
Life Beyond Emissions Trading



Summary

What would fill the void if the EU Emissions Trading System (EU ETS) were allowed to collapse? This briefing shows that ending the ETS would not leave a climate policy void. Emissions trading has awarded huge subsidies to some of the EU's most polluting industries while at the same time failing to reduce greenhouse gas emissions and undermining other environmental measures. As the EU debates a 2030 climate and energy package, it should seek ambitious targets for greenhouse gases, renewable energy and energy efficiency – but targets are not enough. The EU should take a greater role in directly regulating greenhouse gas emissions at source. The existing policy framework could be made more robust by extending the Industrial Emissions Directive to regulate greenhouse gases, strengthening the Energy Efficiency Directive, and reforming the Effort Sharing Decision to exclude the use of carbon offsets. There should also be debate on what role the EU can play. Returning to a patchwork of national legislation would weaken the EU's ability to address climate change, with some countries' inaction putting pressure on others to weaken their own policies. At the same time, citizens' movements at local and national levels are key in achieving broader transformations. Germany's *Energiewende* [energy transition], despite some serious implementation problems, shows the positive role that popular pressure can play in reducing greenhouse gas emissions. Recent efforts to remunicipalise energy supplies also serve as a reminder that public ownership of infrastructure is a key condition for creating the scale of shift required to address climate change.



As the EU debates a 2030 climate and energy package, it should seek ambitious targets for greenhouse gases, renewable energy and energy efficiency – but targets are not enough. The EU should take a greater role in directly regulating greenhouse gas emissions at source.

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Authored by Oscar Reyes

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Introduction

The Emissions Trading System (ETS) is the European Union's flagship climate policy and it is sinking fast, as even some of its biggest supporters now recognise.¹ The scheme is intended to establish a legal limit (or "cap") on carbon dioxide emissions (and more recently, those of other greenhouse gases) by making it expensive to pollute beyond this limit. It gives incentives to companies who pollute less by allowing them to trade surplus permits with other companies. But the cap has been so generous that permits have been over-abundant and their price has collapsed. Traders have lost interest as a result. More damningly, the scheme has been invoked time and again to undermine more effective forms of direct emissions regulation.

The European Commission's "backloading" proposal is the latest measure to keep the ETS afloat by delaying the auction of carbon permits in the hope of artificially boosting the carbon price. But a European Parliament vote and European Commission approval for backloading in December 2013 failed to increase the carbon price, and analysts predict modest gains at best.² In short, the Commission has re-arranged the deckchairs but the ship is still going down.

CEO and others have consistently argued that the ETS is flawed by design and should be scrapped – a position that has been borne out by events.³ A common response to calls to scrap the ETS has been the question of what should fill the void. This briefing does not set out to offer a single, over-arching alternative to the ETS, but given the carbon market's failure, maps out the terrain of climate and energy-related measures that are needed to address climate change.

In the first section of this briefing, we explain why **the ETS is unreformable and should be scrapped**. It's not simply a question of low prices rendering the incentives to cut carbon meaningless. The problem is built into the system, which sets up the wrong incentives, providing subsidies to polluting industries and actually weakening other environmental regulation at a time when the EU should be pursuing the transformation of its energy infrastructure and industrial production. The performance of the ETS in practice has also been dire, with significant lobbying, alongside

governments' protectionism, resulting in permits (over-) allocated according to priorities of the "competitiveness" of European industry in international markets rather than environmental concerns.

The second section looks at **how emissions trading schemes die**. It examines various precedents, including the case of sulphur trading in the USA and the Chicago Climate Exchange, which have floundered amidst a lack of ambition, conflicting regulations and/or a dearth of traders resulting in a sustained price collapse. These markets then wound themselves down, sometimes long in advance of being formally terminated.

A similar situation is facing the EU's ETS. The formal basis for the scheme suggests that it can continue beyond the end of its current trading period in 2020 without further legislation. But this does not mean that no alternative action is possible before this date; while it would be preferable to end the scheme altogether, it is already possible to legislate around a 'zombie' ETS without actually repealing it.

The third section looks at the relative merits of **carbon taxes**. It notes several advantages over carbon trading, from their comparative simplicity, to the fact that they would cut out an array of brokers and speculators who profit from the system without contributing any environmental or social benefit.⁴ But the failure of previous attempts to raise a Europe-wide carbon tax hangs like a shadow over this policy option, and the historical record suggests that any such



tax could be accompanied by exemptions and rebates for many energy intensive sectors.

More promising signs are to be found at the level of **national transition planning**, which is the subject of the fourth section. Taking Germany's *Energiewende* as an example, it shows how national action can be spurred on by grassroots mobilisation and community initiatives. In particular, feed-in tariffs – which pay for renewable electricity that individuals and businesses contribute to the grid – have served to stimulate the uptake of renewables, but this approach has been challenged by the big utilities fearing a loss of market share, who have pressured the government to put a break on the country's energy transition. Citizens' initiatives to remunicipalise energy systems, including a successful referendum in Hamburg, show the importance of electricity market structure and ownership to any transition. Key national contributions to action also include policy support and fiscal incentives to reduce energy demand, in particular through building renovation.

In the fifth section, the focus broadens out to look at the framework of **EU climate policy beyond emissions trading**. A combination of multiple greenhouse gas, renewable energy and energy efficiency targets is preferable to a single emissions reduction target, and this issue is likely to be central to debates on the EU's 2030 climate and energy package. But it is worth stressing that no amount of targets can compensate for a lack of ambition or political will.

The EU's 2030 discussion should not distract from the need to strengthen its more immediate targets. In this regard, the Effort Sharing Decision, which covers over half of EU greenhouse gas emissions, should be a priority. The ESD should be extended beyond the current target of a 10 per cent greenhouse gas emissions reduction target (compared to 1990 levels) by 2020, while carbon offsets should be disbarred from the criteria to comply with this target.

In the longer term, direct regulation to set emissions limits and performance standards, as well as mandating reductions in energy demand, should be at the centre of the EU's approach to climate policy. To some extent the framework for this already exists, including through the strengthening of the Energy Efficiency Directive, and the expansion of the Industrial Emissions Directive to set "best practice standards" in relation to greenhouse gas emissions. These policies are explained in more detail below.

It is difficult to imagine progress on climate change without at the same time addressing **EU energy policy**, the subject of the sixth section. In the absence of emissions trading, a revised Energy Taxation Directive could raise minimum prices and close tax loopholes, especially on aviation and shipping fuels. The Commission should also stop its attempts to undermine feed-in tariffs, and act decisively against illegal state subsidies to nuclear power. The EU should also plan for energy infrastructure, including grids, that move decisively away from fossil fuels and large centralised nuclear power stations.

Such measures are difficult to envisage without changes to how the EU itself operates. The final section looks at this **bigger picture**, including the role that industry lobbying plays in setting the EU agenda. The embrace of international trade liberalisation sets the stage for the further weakening of climate standards, targets and policies. If the EU is to get serious about addressing climate change, a far more radical transformation of its energy system is needed than Commission policy makers currently countenance. National shifts driven by grassroots action are likely to be the main actors in bringing about such a change. EU policy could help this transformation, but to do so it must first bring to an end the system of emissions trading that serves most the interests of governments and industries that are opposed to such a shift.

Why the EU Emissions Trading System must go⁵

The EU Emissions Trading System (EU ETS) is a failed policy. It has awarded huge subsidies to some of the EU's most polluting industries while at the same time failing to reduce greenhouse gas emissions (even though, as we shall see below, some sectors have seen falls for unrelated reasons).⁶ At the same time, the ETS has undermined or blocked the adoption of a wide range of other environmental policies.

