COP 21 came to a close. According to the Swedish Environment Minister Asa Romson, reforming the ETS is urgently needed: “In the current situation, there are too many exceptions to the rules, leading too many companies not having to pay for their emissions or that can even make money without undertaking environmental efficiency measures.”³⁵

The Carbon Leakage Conundrum

One of the most formidable challenges facing the EU ETS has been concern about “carbon leakage.” Carbon leakage occurs when corporations move their production or redirect their investments to other jurisdictions where emissions costs are lower or non-existent, thereby increasing emissions in another location that is less “carbon constrained.” According to the World Bank, “in a world of fragmented carbon pricing instruments, the potential impact of

carbon pricing on the international competitiveness of some domestic industrial sectors has been a concern. The risk of carbon leakage is real as long as carbon price signals are strong and the stringency of climate policies differs significantly across jurisdictions.”³⁶ Indeed, “these concerns over the adverse impact on competitiveness and the possibility of carbon leakage *are probably the single most common concern challenging the introduction of carbon prices around the world.*” (emphasis added).³⁷

The threat of carbon leakage has mostly been addressed by granting more free allowances to companies that claim that paying to emit CO₂ may force them to scale back or move their operations. This has exacerbated the over-allocation problem and has depressed the price per ton of CO₂. *Point Carbon* figures show that companies were given free carbon permits with a tradable value of €77 billion from 2006–2014. It is expected that, between 2021–2013, allowances worth €160 billion will be allocated free to companies.³⁸ Over-allocation of allowances is today a problem facing ETSS everywhere. According to Femke de Jong of Carbon Market Watch,

*all Emissions Trading Systems around the world are over-allocated—and therefore the price is very low. The highest price in any carbon market is in the California-Quebec carbon market, but there they have a carbon price floor. It's far too soon to talk about linking with other carbon markets.*³⁹

Here we confront another major challenge facing ETSS and carbon pricing generally. In the absence of a global carbon market—which is

at best a long way off—the higher the price for carbon, the more carbon leakage becomes a real or potential threat to companies (and their employees) and the more they press for free allowances. The more free allowances are issued to allay the fears of leakage (real, perceived, or projected), the more the price of carbon is likely to stay too low to have an impact either on investment decisions or emissions levels.

According to the World Bank and the Stern Commission, the solution to carbon leakage is in the short term addressed by granting more price-depressing free allowances, but, as the Bank explains, a more satisfactory solution is “international cooperation, which would harmonize carbon price signals across all jurisdictions. It would remove the underlying cause of leakage and therefore reduce the need for assistance measures.” The Stern Commission adds, “by working together, countries can also benefit from knowledge-sharing on best practice, greater transparency, and the opportunity to link trading schemes.”⁴⁰ Hopeful, but hardly convincing.

However, with no international carbon market likely to come to the rescue of the EU ETS, its capacity to help the EU reach its 2030 emissions reduction commitment under the Paris Agreement must be seriously questioned. This does not mean that the EU will fail to reach its target for other reasons (including economic recession and further deindustrialization), but the idea that the EU ETS will be the “main instrument” to deliver the EU’s emissions commitment should be treated with considerable skepticism.

Part Three: Trade Union Debates in the EU

Given the role of carbon markets in the Paris Agreement and the INDCs, an examination of

past trade union debates on carbon trading is probably worthwhile. These debates have

been marked with considerable tension between those unions concerned about carbon leakage and job losses and those who considered it important for unions to push a climate protection agenda as a means of generating new jobs in emerging low carbon sectors.

Not surprisingly, these debates have taken place mostly—but not entirely—within the European Union around the EU ETS, but similar tensions have expressed themselves around carbon pricing in the U.S., Australia, and elsewhere. In the U.S. for example, some unions have sided with the fossil fuel companies and energy utilities to oppose any price on carbon, while others—like the Steelworkers and the AFL-CIO—have called for a “border adjustment mechanism” to level the playing field between domestic producers paying for carbon and global competitors who do not (a position taken by the European Trade Union Confederation, discussed below).⁴¹ If, as seems likely, there are attempts to expand carbon markets in the years ahead, then such tensions could become heightened and also more widespread.