Incredibly, the EU's Integrated Pollution Prevention and Control (IPPC) Directive was modified to explicitly *exclude* CO₂ emission limits for the "installations" (power stations and industrial plants) which are covered by the EU ETS amid fears that it could lead to energy efficiency improvements, reducing demand for emissions allowances and in so doing weaken carbon prices.⁷ Similarly, the revision of the Energy Taxation Directive was weakened for fear of affecting carbon prices, and loopholes that exempt aviation and shipping fuels from minimum tax rates were maintained on account of the ETS.⁸ Leaked documents (from 2007) suggested that the UK government sought to weaken energy efficiency measures and renewable energy targets on the grounds that these could collapse the carbon price.⁹ And a recent European Commission Impact Assessment on the proposed inclusion of industrial sectors in EU energy efficiency regulations suggested a scenario in which the carbon price could collapse to zero.¹⁰ This led to an absurd situation in which advisers to the EU's Directorate-General (DG) on Climate Action warned against tough efficiency measures.¹¹

The massive over-allocation of emissions permits, meanwhile, has resulted in EU-wide targets on greenhouse gas emissions being treated as a ceiling on ambition rather than a floor. The ETS creates a means for countries that under-achieve their targets to avoid domestic action by cheaply purchasing emissions allowances from elsewhere. More pressingly, a huge system-wide surplus of allowances (inflated by the use of offsets) has built up, which can be "banked" for use after 2020. The net effect is that it is "cancelling out the abatement that is being delivered by other policies such as the Renewable Energy Supply Directive and the Energy Efficiency Directive."¹² This is compounded by the fact that the EU's target of 20 per cent emissions reductions by 2020 is widely acknowledged to be too low.¹³

The stated aim of the ETS is to put a price on carbon, providing a financial incentive for companies to cut their pollution and, ultimately, invest in cleaner energy sources and more efficient technologies. It has not done so, and nor has it cut carbon emissions.¹⁴ European carbon prices have been consistently unstable, crashing in April 2006 and November 2008 and declining further since then. When the EU carbon price fell below €7 in spring 2012, Stephanie Pfeifer, Executive Director of the Institutional Investors Group on Climate Change (IIGCC) representing investors and pension funds, commented that: "The EU ETS was expected to support emission reductions by catalysing innovation and driving investment in low carbon solutions. This is not happening."¹⁵ The price has since slumped below €5, and it remains at that level as this report goes to press (January 2014), even after the EU Parliament and Commission passed a "backloading proposal" intended to bolster the carbon price.¹⁶

Some defenders of the scheme have sought to deflect criticism by suggesting that price is "fundamentally the wrong focus", and that CO₂ emissions in industrial sectors covered by the scheme are falling.¹⁷ This is disingenuous. A carbon price is the causal mechanism by which the ETS is intended to reduce emissions. If prices are negligible and emissions are still falling, then we need to look elsewhere to explain what has caused that fall. In fact, there are no shortage of candidates: the outsourcing of manufacturing beyond Europe, an EU-wide recession, changes in commodity prices, and in some cases renewable energy policies like feed-in tariffs that have promoted some switching in electricity generation capacity.¹⁸

But we also need to take a deeper look at why carbon has stubbornly refused to "sit down, shut up and behave like a proper commodity".¹⁹ After eight years of low and fluctuating prices, it is clear that the system's failure to put an

“adequate price” on carbon is not simply due to bad luck, bad timing or poor administrative decisions – even if those have all played a part.²⁰ In theory, a cap and trade system should set a limit that creates a scarcity of carbon permits, which is what gives them a market value sufficient to meet the environmental goal. In practice, that has not happened, as (predictably) the system is not simply established according to environmental interests. Significant lobbying, alongside governments’ protectionism, has consistently seen permits allocated according to competitiveness rather than environmental concerns. Too many permits have been handed out in total, which is of particular benefit to energy-intensive industry and countries with a high proportion of coal in their electricity mix.²¹

The distribution of permits has reinforced inaction and resulted in large subsidies for some of the most polluting firms. Industrial sectors (notably steel and cement) have consistently been awarded far more permits than they have needed for compliance with the “cap”, resulting in a surplus that they can sell for profit or keep hold of to delay reducing their CO₂ emissions. The power sector has had relatively tighter allocations, since it can simply “pass through” costs to consumers. Indeed, the performance of the whole system may better be conceived of as an industrial subsidy scheme.²² Estimates for the first phase of the scheme (2005-2007) suggest that power companies gained €19 billion in windfall profits by passing on to consumers the cost of permits that it was awarded for free, and stood between €23 and €71 billion in the second phase of the scheme (to 2012).²³ Manufacturers also stood to gain an estimated €14 billion by passing costs they hadn’t actually incurred onto consumers, as well as a further €6 billion in the value of over-allocated emissions permits.²⁴

The current phase of the scheme, which runs from 2013 to 2020, has ushered in significant changes in how allocations of permits happen, with Brussels playing a far more central role, but it has not entirely altered this dynamic.²⁵ Manufacturers still get a significant proportion of emissions permits for free, whilst changes to State Aid rules allow energy intensive industries to be compensated for any increase in energy prices as a result of the ETS. As Saskia

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Ozinga of the NGO FERN points out, “calculations to evaluate eligibility for State Aid contributions for indirect EU ETS costs are based on a carbon price that is over 1000% higher than the real price of carbon.”²⁶

In October 2012, the Commission opened a debate on a series of possible “structural reforms” to the ETS, ranging from higher greenhouse gas targets and limits on international offset credits, through to “bringing more sectors into the EU ETS,” although there is no clear legislative path to implementing these measures.²⁷ The belated recognition that the system has serious problems is welcome, although the framing of possible reforms does not actually address the structural problems of ETS itself, which run far deeper than the problems of poor allocation, inadequate pricing and misplaced subsidies.

Establishing a system of carbon pricing (trading or taxation) sets up the wrong incentives for a transformation of the energy system – a key component of what any EU environmental policy should set out to do. A marginally higher carbon price may, at best, incentivise a short-term switch from coal to gas-fired power production, but this kind of incrementalism also serves to lock-in a reliance on fossil fuel technologies rather than breaking with them.²⁸ In the unlikely event that a higher price was sustained, nuclear, carbon capture and storage, and biomass would be the probable beneficiaries.²⁹ But any such judgement should be exercised with caution, since there are many other economic, institutional and regulatory factors that shape the development of energy infrastructure, as well as the future of EU industry and the extent to which it adopts and develops cleaner technologies.³⁰

How Emissions Trading Systems die

This is the way emissions trading ends: not with a bang, but with a whimper. A lack of ambition, conflicting regulations, or a dearth of traders leads to a collapse in prices. Policy makers get cold feet. Market participants withdraw, trading dwindles, and the carbon price closes on zero. The market starts to wind down, with formal legal closure coming almost as an afterthought.

The first wide-scale experiment in trading emissions was the 1990 US Clean Air Amendment Act, which inaugurated a programme of sulphur dioxide trading to curb acid rain. While SO₂ emissions from power plants reduced even as overall electricity generation increased,³¹ subsequent research has found that this had more to do with technological improvements that pre-dated the scheme, alongside a reduction in transport costs that made low-sulphur coal far more readily available in the USA.³²

Despite this, the Acid Rain programme was sold as a model for the (far more complex) system of greenhouse gas emissions trading, even though it hit the buffers when it came into conflict with US state-level air quality legislation.³³ From a peak of \$1,200 per ton in 2005, permits fell off to \$115 in July 2008 and collapsed to just \$0.12 by the time they were auctioned in 2012 as the demand for allowances had been “virtually eliminated”.³⁴

This offers a first lesson in how emissions trading schemes die. Although SO₂ trading remains legally in force in the USA, it has been rendered irrelevant by other regulations and a collapse in permit prices.

The second main way in which “cap and trade”-style emissions trading schemes have come to an end is simply a failure to issue new allowances once a fixed period over which reductions are scheduled to take place has come to an end. Take, for example, the internal trading scheme run by oil-giant BP, which was a major pillar of the company’s effort to lobby for an EU ETS rather than a carbon tax.³⁵ Many of the projects BP claimed to have implemented as a result of emissions trading were already under way when the scheme began.³⁶ Combined with the fact that BP anticipated business growth that never materialised, the scheme was left with a significant surplus of permits.³⁷ Trading remained thin and, at the end of 2001, the task force charged

with running the scheme announced a “temporary” suspension to adjust the trading rules.³⁸ No new caps were announced and, with the existing (lax) targets already met, the scheme was discontinued.³⁹

A similar story can be told of the UK Emissions Trading Scheme, launched with the aim of encouraging the EU as a whole to adopt carbon trading. The firms that took part in this voluntary market, which began in 2002, easily met and often exceeded their emissions reduction targets. Just four firms accounted for over half of the trading, gaining large state subsidies for undertaking cheap and simple modifications to their industrial practices.⁴⁰ The scheme formally ended in 2007, by which time it had been superseded by the EU ETS.

Likewise, the Chicago Climate Exchange, which ran the first cap and trade scheme for CO₂ emissions in the US, closed its doors in December 2010 – the end of the period for which CCX participants had voluntarily made emissions “reduction” commitments. No renewal of these commitments was sought, since trading had already collapsed, with permits virtually worthless and no trades in almost a year preceding its formal closure.⁴¹

In the EU, we see a repeat of these familiar patterns. The infrastructure for trading emissions permits is already falling into disrepair, although the edifice has yet to fully collapse. Bluenext, the second largest of the exchanges on which European permits were traded, shut its doors in December 2012. The spot market, which trades carbon allowances in real time (“on the spot”) rather than as futures, has never recovered from a series of fraud cases. In London, where the majority of carbon trading takes place, the number of traders has fallen by 70 per cent over the past four years, and 10 banks have significantly scaled back or pulled out of carbon trading altogether.⁴²

The UN's Clean Development Mechanism (CDM), the world's largest carbon offsetting scheme, is in an even worse state. Companies involved in the EU ETS are the largest buyers of carbon credits generated by the CDM, and can currently pick these up for less than half a Euro per ton.⁴³ That makes pollution in the EU very cheap, but has seen a lot of the CDM's emissions reporting and trading infrastructure mothballed.⁴⁴ Trading desks at major investment houses are shutting down, credit purchase agreements have been unilaterally torn up, and numerous CDM projects and project developers risk default.⁴⁵



Ending the EU ETS: Legal Pathways and Roadblocks

The 2009 Emissions Trading Directive allows for the continuation of the ETS beyond the end of its current trading period in 2020 without further EU-wide decisions being made.⁴⁶ Ending the ETS therefore requires a new Directive stating that the scheme has been repealed. In addition, several other EU Directives and Decisions that presume the existence of the ETS would need to be amended or repealed.⁴⁷ The groundwork for this could (if the Commission so chose) be laid in the context of the 2030 package, since the ETS is ultimately premised upon the adoption of internationally binding targets.

A further issue to contend with is the enthusiasm of DG Climate Action for the emissions trading system. Many of the leading figures in that department have made their careers off the back of emissions trading, including Director General Jos Delbeke and

Commissioner Hedegaard's Chef de Cabinet Peter Vis, both of whom played a key role in founding the scheme.⁴⁸ That gives DG Climate Action the upper hand in preventing the repeal of emissions trading, although according to the Treaty on the Functioning of the EU the European Parliament and/or the Council could "request" or "propose" that the Commission consider cancelling the scheme.⁴⁹ Another possibility could involve reforming the structure of DG Climate Action, although that risks handing power to the more industry-friendly DG Energy unless handled with sensitivity.

Irrespective of the legal roadblocks, it would be possible to legislate around a zombie ETS without formally repealing it. Strengthening the Energy Efficiency Directive could, as DG Climate advisers warned, further collapse the price of carbon permits, rendering the scheme

irrelevant. The Effort Sharing Decision, which covers emissions in sectors not covered by the ETS, could be extended (while at the same time ruling out the use of offsets to comply with that Decision). Direct regulation of CO₂ and other greenhouse gases under a revised Industrial Emissions Directive would have a similar effect. Greenhouse gas emissions reporting could be amended to strip out the trading element.⁵⁰ The terms of the Energy Taxation Directive could be strengthened to raise statutory minimums and close loopholes (especially on aviation and shipping). We will examine these proposals in further detail below, but it should already be clear that legal continuation of a zombie ETS should not be an impediment to the strengthening of other climate measures that oblige companies and EU member states to curb their emissions.

Back to the Future: Carbon Taxes

As the failures of emissions trading become more obvious, carbon taxes are being proposed again at both EU and national levels – despite the fact that the failure to impose a carbon tax was arguably one of the main reasons why Commission officials put their weight behind emissions trading in the first place.⁵¹

In 1991, the European Commission responded to the first report of the Intergovernmental Panel on Climate Change (IPCC) with a proposed a carbon tax that would have placed a \$3/ton levy on the carbon content of fossil fuels (rising by \$1/ton until 2000), and a further tax on all forms of non-renewable energy.⁵² It failed, amidst suspicions from several member states regarding any direct fiscal role for Brussels.⁵³

There is little reason to think that a Europe-wide carbon tax would fare any better, politically, a second time around – although, in theory, carbon taxes do overcome some of the problems associated with emissions trading. Notably, given the many loopholes and opportunities for gaming the system that have beset the ETS, it is relatively simple to levy an emissions tax.⁵⁴ Cap and trade schemes typically involve complex estimates and negotiations to set emissions “baselines” (the starting point against which reductions are measured) and make sectoral allocations.⁵⁵ This can give polluters the upper hand, since regulators are often highly reliant upon expertise from the very companies they are regulating. Emissions trading schemes also require strict regulations to ensure against “double counting” of emissions reductions and other fraudulent practices.⁵⁶ A tax requires none of these elements, as well as doing away with the brokers and speculators who profit from the system without any environmental or social benefit.⁵⁷

Proponents of carbon taxes also point out that they offer far greater consistency in pricing carbon than emissions trading does.⁵⁸ That predictability would result in greater certainty for businesses which, in turn, may strengthen the case for renewables and efficiency when making investment decisions on new power generation or industrial capacity. The potential impact should not be over-stated, however. The levels of taxation under any Europe-wide tax are unlikely to be of the order of magnitude required to change corporate behaviour, and are no substitute for non-fiscal measures such as improved state planning,

public ownership of utilities or direct regulation.⁵⁹ The lobby pressure that heavy industry applies on carbon trading would be the same for a carbon tax, and it would likely see rebates or exemptions for heavy industry that claims significant exposure to so-called “carbon leakage.”⁶⁰

A further argument in favour of carbon taxes suggests that they could raise revenue that might then be invested in renewable energy and energy efficiency, although the experience of similar ring-fencing is that national treasuries tend to cut other payments in equivalent amounts to what such funds raise. The nature of “clean” energy expenditure is also contested. For example, industry lobbying meant that the auction of 300 million permits as part of ETS “New Entrants Reserve” now provides revenues mostly for Carbon Capture and Storage, locking in fossil fuel use and delaying a transition to renewables.⁶¹

Carbon taxes need not raise funds, however, and some proponents of them argue that it is better if they do not do so.⁶² One of the biggest drawbacks of carbon taxes is that they threaten to hit the poorest people hardest.⁶³ A “cap and dividend” approach would redistribute the revenues raised by the tax to ensure that they do not exacerbate inequality. But it is not clear that things would work this way in a Brussels context. Indeed, the historical precedent suggests that any redistribution would not compensate for the effects of imposing a regressive tax on individuals (disproportionately impacting the poorest people), but rather that major industries would be offered concessions and opt outs.⁶⁴ For example, when the Commission first laid out its carbon tax in 1991, it considered exempting steel, chemicals, non-ferrous, cement, glass and pulp and paper sectors on competition grounds.⁶⁵ Those same sectors have continually lobbied (with some success) for lax allocations and rebates under the ETS.