Balancing Present and Future: The European Trade Union Confederation

When examining trade union policy at the EU level, it is important to give special consideration to the role of the European Trade Union Confederation (ETUC). Under the 1992 Maastricht Treaty, the ETUC is one of the European social partners and is recognized by the EU, the Council of Europe, and the European Free Trade Association (EFTA) “as the only representative cross-sectorial trade union organization at European level.”⁴²

As a designated social partner under Maastricht, the ETUC has involved itself in the climate change debate in a manner that seeks to breathe new life into “social dialogue” and “social partnership” in a Europe where most gov-

ernments and key business sectors presently display little or no respect for either. The ETUC has also kept the flag of “Social Europe” flying during a period when the ideological and institutional foundations of this once compelling vision have been largely demolished in numerous EU member states by way of austerity and attacks on collective bargaining, labor market protections, and the welfare state.⁴³ For the ETUC, the enormity of the climate challenge and the need for fundamental changes in patterns of production and consumption provided an opportunity to both “re-boot” and reframe social partnership. The ETUC therefore embraced the EU ETS from the outset, regarding it as “crucial in achieving the EU’s ambitious objectives for the post-Kyoto period.”⁴⁴

Large ETUC affiliates mostly concurred with this approach. For example, the Trades Union Congress (TUC) in the UK acknowledged “the central importance of the ETS in reaching the UK’s Kyoto-plus commitments” and regarded the scheme to be “an effective market mechanism for participating member states.” For UK unions, the EU ETS was “the most significant attempt by any nation, or set of nations, to impose an effective limit on greenhouse gas emissions” and “by a long stretch the government’s most effective market-based initiative to deliver cuts in carbon emissions through carbon pricing.”⁴⁵

The ETUC supported the commission’s ETS Directive of January 2008, which adjusted the ETS in order to accommodate EU member states’ commitments (announced in 2007) to reduce CO₂ emissions by 20% based on 1990 levels. In March 2008, the ETUC endorsed the commission’s “20-20-20” targets, while emphasizing the potential of climate protection to create jobs.⁴⁶ Given the emissions reduction recommendations proposed by the Intergovernmental Panel on Climate Change (IPCC), the 20% emissions reduction should, said the ETUC, be considered the minimum acceptable target.

Proposals and Criticisms

However, in 2007 the ETUC criticized the commission for pressing forward with measures that promoted more liberalization and for failing to establish platforms of social dialogue among employers, member states, and unions that could address the problems facing the EU ETS and EU industrial strategy more generally. In 2008, the ETUC requested a “consultative committee of the European social partners” on the climate and energy package and to make the process obligatory under the 2008 Directive on the ETS. The ETUC stated, “the one-off consultation prescribed by the Directive on revision of the emissions trading scheme (ETS) is not sufficient.”

The ETUC made it clear that, while it supported the commission’s emissions targets, jobs would be lost in some industries. It urged the commission to implement, “just employment transition programs” as the best way to “guarantee that structural changes in employment patterns due to climate change mitigation are anticipated and the potential of new jobs tapped while ensuring that workers are not forced to pay for the necessary mitigation measures through the loss of their livelihood.” The ETUC also expressed concerns about what the targets would mean for the competitiveness of energy intensive industries in Europe, and urged the commission to consider “border compensation measures to prevent European industry from having to cope with unfair competition from companies in countries that do not apply similar emissions reduction measures.” This could be done via a carbon tax or the inclusion of importers and exporters in the carbon market.⁴⁷

Carbon Leakage and Competitiveness Concerns

During discussions on the 2008 ETS Directive and the “20-20-20”⁴⁸ climate and energy pack-

age, unions in energy intensive sectors took a more critical approach to the EU ETS.

These included German unions in mining, chemicals and energy, such as IG BCE; the Polish energy and mining union, affiliated to Solidarność, (SGiE); the European Metalworkers’ Federation (EMF); and the European Mine, Chemical, and Energy Workers’ Federation (EMCEF). In May 2012, the latter two bodies became the European arm of a new Global Union Federation, IndustriALL. At the time of its launch, “IndustriALL Europe” represented 6.9 million union members, mainly in energy intensive industries.⁴⁹ The ETUC’s support for full auctioning of permits for power sector companies did not go down well with these unions. The Polish unions proposed that the ETUC not support the commission’s proposals until the ETUC’s demands were met—an idea that would not have been very compatible with the constructive approach expected of a social partner.⁵⁰