Despite the Realpolitik argument that “carbon pricing” is the only viable climate policy future for the EU, the failure of previous attempts to raise an EU-wide carbon tax hangs like a shadow over this policy option. The UK-led objections to granting the Commission revenue-raising powers with its carbon tax proposal in 1992 were based on fears that this might be the thin end of the wedge. With the present UK Government currently undertaking a review of the “balance of competencies” between Westminster and Brussels, and pledging a referendum on EU membership, it is unlikely to have softened its stance since.⁶⁶ An alternative implementation that would see tax revenues handled at the national level may find more support, but it would be unlikely that the Commission could then ring-fence revenues for use on climate-related projects.

Ultimately, carbon taxes and trading work on the same principle that a price on carbon “internalises” the costs of greenhouse gas emissions rather than allowing companies to pollute for free.⁶⁷ But this comes at the cost of reframing the problem of climate change in economic terms, which can close down larger questions about the social and environmental impacts of the EU’s promotion of a neoliberal global economic model, and the implications of a continued reliance upon fossil fuels.⁶⁸

Underlying both carbon taxes and trading is an assumption that incremental cost changes will eventually redirect investment. But this type of incrementalism is inadequate

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to the scale of the challenge posed by climate change.⁶⁹ If energy and industrial systems are to be transformed away from emitting greenhouse gases, then we cannot afford to “lock in” a reliance on fossil fuels. Yet that is precisely the kind of incentive that pricing gives, encouraging quick fixes to patch up outmoded factories, or switch from coal to gas electricity, but delaying more fundamental changes.

Finally, it is important to distinguish between the role of carbon taxes, and the role that fiscal policy in general can play. As we shall show later, shifting subsidies and energy tax alterations could play a role in any future EU climate policy without conceiving of a new carbon tax to “replace” some or all of the ETS.

National Transition Planning

In Brussels, one of the most commonly heard refrains in climate debates is that the end of the ETS would leave a policy void. Yet the Commission is by no means the only source of legislation on climate and energy matters. The ETS currently covers less than half of EU emissions, principally in the electricity sector, with the rest covered by policies developed at a national or local level to comply with the Effort Sharing Decision. That includes several sectors, most notably transport (excluding international aviation), energy use in households and commercial buildings, and agriculture.⁷⁰

While the European Commission accords different administrative departments (Directorates General) to “climate” and “energy” policy, it is difficult to imagine progress on the former without also addressing the latter. It should be noted, too, that the EU has only limited responsibility for energy policy under the Lisbon treaty – a “competence” it shares with national governments.⁷¹ In considering what is appropriate at European level, then, we should first consider what happens at the level of nation states. The example of Germany, which has the most far-reaching energy transition plan of any industrialised country, can help here.

The German Energy Transformation

Germany’s *Energiewende* [energy transition] offers an ambitious long-term vision for cutting greenhouse gas emissions, phasing out nuclear power, expanding renewable energy and halving electricity consumption, all while keeping the economy afloat.⁷²

The *Energiewende* is anchored by a series of targets – an 80 to 95 per cent reduction in greenhouse gas emissions by 2050 compared to 1990 levels, ramping up renewables to account for 80 per cent of electricity consumption (60 per cent of gross final energy consumption) and halving primary energy use (compared to 2007 levels) by the same date.⁷³

Long-term targets are the stock in trade of politicians everywhere, typically combining an ambitious vision of the future with inaction in the present. The *Energiewende* initially overcame this by imposing intermediate targets, longer than a single electoral term but close enough to require immediate action.⁷⁴ These include separate targets for greenhouse gas emissions, energy efficiency and renewable energy – a

division reflected in current EU debates on the 2030 climate and energy strategy, but that are further broken down. For example, the efficiency targets provide separate objectives for energy use and demand, residential heating efficiency and (less ambitiously) transport, whilst the electricity targets differentiate electricity consumption from final energy use. Beyond percentage reduction targets, the *Energiewende* rules out nuclear power and coal mining (although not coal power itself) as technologies incompatible with the planned transition to renewable energy, and includes a pledge to phase out nuclear power production in Germany by 2022.⁷⁵

Phasing out sunset technologies, while at the same time providing policy support for the spread of renewables, is at the core of the *Energiewende*. Germany’s system of feed-in tariffs has been a crucial element here. Since 1990, German utilities have been required to purchase renewable energy at prices guaranteed as a percentage of the overall retail price of electricity – a measure that secured the expansion of wind power, in particular.

The German Renewable Energy Act 2000 (*Erneuerbare-Energien-Gesetz*, EEG) expanded these measures further: extending the purchase guarantee for 20 years, and calibrating the price formula for different renewable sources (wind, solar, geothermal, etc). The result was a continued expansion in wind power production and a boom in photovoltaics, driven on by falling production and installation costs.⁷⁶ Renewables overall now make up over 40 per cent of installed capacity, and accounted for almost a quarter of Germany’s power generation in 2012, up from 15 per cent in 2008.⁷⁷

This expansion is all the more remarkable for the fact that half of the renewables installed capacity is owned by private individuals: 40 per cent in the form of citizens’ cooperatives, with a further 10 per cent owned by farmers.⁷⁸ Within the



last five years alone, 450 new energy cooperatives have been formed both to provide generation and run local grids.⁷⁹

Despite these successes, the *Energiewende* is far from perfect. In its present form, it raises serious social questions because the additional costs of feed-in tariffs rest with ordinary consumers, rather than being incorporated into state budgets. “That makes the scheme austerity-proof, but it also creates a problem because the wage poor pay relatively more,” says Tazio Mueller, a researcher with the Rosa Luxembourg Stiftung.⁸⁰ The key problem here, he continues, is the fact that manufacturers are exempted from paying their share, thereby pushing the costs onto households. This aspect of the scheme is now subject to a European Commission review on the grounds that exemptions for Germany industry may break State Aid rules that prohibit the payment of subsidies.⁸¹

The *Energiewende* has also had a significant effect on the energy wholesale market, although this has yet to be reformed in response. The fast uptake of solar and wind power has reduced wholesale energy prices (through the so-called “merit order effect”), benefiting consumers while rendering most fossil fuels uncompetitive.⁸² But without market reform or state planning these lower prices can consolidate the place of coal (the cheapest fossil fuel) in the energy mix and increase coal imports.

Combined with the effects of the nuclear phase-out, German energy policy is caught in a state of schizophrenia: boosting renewable energy generation on the one hand, while increasing the country’s reliance (at least in the short term) on coal-fired power stations on the other.⁸³ This reflects a failure to break the stranglehold of the big four utilities in Germany (E.ON, RWE, EnBW and Vattenfall), which have been caught out by the rush to renewable energy in Germany and own just 12 per cent of the total renewables capacity between them.⁸⁴ The increased competitiveness of renewables has seen them mothballing fossil fuel power stations in the face of declining profits.⁸⁵

These companies are seeking to delay and change the nature of the transition. They have sought to undermine public confidence by blaming renewable energy itself for increased

“Between 2007 and mid-2012, over 60 new local public utilities (stadtwerke) have been set up and more than 190 concessions for energy distribution networks – the great majority being electricity distribution networks – have returned to public hands.”

Public Services International Research Unit

energy prices, and have taken advantage of slow progress on transforming the energy grid, which remains oriented around “base load” energy from coal and nuclear power. At the same time, the big utilities are positioning themselves to invest in large-scale offshore projects, including wind farms in the Baltic.⁸⁶ Whether new grids are planned around these large-scale plans, or favour small-to-medium scale regionalisation, will play a major part in how the *Energiewende* develops in future.⁸⁷

If the community controlled and smaller scale renewables pathway wins out, then it will do so through a continuation of the popular support that forms the basis of the *Energiewende* in the first place. As Mueller points out, Germany’s energy transition is a movement success that initially emerged from the country’s anti-nuclear struggles, which fed into both a vibrant “alternatives” movement (favouring peace, ecology and cooperative production) as well as the Green Party.⁸⁸ This laid the basis for a strong opposition to nuclear power, which manifested itself in a political U-turn by Germany’s governing coalition in the aftermath of the Fukushima nuclear disaster.

More recently, citizens’ movements have been instrumental to a process of “remunicipalising” electricity supplies. As the Public Services International Research Unit points out, “Between 2007 and mid-2012, over 60 new local public utilities (stadtwerke) have been set up and more than 190 concessions for energy distribution networks – the great majority being electricity distribution networks – have returned to public hands.”⁸⁹ These *stadtwerke* operate as supply companies, which can either buy or generate electricity. The biggest success of all came in September 2013, when the citizens of Hamburg voted to buy back energy grids that the city had sold to Vattenfall and E.ON over twenty years previously.⁹⁰ A similar referendum was held in Berlin in November 2013 but, despite an overwhelming 81 per cent majority in favour of remunicipalising the city’s energy supply, the vote narrowly missed quorum so the measure did not pass.⁹¹

There is a positive correlation between community ownership and support for a transition to renewable energy. That is likely to be crucial to any transition. The hostility of large utilities, which remain heavily invested in fossil fuels even as they try to expand a niche in renewables, is also a common thread.

The Coalition Agreement that ushered in a new German government in December 2013 contains further setbacks. Under this Agreement, the status of the renewables targets has been changed from setting out minimum requirements to treating these as a “corridor” for the minimum *and maximum* proportion of renewables within the overall energy mix.⁹² Rather than encouraging further renewables, that would act as a brake, slowing the pace of the transition to renewables in favour of keeping the large utilities’ coal-fired power stations open.⁹³ The Agreement also sets limits for onshore wind, favouring the utilities expensive offshore plans.⁹⁴

The battle is far from over, and the *Energiewende* shows that significant inroads can be made if citizens’ movements, including a growing band of small-scale renewables producers, create sufficient political will to force a transition. But the German case shows that this will not succeed without at the same time breaking the stranglehold, and lobby power, of the big commercial utilities.⁹⁵

National Transition Planning

It would be misleading to abstract from one example as the model for other countries, or for the EU itself, but Germany is not the only instance of significant increases in renewable energy capacity in Europe. Wind energy now meets up to 30 per cent of electricity demand in Denmark, 20 per cent in Portugal and 17 per cent in Spain.⁹⁶ Feed-in tariffs were the significant difference in each case, but Portugal and Spain have subsequently seen these slashed in the name of austerity, and under pressure from major energy companies keen to undermine rival small-scale renewables.⁹⁷

In Denmark, feed-in tariffs and a moratorium on the building of new coal-fired power plants spurred a significant increase in wind power in the 1990s, the majority of which was owned by community power co-operatives and farmers.⁹⁸ Just as significantly, the country developed a system of consumer- and municipality-owned Combined Heat and Power plants, engaging in a gradual shift from large-scale (and low-efficiency) power production to a model based on more

localised, not-for-profit supplies.⁹⁹ But a change of government ushered in a new approach in 2000, with the feed-in tariff replaced by new “renewable portfolio standards” for major utilities and the emphasis on community ownership abandoned.¹⁰⁰ Wind power development stalled, and local opposition to new, larger scale projects increased – until, with a change of government, feed-in tariffs were brought back in 2009.¹⁰¹

The key lesson here, as in Germany, is that there is a positive correlation between community ownership and support for a transition to renewable energy. That is likely to be crucial to any transition. The hostility of large utilities, which remain heavily invested in fossil fuels even as they try to expand a niche in renewables, is also a common thread. That was also the case in France, where a feed-in tariff for solar PV was slashed, and a system of tenders for larger renewables contracts was put in place.¹⁰² The resultant system favours larger players, who can afford the risks of bidding for tenders, at the expense of community-controlled projects.¹⁰³

Energy market liberalisation doesn’t actually help here. It has been slow to break down monopolies like EdF in France, while at the same time contributing to the concentration of electricity markets in the hands of a few dominant utilities that have consistently acted to slow the transition away from fossil fuels.¹⁰⁴ Breaking this oligopoly of pan-European utilities will be crucial in advancing climate-friendly energy policies. Big utilities like EdF, which has a significant nuclear portfolio, continue to think in terms of base-load power. But, as the report Zero Carbon Britain points out, “Constant power output (such as that from nuclear power plants) is not helpful in balancing a variable energy supply – it simply leads to further overproduction of energy at times when renewable systems can meet demand.”¹⁰⁵ More effort could instead be put into balancing supply and demand by means of a proactive industrial policy or smart metering.¹⁰⁶ As we saw in the German case though, improvements at national level are often driven by pressure from citizens more locally. Remunicipalisation of electricity supplies, in particular on the distribution side, could make a significant difference to the advancement of renewable energy.

EU Climate Policy: the 2030 Package

As we have seen above, some of the most transformative measures to address climate change come from the bottom up, with citizens' actions driving more progressive national policies, rather than from the EU institutions. Although the EU institutions are unlikely to be the main drivers of the kind of radical transition needed to address climate change, they can nevertheless act as a buffer against any return to the kind of patchwork of national legislation that would allow some countries to avoid taking action altogether.¹⁰⁷

The Commission's "2030 Framework on Climate and Energy Policies" Green Paper, issued in March 2013, fired the starting gun for the debate on EU policies in the longer term, with a White Paper due to setting out the Commission's proposals scheduled for release in January 2014. The number and scale of targets adopted has already proven to be a key battleground.

Some EU member states, notably Poland, are set against any targets being announced in advance of a new international climate agreement, a stance that can be interpreted as wishing to put a block on any new climate action.¹⁰⁸ Others, including the UK, Czech Republic and Finland, have argued that only a single greenhouse gas target is needed, rather than having separate targets for renewable energy and efficiency.¹⁰⁹ The UK advocates a "technology neutral" greenhouse gas target, envisaging a key role for nuclear power, shale gas and carbon capture and storage in meeting climate commitments.¹¹⁰ Although these are not the focus of the current briefing, environmentalists have advanced several cogent criticisms of these "false solutions" to climate change.¹¹¹

The UK also claims that multiple targets conflict with the logic of emissions trading, "depressing the carbon price and potentially increasing the cost of abatement."¹¹² The flexibility that the UK craves is, at the same time, one of the main reasons for persisting with multiple targets, and doing away with the ETS. Emissions trading undermines the integrity of climate targets. In the case of greenhouse gas emissions reductions, it allows companies and countries to cheaply outsource responsibility through offsetting. In the case of renewable energy generation and energy efficiency targets, meanwhile, it places downward pressure on ambition.

Further opposition to multiple targets comes from within the Commission itself, spurred on by industry lobbying. Most notably, the (German) Energy Commissioner Günther Oettinger is opposed to an energy efficiency target, on the grounds that it could harm industry. In this, he is following the position taken by German industrialists Bayer and BASF, which have argued instead for a far weaker "energy intensity" target that would absolve them of responsibility to reduce their greenhouse gas emissions.¹¹³

Too heavy a reliance on targets certainly has its limitations, not least in how these are defined. Most notably, the EU's 10 per cent target for "energy from renewable sources" in transport has stimulated destructive competition between food and fuel crops, exacerbated land grabs and generated displacement effects that result in increased CO₂ emissions.¹¹⁴ Any future renewables targets should apply direct and indirect land use accounting and exclude land-based agrofuels from the definition of renewables altogether.¹¹⁵

Greenhouse gas emissions reduction targets also contain some major loopholes that weaken their impact. Biomass is wrongly treated as carbon neutral; land-use, land-use change and forestry accounting routinely manipulates baselines to massage the figures; and international aviation and shipping are excluded from global emissions accounting altogether.¹¹⁶ These issues are by no means unique to the EU, but the Commission could take a lead in reconsidering how these sectors are counted in its domestic legislation, and argue for the closure of these gaps at an international level – rather than trying to open the gaps wider, as is currently the case.