These tensions were also evident between unions at the national level. In the UK, unions representing workers in energy-intensive sectors expressed concerns with regard to the exposure to global competition of UK-based companies in steel, ceramics, cement and lime manufacture, aluminum, and basic inorganic chemicals—companies which at the time employed 800,000 workers. Sharing the concerns of industry groups, these unions called for “an EU-wide import adjustment system for energy intensive industries to avoid the problem of carbon leakage.”⁵¹ According to Michael Leahy, then general secretary of the union Community (which has members in heavy industry and manufacturing) “if the trading of emissions is not set up effectively, we run the risk of losing more than our manufacturing base. However, it is not only jobs that will be lost; it will almost certainly be the chance to reduce carbon emissions.” These concerns were heightened when the UK government announced it was going to

introduce a “carbon price floor” (CPF) to compensate for the low carbon price under the EU ETS. The measure was intended to drive investment in low carbon energy sources. The TUC said the CPF was “a strategic mistake, disadvantaging UK industry” for its impact on “the competitiveness and sustainability of UK industry relative to the EU and rest of the world.”⁵²

Unions and the ETS Rescue Operation

In the years since the 2008–2009 financial crisis, the EU ETS’s fortunes have gotten progressively worse. The price of carbon collapsed due to the combined impact of over allocation of permits and weak demand due to the industrial slowdown. In June 2012 the ETUC’s Executive Committee adopted a resolution lamenting the effect of the low CO₂ price and calling for urgent intervention to ensure a strong price signal.⁵³ The ETUC had supported the commission’s plan to take 900 million tons of carbon off the market and then reintroduce the permits later when, it was hoped, demand would be stronger. This “backloading” proposal was originally rejected by the European Parliament in mid-April 2014, and the price of carbon per ton fell to just €2.75.⁵⁴ Reflecting its priorities, the ETUC stated: “The European carbon market will remain clinically dead until structural decisions are taken to reform it, meaning that no effective price signal will be sent to investors for years [...]. (The vote) will also have a negative impact on EU leadership in international discussions.”⁵⁵

While concerns with regard to both the effectiveness and design of the EU ETS may have everywhere increased over time, the ETUC’s support for the scheme has remained to this day remarkably solid. According to the ETUC, despite its problems, “The ETS is one of the leading instruments of the European framework for the fight against climate change.” The ETS offers “a single regulatory framework for

the whole of European industry and energy production, which appears preferable to a juxtaposition of different national systems which would engender environmental dumping within the EU.”⁵⁶

The ETUC’s message has stayed more or less the same since COP 21. In a statement issued after the late 2015 Paris talks, the ETUC warned that the commission’s approach to climate “remained far too dependent on one instrument—the EU ETS.”⁵⁷ The EU, said the ETUC, “must make an in-depth assessment of the risk of carbon leakage and of the policy instruments it should have to effectively tackle it.” Addressing carbon leakage through the free allocation of permits, said the ETUC, fails to “provide a response to the main driving forces behind relocations which include the price of raw materials, the weakness of internal demand, the development of important markets in other geographic areas, the import of cheap industrial goods from emerging economies and overcapacity in certain sectors.” The ETUC again proposed that a carbon tax be imposed on goods imported into the EU from countries where no carbon price is in place. It also called for a “Just Transition Fund to support workers which would be negatively impacted by the transition to a low-carbon economy.”⁵⁸

Learning from the ETUC’s Experience

Since the launch of the EU ETS in 2005 the ETUC has tried to balance a defensive approach (prevention of carbon leakage and the protection of existing jobs) with a forward-looking and job-focused approach grounded in the idea of a new, low-carbon, and highly competitive Europe. As noted above, the ETUC’s support for the EU ETS is driven by its concerns for the EU to position itself as a global champion of “green and inclusive growth”—and to do so in a way that demonstrates the economic as well

as social advantages of social dialogue and social partnership.

Unfortunately, the ETUC's proposals on the EU ETS and EU climate and energy policy in general have been completely ignored. That this is hardly a convincing demonstration either of the health or the efficacy of "social partnership" is the least of the problem. More serious, perhaps, is the tendency to persist with an approach even when the results have been so meager. This persistence on the part of the ETUC flows from the belief that the neoliberal climate and energy architecture is an immovable and thus inescapable reality, and that Social Europe is an idea that can still survive despite unswerving commitment to market liberalism on the part of the commission and other major institutions.