Despite these limitations, the adoption of separate targets for renewable energy, greenhouse gases and energy efficiency in the context of a 2030 Package would be a progressive measure, making it harder for countries and firms to avoid

action by simply manicuring statistics.¹¹⁷ The adoption of multiple targets also specifically advocates for a transition to renewable energy rather than nuclear power, or untested and expensive carbon capture and storage. Better still, a fourth target on energy consumption could be added to the EU package. Current discussions on a new French energy law provide a precedent for this.¹¹⁸

No amount of targets can compensate for a lack of ambition in their scale, however. The EU presents itself as a “climate leader”, but its current ambition falls a long way short of what is required to meet its share of the responsibility for staying within a global carbon budget that could avoid dangerous climate change.¹¹⁹ The EU’s climate roadmap projects domestic greenhouse gas emissions of up to 40 per cent by 2030, although there is no agreement even on this figure.¹²⁰ As this briefing goes to press, it is being reported that the Commission White Paper may offer a single 40 per cent greenhouse gas target, despite evidence in its own Impact Assessment of 2030 policies suggesting that greater ambition would be financially beneficial.¹²¹ By comparison, research conducted for Friends of the Earth suggests that the EU’s “fair share” of global reductions should be at least 60 to 80 per cent by 2030 (without the use of offsets), while Professor Kevin Anderson of the Tyndall Centre for Climate Change Research suggests that “the Commission must find the courage to pursue an equitable and science-based 2030 decarbonisation target of around 80 per cent.”¹²²

Effort Sharing

The battle over targets in the 2030 Package is politically important, but it should not be allowed to eclipse the role that the EU could play in regulating greenhouse gas emissions, or distract focus from shorter-term changes. The Effort Sharing Decision is a clear case in point.

At present, over half of the EU’s greenhouse gas emissions are covered not by the ETS but by the Effort Sharing Decision, which sets a 2020 reduction target of 10 per cent (compared to 1990 levels) over a range of sectors including transport,

households and commercial buildings, waste and agriculture.¹²³ This target was unambitious even before the EU-wide recession slowed greenhouse gas emissions.¹²⁴ But it is further undermined by the fact that EU member states can use international carbon offsets to meet up to two-thirds of the reductions required under effort sharing by 2020.¹²⁵ To add insult to injury, these offsets can include credits from industrial gas projects that EU climate commissioner Connie Hedegaard criticised for their “total lack of environmental integrity”.¹²⁶

The ESD is a further example of how carbon trading makes weak targets even more lax, outsourcing and undermining even the limited emissions reduction commitments that EU member states have made. Excluding the use of offsets is an important first step in improving the ESD, and could be undertaken even in advance of the 2030 climate and energy package that is now under discussion.

The ESD could provide a “catch-all” framework that encourages member states to regulate greenhouse gas emissions more strictly in areas where other EU targets and standards are weak, such as energy efficiency of buildings and methane emissions.¹²⁷ Its relatively simple regulatory framework could be extended in the absence of emissions trading, and has the merit of calibrating targets according to the relative wealth of EU member states. But it will achieve little without more ambitious targets – and targets alone are not enough.

Energy Efficiency

The Energy Efficiency Directive (EED) imposes legally binding limits for both primary energy consumption (the total source energy, whether fossil fuels or renewables, prior to its transformation into electricity or refined fuels) and final energy (end user consumption, including by manufacturers and households).¹²⁸ These targets are intended to help deliver the EU’s overall target of 20 per cent energy savings by 2020.¹²⁹

The EED also incorporates a number of sector-specific targets. It asks energy distributors and retailers to encourage 1.5 per cent annual savings from their customers – whether



through improved transmission infrastructure, or end use changes such as schemes to upgrade home insulation.¹³⁰ It requires governments to renovate public buildings at a rate of 3 per cent per year to the level of minimum standards set out in the directive of the energy performance of buildings.¹³¹ Countries are also requested to draw up a roadmap for the retrofitting of their entire building sector, including commercial properties and households; roll out new energy use metering systems, and improve their auditing capacity on energy usage.

At best, these measures could lay the groundwork for more radical reforms post-2020 but their potential impact should not be over-stated. Energy efficiency is not the same as energy reduction, as George Monbiot explains:

As efficiency improves, people or companies can use the same amount of energy to produce more services. This means that the cost of energy for any one service has fallen. This has two effects. The first is that money you would otherwise have spent on energy is released to spend on something else. The second is that as processes which use a lot of energy become more efficient, they look more financially attractive than they were before. So when you are deciding what to spend your extra money on, you will invest in more energy-intensive processes than you would otherwise have done. The extraordinary result is that, in a free market, energy efficiency could increase energy use.¹³²

The present EED circumvents this paradox to some extent by setting binding limits on energy use. A more complete response, however, would set higher energy use targets to compensate for the effects of outsourcing manufacturing, which puts many of the emissions generated in the course of making products for European consumers beyond the scope of the EU's existing statistics.¹³³

Direct Regulation

Direct regulation to set emissions limits, standards and mandate reductions in energy demand is likely to form the key set of policies that drive down greenhouse gas emissions in the short to medium term.¹³⁴ Unlike carbon markets, which make marginal changes by design, direct regulation can be set to encourage a “step change” in our approach to greenhouse gas emissions. Admittedly, such policies are subject to significant lobbying from both major industries and nation states acting in the interests of particular industries – a point to which we will return. But to start with, it is worth noting that EU climate and energy policy already contains a broad package of direct regulatory measures that could be used as the legislative basis for a more robust EU-level climate policy framework.¹³⁵

In the absence of emissions trading, the Industrial Emissions Directive (IED) could be extended to coverage of greenhouse gases.¹³⁶ The new legislation, which consolidates and strengthens seven existing directives, applies a series of emissions limits from 2016 onwards.¹³⁷

There is considerable overlap between the installations covered by this Directive, and those currently covered by the ETS. As such, the extension of limits under the IED could result in the streamlining of environmental legislation. That would likely win a measure of support amongst smaller businesses concerned with the administrative burden of multiple regulations, although it may cause greater controversy within the European Commission, since the IED is administered by the Directorate General for Environment rather than DG Climate Action.

Unlike carbon markets, which make marginal changes by design, direct regulation can be set to encourage a “step change” in our approach to greenhouse gas emissions.

Incorporating greenhouse gas emissions under the IED, or similar measures such as the adoption of CO₂ Emissions Performance Standards for power plants, would mark a significant improvement upon the ETS. Direct regulation can force the worst polluters to clean up their act and, in stark contrast to the ETS, it enforces the closure of some of Europe’s most heavily polluting coal-fired power stations.¹³⁸ It can also act as a stimulus for innovation.¹³⁹

Energy use in buildings is also controlled by direct regulation at EU level. The Directive on the Energy Performance of Buildings (2010/31/EU) sets out minimum requirements for the thermal characteristics, heat insulation, hot water supply, air conditioning, and built-in lighting installations of new buildings.¹⁴⁰ The EED extends these terms to government buildings. But with the building sector accounting for around 40 per cent of the EU’s total energy consumption,¹⁴¹ there remains further scope to extend EU-wide regulations encouraging national planning to support the retrofitting of commercial and residential housing stock up to these standards too.

Elsewhere, the Ecodesign Directive sets out a framework for the adoption of mandatory minimum requirements for a broad range of energy-using products, including boilers, air conditioning, fridges, light bulbs, televisions and windows.¹⁴² As a “framework directive,” it establishes the principles and criteria for setting targets, but remains open for expansion to other energy-related products, except means of transport.

Vehicle transport is covered by other regulations, most notably the Cars Regulation,¹⁴³ an equivalent Regulation on Vans (“light commercial vehicles”)¹⁴⁴ and the Fuel Quality Directive.¹⁴⁵ In July 2013, a new limit of 95 grams of CO₂ per kilometre for the average new car by 2020 was agreed. However, delays and loopholes were introduced by German government lobbying on behalf of its luxury car-makers.¹⁴⁶

In strengthening and extending such regulations, the EU’s monitoring and technical capacity would also need to be increased. The Commission’s energy efficiency work is severely under-staffed.¹⁴⁷ Its capacity to monitor the implementation of regulations on energy-use is also stretched. Implementation falls under “market surveillance” (part of DG Enterprise), but its regulators tend to have the capacity and competence to focus on safety rather than compliance with energy design, ecodesign and eco-labelling rules – leading to differential application across member states.¹⁴⁸ National regulators are also typically under-staffed.

Direct regulation alone is not enough to steer a transition away from fossil fuels, however. The adoption of emissions standards as part of the European Investment Bank’s new energy policy offers a precedent for considering how extending regulations would play out. The Bank’s new rules set Emissions Performance Standards that ostensibly prohibit the funding of coal-fired power stations.¹⁴⁹ But it also suggests that exceptions can be made if plants are needed for “security of supply”, the criteria for which are left troublingly vague.¹⁵⁰ Coal plants can also scrape under this performance bar by co-firing with biomass, or with the promise of (unproven) “carbon capture and storage” techniques, while lending to gas-fired power stations would still comfortably conform with the new standard.¹⁵¹ Similar loopholes would likely be encouraged in attempts to incorporate greenhouse gases within the IED. The UK, Italy and Poland have already negotiated a delay in the closure of some of the most polluting coal plants until up to 2020.¹⁵²

At the same time, there is considerable scope for lobbying and industry manipulation in the drawing up of new “best available technique” (BAT) standards since these are based on, and assessed by, the corporations that are themselves being regulated.¹⁵³ In common with other such standards, setting out the best techniques refers only to the adoption of technologies, but does not in itself regulate how efficiency equipment is then used. National and EU regulators lack the competence and capacity to address this issue.

Energy Policy

Taking action on climate change does not begin or end with climate policy. The EU's energy and trade policies, its infrastructure expenditure and development lending, its overall growth strategy, and even its constitutional basis, are all important to assessing the bloc's role in causing climate change – and its capacity to address it.

There are four major areas where the EU's institutional presence could be felt, for good or ill, in transforming Europe's energy infrastructure: energy taxes, liberalisation and market reform, subsidy shifting and energy infrastructure development.

Energy Taxes

We saw earlier that there are significant political and practical limitations to the imposition of an EU wide carbon tax. Yet the EU already regulates minimum levels of taxation of energy products and electricity under the “Community framework for the taxation of energy products and electricity”.¹⁵⁴ In 2011, it proposed a revised Energy Tax Directive that would set new criteria based on CO₂ emissions and energy content.¹⁵⁵ But this has met considerable resistance from EU member states, led by France, Germany, Poland, and Luxembourg.

As things stand, the Directive contains many loopholes, the most notable of which relates to Aviation and Shipping. The Commission is intent upon continuing these exemptions, however, on the basis of their inclusion (or potential inclusion, in the case of shipping) within the EU ETS.¹⁵⁶

Doing away with emissions trading could help to advance the case for higher minimum fuel taxes, since one of the main stated reasons for blocking new legislation is the alleged “double burden” of the ETS. But more fundamental reforms in EU decision-making, such as shifting the balance of power towards the EU Parliament alongside tighter controls on Brussels-based lobbyists, would be needed if such proposals were to make real progress.

Liberalisation

The European Union has engaged in a process of energy market liberalisation that has reshaped much of the continent's electricity sector – unbundling supply from generation, and opening up markets to new competitors. Proponents of these measures, including some environmentalists, claim that this can help to address institutional inertia and inflexibility that can block the more rapid deployment of renewable energy.

Critically, though, liberalisation has resulted in an ownership structure that is even more concentrated in the hands of a small handful of large utilities.¹⁵⁷ At the same time, the assumption that liberalisation contributes to the advancement of renewable energy has been questioned in an extensive survey by Michael Pollitt of the University of Cambridge's Judge Business School, which found that the social acceptability, not liberalisation per se is the key determinant of a low-carbon energy transition.¹⁵⁸

Subsidies

The EU has repeatedly pledged to end coal subsidies, passing a Regulation that would phase out State Aid to the coal industry in 2010, which it then extended under pressure from Spain and Germany until 2018.¹⁵⁹ The prospect of phasing out other fossil fuel subsidies is likely to face similar delays, despite having achieved broad international agreement in principle.¹⁶⁰ In May 2013 the European Council called on the G20 to make the “phasing out environmentally or

economically harmful subsidies, including for fossil fuels” a priority.¹⁶¹ But it continues to hide its own inaction behind a rhetoric of having to act alongside other trading blocs.

The EU’s record on supporting renewable energy subsidies is little better. EU-wide support for feed-in tariffs and renewable energy purchase guarantees could rapidly help renewable energy to displace fossil fuels, as in the case of the German *Energiewende*.¹⁶² Yet there is a huge and widening gulf between transformative aspirations and the actual direction that EU policy is taking. The Commission’s most recent Communication on renewable energy sets its stall against the promotion and harmonisation of feed-in tariff schemes in the name of avoiding “market distortions.”¹⁶³ This position was reaffirmed by the EU Energy Council on 7 June 2013, which called for the “gradual phasing out of support for new projects of certain types of maturing renewable energies”.¹⁶⁴ At the same time, some member states are openly promoting massive state subsidies for nuclear power, the most recent example being the planned Hinkley Point power station, for which the UK government guarantees a 35 year price double current market rates for electricity. The EU is now reviewing this decision to see if it breaks State Aid rules.¹⁶⁵

Grids and Energy Infrastructure

The EU now has a wide-ranging mandate to improving electricity grid and energy transport infrastructure planning – key aspects in any transition. At present, electricity generation is highly centralised, with power stations typically located close to urban centres to minimise transmission losses.¹⁶⁶ Grids are constructed around large “base-load” power plants (gas, coal, nuclear) that are always on, supplemented by others during times of peak usage. Electricity storage capacity is minimal, because intermittency is a relatively minor issue. Vehicle transport is based on liquid fuels. All of these assumptions would have to change if the EU were to mount a credible energy transition away from fossil fuels. Yet the Commission’s current proposals, set out in its “Regulation for guidelines on trans-European energy



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infrastructure,” actually entrench a further reliance on fossil fuels, with gas pipelines, liquefied or compressed natural gas infrastructure, carbon dioxide transport (for “carbon capture and storage facilities”) and oil infrastructure all explicitly included in the funding mix.¹⁶⁷

The Bigger Picture: Lobbying and Corporate Globalisation

Numerous policy options exist for replacing the ETS, by building on existing policies at the EU and national level to develop a framework for climate and energy policy without emissions trading. Such measures would be a great improvement upon the current regime, weeding out the offset loopholes in Effort Sharing, removing the downward pressure on efficiency targets, and the “deep freeze” effect that the ETS has on other policies, from energy taxes to renewable targets. We have also shown, however, that climate and energy policy proposals on their own would fall far short of what is needed to address the EU’s role in causing dangerous climate change.