Clearly, the ETUC's "until death do us part" support for the EU ETS has not produced anything positive for workers, just as the EU ETS itself has not produced anything positive for the climate. And to continue to express concerns about both carbon leakage *and* the weak carbon price signal does not prepare trade unions in Europe and elsewhere for the larger and more serious struggles in our own ranks in the years ahead should current policies continue to be pursued. Put simply, a stronger carbon price signal is likely to make carbon leakage more likely, but without it the EU will struggle to meet its emissions commitments.⁵⁹ The lack of symmetry between these two challenges is also worth noting. Whereas a weak carbon price can generate at least some carbon leakage, and with it job losses, it takes a much higher price in order to produce a significant impact on emissions levels.⁶⁰

Polluter Pays or Worker Pays?

Legitimate trade union concerns about carbon leakage simply cannot be addressed within the present neoliberal policy framework. The

"polluter pays" principle is not consistent with a trade union approach. It normalizes the idea that those with the resources can continue to pollute and those who decide they do not wish to pay can move their resources elsewhere, thus carbon leakage. The workers are left behind. In practice, the "polluter pays" principle becomes "worker pays."

If relocation happens as a result of a carbon price, then the jobs that have been lost have brought no environmental benefit. Emissions will simply be generated in the country or region that is not carbon-constrained by way of a price. It is worth remembering that the issue of carbon leakage only arises as a result of carbon pricing in the first place. No price, no leakage. (Although companies have many reasons other than paying for carbon that could lead them to relocate or shift investment elsewhere.)

Comprehensive just transition measures could protect workers and communities from the impact of jobs lost as the result of climate policies, but these measures cannot themselves resolve the problem of leakage, and they will not be implemented until the neoliberal lockdown on policy has been broken. Similarly, neoliberal trade policy from the WTO to the recently proposed trade deals—such as the Transpacific Partnership (TPP) and the Trade in Services Agreement (TISA)—would make it impossible to introduce border adjustment measures and other mechanisms to handle leakage. TISA also weakens the power of democratically elected governments to make their own energy choices or to introduce environmental measures as they see fit. As PSI General Secretary Rosa Pavanelli noted during COP 21, TISA "is the great climate change swindle. As modest targets are being discussed in Paris, in Geneva the means to achieve them are being negotiated away in the interests of the largest corporations on earth. It is becoming clear why our governments try to hide these negotiations by conducting them in secret."⁶¹

Conclusion: The Only Just Transition is a Transformative Transition

As documented in the 2014 TUED paper *Climate Change and the Great Inaction: New Trade Union Perspectives*, unions joined the UNFCCC discussions in the mid-to-late 1990s at a time when the neoliberal notion “There is No Alternative” was at the height of its influence and authority. The market-based Kyoto Architecture was already in place and carbon trading had been established as a primary policy option to reduce emissions. Any trade union opposition to market approaches like carbon trading would at that time have probably been futile.

But today the situation is different. Neoliberal approaches to energy transition and climate protection (and to economic management more generally) are in a state of chaos. New trade agreements presently being discussed behind closed doors threaten the sovereign right of governments to protect their own people from pollution and climate change. Furthermore, there is clear evidence to show that the austerity policies presently being pursued

in many parts of the world are undermining the—already inadequate—attempts to promote renewable energy and low-carbon economic activity.⁶³ This many-sided challenge must be acknowledged and confronted, first at the level of ideas and program and, over time, at the level of action.

Their Ambition—and Ours

The Paris Contradiction compels unions and their allies to develop a clear and comprehensive alternative to neoliberal approaches to energy and climate change. A low-carbon and truly sustainable economy will not be traded or “incentivized” into existence. The gap between the “well below 2 degrees Celsius” or 1.5 degrees targets in the Paris Agreement and the projections of the INDCs constitutes a political as well as civilizational emergency. This gap cannot be bridged without a fundamental shift away from the neoliberal framework toward direct government-led interventions aimed at

Trade Union Opposition to Carbon Trading: The International Transport Workers’ Federation

Carbon Trading – Neither Effective nor Equitable

“Climate change cannot be tackled without fundamental structural changes in our economy and society. The logic of carbon trading is that CO₂ and other GHGs are viewed as ‘externalities’ that need to be priced, and carbon markets purportedly allow for ‘flexibility,’ and reduce polluters’ costs in ways that carbon taxes and regulations do not. The constant referencing of the need to ‘incentivize’ actions to gradually reduce emissions speaks volumes. Action not driven by the profit motive therefore becomes unimaginable. Carbon trading has also led to a reliance on off-setting—which essentially delays or halts action to protect the climate in one place in order to take ‘actions’ somewhere else—in the name of flexibility and gradual adjustment.

The expansion of social and democratic ownership of industries that produce emissions is also necessary in order to prevent further damage to people and the environment and to plan an equitable and orderly transition to a low carbon economy.”⁶²

democratizing and reorienting the main economic and financial institutions.

As a first step, this shift entails that unions clearly reject carbon trading as a mitigation tool. ETSs around the world have thus far proved to be totally inadequate in this respect, even if the funds accrued through auctioning of permits have sometimes produced positive social outcomes. Unions here and there have managed to ensure that a portion of the funds generated through the auctioning support worthwhile projects. But this should not lead to the conclusion that an ETS—or ETSs in general—are doing what they are supposed to do. In other instances, ETSs have served as cover for “business as usual.” Companies can point to an ETS and say “we are paying for our pollution,” which may be both an astute business decision, given the presently low price of carbon, as well as expedient public relations.

As was noted above, the World Bank, the Stern Commission, and numerous others simply repeat that carbon markets will be more effective when there is a stronger price signal. This can no longer go unchallenged. As noted in Part Two, it simply avoids asking why the price signal has not been generated already. Unions have nothing to gain by perpetuating the idea that ETSs are, or can be, an effective instrument in driving down emissions levels.

In the post-Paris period, unions have to do more than urge governments to show higher levels of ambition—especially when key governments plan to use ETSs as perhaps the primary instrument to achieve the commitments already submitted to the UNFCCC. The root causes of the present lack of ambition need first to be clearly understood. It is superficial and simplistic to describe the lack of ambition as simply a problem of “political will.” Rather, the Paris Contradiction expresses the distance between, on the one hand, the conviction that emissions can be “decoupled” from econom-

ic growth (which can continue more or less without interruption) and, on the other hand, the “best we can do” reality offered by governments and corporations that work within the ideological and systemic confines of competition and accumulation.

Meanwhile, the continuation of existing trade union policy on carbon trading can be expected to heighten tensions between unions. The threat of carbon leakage is real. The threat of climate change is also indisputably real. Trade union policy must respond to both in ways that open the door to bolder government-led interventions to manage the energy transition in ways that are democratic, equitable and ultimately effective.

Programmatic Work

Some unions have declared their opposition to carbon trading and view market measures as part of a broader push to commodify nature and further “enclose” the commons. Resolutions and statements are an important first step in that they can open the door to a broader critique and a rigorous search for alternatives.

Part of the struggle for unions will involve the need to address the “ambition deficit” in our own institutions. The Paris goal of “well below 2 degrees Celsius”—as well as a just transition—will require a completely different set of policies and approaches anchored in an extension of social ownership and democratic decision making over key economic decisions. This is deeply disruptive to the neoliberal mindset and goes beyond the “green growth” neo-Keynesian narrative that many unions today find appealing.

The programmatic work that unions and their allies need to do in order to develop carefully thought out proposals should be an urgent



priority. The expertise and knowledge in the international trade union movement, other social movements, and research institutes needs to be harnessed with this end in mind.

Unions and a broad spectrum of organizations mobilized for COP 21 using the phrase “the

road through Paris,” thus implying that the struggle against climate change would continue despite the disastrous shortcomings of the Paris Agreement. Unions now have an opportunity to take stock of the challenges ahead—political, organizational, and programmatic—and how best to meet them.

References

- 1 The EU ETS operates in the 28 EU member states and the other three members of the European Economic Area (Iceland, Liechtenstein, and Norway).
- 2 *The Stern Review: The Economics of Climate Change*, 2006.
- 3 International Energy Agency (IEA), *World Energy Outlook 2015: Special Report on Energy and Climate Change*, Paris: IEA, 2015, worldenergyoutlook.org.
- 4 The EU ETS operates in the 28 EU member states and the other three members of the European Economic Area (Iceland, Liechtenstein, and Norway).
- 5 See The Global Commission on Economy and Climate, newclimateeconomy.report
- 6 The World Bank, "Pricing Carbon," worldbank.org/en/programs/pricing-carbon.
- 7 The World Bank, *State and Trends of Carbon Pricing 2015*.
- 8 J. Rydge, *Implementing Effective Carbon Pricing*, London: New Climate Economy, 2015, newclimateeconomy.report/misc/working-papers/.
- 9 Center for Climate & Energy Solutions, c2es.org/newsroom/articles/what-role-carbon-markets-2015-climate-agreement.
- 10 The World Bank, *State and Trends*.
- 11 The World Bank, *State and Trends*, p. 43.
- 12 UNFCCC, China, Intended Nationally Determined Contribution, 2015.
- 13 "China's national ETS to go big from the start-of-ficial," *Carbon Pulse*, Dec. 8, 2015.
- 14 The World Bank, *State and Trends*, p. 26.
- 15 See the May 29, 2015 letter to the UNFCCC Secretariat and the COP 21 Presidency, s08.static-shell.com/content/dam/shell-new/local/corporate/corporate/downloads/pdf/media/speeches/2015/letter-to-unfccc.pdf.
- 16 Global Investor Statement on Climate Change, iigcc.org/publications/publication/2014-global-investor-statement-on-climate-change.
- 17 Carbon Price Communiqué (first issued 2012), climatecommuniques.com/Carbon-Price.aspx.
- 18 "CGEP - 2015 BP Energy Outlook 2035 with BP Chief Economist Spencer Dale," Feb. 26, 2015, youtube.com/watch?v=fyPBww4o_Do.
- 19 Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Synthesis Report*, Geneva: IPCC, 2014.
- 20 The World Bank, *State and Trends*, p. 23.
- 21 Rydge, *Implementing Effective Carbon Pricing*, p. 12.
- 22 The Stern Commission does imply that one ETS has reduced emissions. "The Regional Greenhouse Gas Initiative (RGGI) is the *first market-based regulatory program in the United States to reduce GHG emissions*. It is a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont to cap and reduce CO₂ emissions from the power sector." But it is not clear whether the RGGI has reduced emissions already or it is simply designed to do so.
- 23 European Trade Union Initiative (ETUI), *Europe's Energy Transition in the Austerity Trap*, Brussels, 2015.
- 24 The Global Commission on Economy and Climate, p. 41.
- 25 For an excellent explanation of carbon trading as a barrier to capital accumulation, see Romain Felli "Environment, not planning: the neoliberal depoliticisation of environmental policy by means of emissions trading," *Environmental Politics* 24:5 (2015), pp. 641-660.
- 26 See United States submission to the UNFCCC, "INDCs as Communicated by Parties," www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx.
- 27 "Paris Agreement rings in new era of international carbon trading," *Carbon Pulse*, Dec. 12, 2015.
- 28 See UNFCCC, "The Mechanisms under the Kyoto Protocol: Emissions Trading, the Clean Development Mechanism and Joint Implementation," unfccc.int/kyoto_protocol/mechanisms/items/1673.php.
- 29 ETUC, "ETUC position on the structural reform of the EU Emissions Trading System," Dec. 16-17, 2015, etuc.org/documents/position-structural-reform-eu-emissions-trading-system#.VoP-SclKGbX9.
- 30 Monthly average prices for European Emissions Allowances (EUAs): The World Bank, *State and Trends of the Carbon Market 2012*.
- 31 European Commission, "Proposal for a Decision of the European Parliament and of the Council concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC," Jan. 2014, ec.europa.eu/clima/policies/ets/reform/docs/com_2014_20_en.pdf.
- 32 European Commission, "Questions and answers on the proposed market stability reserve for the EU emissions trading system," Jan. 22, 2014, europa.eu/rapid/press-release_MEMO-14-39_en.htm.
- 33 European Council, EUCO 169/14, Brussels, Oct. 24, 2014.
- 34 European Commission, "Revision for phase 4

- (2021-2030),” ec.europa.eu/clima/policies/ets/revision/index_en.htm.
- 35 “EU should revisit its climate policies, say Swedish lawmakers,” *Carbon Pulse*, Jan. 7, 2016.
- 36 The World Bank, *State and Trends*, p. 14.
- 37 The World Bank, *State and Trends*, p. 56.
- 38 European Commission, “Revision for phase 4.”
- 39 Femke de Jong, “Webinar – Role of carbon markets under the Paris climate treaty and impact on EU’s climate policies,” *Carbon Market Watch*, Nov. 24, 2015, carbonmarketwatch.org/webinar-invitation-role-of-carbon-markets-under-the-paris-climate-treaty-and-impact-on-eus-climate-policies/.
- 40 The World Bank, *State and Trends*, p. 62.
- 41 See, for example, “USW Cites New Report on Needed Provisions in Senate Clean Energy Bill,” *United Steelworkers of America*, Oct. 2, 2009, usw.org/news/media-center/releases/2009/usw-cites-new-report-on-needed-provisions-in-senate-clean-energy-bill.
- 42 ETUC, *What is the ETUC?*
- 43 “The European Social Model is an example for the rest of the world of a society based on social justice and solidarity, where economic and social advancement take equal priority, and where decent work and social protection combat poverty and social exclusion. That is why the success of Social Europe is so important not only for European citizens, but also for developing just and fair political systems in other countries.” ETUC, June 2006.
- 44 ETUC, *ETUC position on the revision of the EU Emissions trading directive*, June 5, 2007, etuc.org/documents/etuc-position-revision-eu-emissions-trading-directive#.VomRKFKGbX8.
- 45 Trade Union Sustainable Development Advisory Committee (TUSDAC), 2007, cited by Paul Hampton, *Workers & Unions for Climate Solidarity: Tackling Climate Change in a Neoliberal World*, Routledge, 2015.
- 46 ETUC, *ETUC’s position on the climate change and energy package*, Mar. 4, 2008 etuc.org/documents/etuc%E2%80%99s-position-climate-change-and-energy-package#.VpKnUIKGbX8.
- 47 ETUC, *ETUC’s position on the climate change and energy package*.
- 48 The EU’s 20-20-20 goals (20% increase in energy efficiency, 20% reduction of CO2 emissions, and 20% renewables by 2020). See more at “The 20-20-20 Goals,” ESMIG, esmig.eu/page/20-20-20-goals#sthash.93SNncFk.dpuf.
- 49 IndustriALL European Trade Union, “About Us,” industriall-europe.eu/about/about.asp?mloc=puba&abo=secr#bb.
- 50 Aleksandra Lis, *Making a Market: The Problem of Polish Carbon in EU Climate Policies*, PhD Dissertation in Sociology and Social Anthropology, Central European University, Budapest, May 2012.
- 51 See Hampton, *Workers & Unions for Climate Solidarity*, chapter 4, for a discussion on the “carbon leakage” debate in the UK trade union movement.
- 52 Quoted by Hampton, *Workers & Unions for Climate Solidarity*, chapter 4.
- 53 ETUC Executive Committee Statement, Jan. 22, 2013.
- 54 “ETS RIP?” *The Economist*, Apr. 20, 2013.
- 55 ETUC Executive Committee Statement, Jan 22, 2013.
- 56 ETUC, *The Fight Against Climate Change in Europe and the World*, June 5, 2013.
- 57 ETUC, Position on the Structural Reform of the EU Emissions Trading System, Dec, 16-17, 2015, etuc.org/documents/position-structural-reform-eu-emissions-trading-system#.VoPSclKGbX9.
- 58 Some US unions had supported a similar proposal (called a border adjustment mechanism) during the 2008-2009 discussions on a congressional climate bill that would have put in place a national ETS covering 70% of the economy. The bill was defeated and there has been no effort to set up a national ETS since.
- 59 ETUC, “No jobs on a dead planet,” press release, Oct. 20, 2014.
- 60 For a study on carbon leakage, see M. Sato and A. Dechezleprêtre, *Asymmetric Industrial Energy Prices and International Trade*, working paper, Grantham Research Institute on Climate Change and the Environment, 2015, lse.ac.uk/GranthamInstitute/publication/asymmetric-industrial-energy-prices-and-international-trade/.
- 61 Public Services International, press release, Dec 3, 2015.
- 62 ITF, “ITF Climate Change Conference: Discussion Document,” 2010. itfglobal.org/en/resources/training-education/itf-climate-change-conference-discussion-document/.
- 63 Béla Galgóczi, ed., *Europe’s energy transformation in the austerity trap*, Brussels: European Trade Union Institute, 2015.



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