The EU’s susceptibility to corporate lobbying is a large part of this picture. There are an estimated 15,000 to 30,000 lobbyists attempting to influence the Brussels institutions, the vast majority of whom represent business rather than citizens’ interests.¹⁶⁸ When the Commission initiates policies, it farms out suggestions to more than 1,000 “expert groups”, which are usually stacked with corporate representatives.¹⁶⁹ But lobbying does not stop there. The Council, which convenes regular meetings of Ministers and Heads of State of the EU’s 28 member states, offers few concessions to democratic accountability. State representatives (and their civil servants) defend “national interests” with little accountability to their home parliaments, and with scant reference to their own electoral platforms. The European Parliament, as the elected but relatively marginal “democratic” wing of this division of power, is also reputed to be a “lobbying paradise.”¹⁷⁰

It is not the task of this briefing to propose how these institutions should be reformed – such discussions, in any case, are well articulated elsewhere.¹⁷¹ But it is worth stressing that, without greater transparency and democracy underscoring the legislative process, the European institutions themselves are more likely to remain part of the problem than the solution on climate change.

The EU’s external relations and, in particular, its role in trade policy, underscores both this institutional failing and a more fundamental limitation in attempts to address climate change by means of policy measures alone. As a cheerleader for corporate globalisation, the EU has increasingly expanded the frontiers of market liberalisation beyond its borders – in part, as a means of “disciplining” member states to adopt further neoliberal reforms domestically.¹⁷² The climate change consequences of liberalised trade can be seen in the EU’s “emissions embodied in trade”, which

The climate change consequences of liberalised trade can be seen in the EU’s “emissions embodied in trade”, which have continued to increase while domestic emissions have fallen.

have continued to increase while domestic emissions have fallen.¹⁷³ While industry lobbyists attribute this emissions outsourcing to the ETS itself, there is little evidence to support that argument.¹⁷⁴ A more likely culprit is the plethora of free trade agreements and Bilateral Investment Treaties (BITs) that allow the EU to import goods from unsustainable energy sources and evade environmental regulations.

The EU’s trade agreements also serve to weaken the hand of legislators in adopting tougher regulations. For example, the proposed EU-US Free Trade Agreement could create pressure to “level down” European efficiency standards to match US levels.¹⁷⁵ It would also strengthen the hand of energy intensive industries, which are arguing strongly against the EU increasing its greenhouse gas targets without similar commitments from other industrialised countries.

Other free trade treaties have created international forums for corporations to challenge environmental legislation with the backing of nation states and trading blocks. In 2010/2011, for example, Japan and the EU filed cases at the WTO against renewable energy incentives in Ontario, Canada.¹⁷⁶ A proposed EU-Canada Trade Agreement threatens the bans on gas fracking that currently exist in many EU states and regions.¹⁷⁷ It could also compromise the Fuel Quality Directive, which at present serves to exclude most oil from tar sands entering the EU because of its high carbon intensity.¹⁷⁸

Conclusion

The end of the EU Emissions Trading System would not lead to a policy void, but instead provides an opportunity for considering what measures could better achieve the type of transition that is needed to address climate change, and which institutions are best placed to implement them. This briefing should be considered a first step in mapping this terrain, rather than a definitive plan for how to “replace” the ETS. In so doing, we have laid out the case for a series of changes that could reshape climate and energy policy:

* **The ETS is unreformable and should be scrapped.**

Measures to reform the ETS fail to address its role in weakening and undermining the adoption of other environmental regulation. The scale of the climate change problem is at odds with the incrementalism of emissions trading, which encourages cheap fixes that can lock-in reliance on fossil fuel infrastructure.

* **Repeal of the Emissions Trading System Directive would formally end the system but there is no need to wait until then to consider it dead.** Other emissions trading systems have seen a surplus of allowances lead to a sustained price collapses and traders withdrawing from the market. The ETS has already entered this spiral, so legislators should enact other policies, from energy efficiency to direct emissions limits, irrespective of whether or not they could undermine the (already compromised) carbon price.

* **Carbon taxes should not be pursued as a replacement for emissions trading.** A carbon tax offers some advantages over emissions trading, most notably by cutting out the financial sector speculators who profit from the system. But carbon taxes have also proven to be socially regressive. Some tax schemes (such as “cap and dividend”) could avoid that fate, but the record of ETS allocation and the EU’s previous attempt to tax carbon suggests that energy intensive industry, rather than individual consumers, is likely to benefit most from any exemptions and rebates. EU member state opposition to giving the EU revenue-raising powers would also represent a formidable obstacle to an EU-wide carbon tax.

* **Citizens’ actions and national transition planning are likely to remain the key drivers of any energy transition.** Brussels-based policy-makers often consider the EU

institutions as the last bulwark against a downward spiral of states competing against each other to weaken climate regulations. Yet some of the most promising measures for transforming climate and energy systems are happening at local and national levels. Despite many flaws in how it is being implemented, the German *Energiewende* offers important lessons for other countries and the EU itself. Feed-in tariffs have successfully stimulated the expansion of renewable energy, much of it community-owned, in the process fostering broader support for a transition to renewable energy. The movement to remunicipalise energy grids also points the way to increasing public ownership, breaking the stranglehold of the large corporate utilities that are delaying the transformation of the energy system.

* **There should be separate and ambitious EU targets for greenhouse gas emissions, renewable energy and energy efficiency.** Focussing on a single greenhouse gas target for 2030 would damagingly bolster nuclear power and “carbon capture and storage” at the expense of renewable energy. It would also offer greater opportunities for action to be avoided by manicuring the statistics. No range of targets can overcome a lack of ambition, however. The EU should be aiming for between 60 and 80 per cent reductions in greenhouse gas emissions alone by 2030 if it is to meet its fair share globally – considerably in excess of the figures that are likely to appear in the Commission’s forthcoming 2030 White Paper.

* **The 2030 debate should not distract from the need to immediately reform the Effort Sharing Decision.** Over half of the EU’s greenhouse gas emissions are covered by the ESD rather than emissions trading. Its 10 per cent reduction target is inadequate, and it is further undermined by the ability to meet this target using carbon offsets. Greater ambition and a ban on offsets are required.

- * **Targets are not enough, and the EU should focus on direct regulation.** The EU already has a range of direct environmental regulations, ranging from minimum standards on the energy performance of buildings and “fuel quality”, to emissions limits on cars and vans. In addressing the sectors currently covered by emissions trading, it should extend the Industrial Emissions Directive to incorporate emissions performance standards for greenhouse gas emissions. Industrial plants and power stations failing to make the grade should face closure.
- * **EU energy policy should promote renewable energy and ban fossil fuel subsidies.** In the absence of emissions trading, the EU could reopen discussions on the Energy Taxation Directive to close aviation and shipping loopholes, as well as raising minimum prices. More broadly, the EU should stop in its attempts to undermine renewables feed-in tariffs, and apply State Aid rules to outlaw long-term price guarantees subsidising nuclear power.
- * **More ambitious EU climate and energy policy requires democratic reforms to EU institutions, and an end to the international trade deals that reinforce corporate globalisation.** Industrial lobbying, and lobbying by governments on behalf of favoured national industries, set the stage for EU policy-making that favours corporations over people. Tougher rules on ethics and accountability are needed to end the corporate capture of the EU. It is also high time the EU adopted an alternative trade mandate, in order to reverse a series of bilateral trade and investment treaties that threaten the ability to effectively legislate on greenhouse gas emissions.¹⁷⁹



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Endnotes

- 1 For example, *Time* magazine quotes one London carbon trader as claiming that “the EU ETS has ceased to be an effective environmental policy.” *The Economist*, meanwhile, has a spokesperson for the International Emissions Trading Association chastising the EU ETS as “an example of what not to do”. Walsh, B. (2013) “If Carbon Markets Can’t Work in Europe, Can They Work Anywhere?” <http://science.time.com/2013/04/17/if-carbon-markets-cant-work-in-europe-can-they-work-anywhere/> ;
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- 4 Anderson, K. (2013a) “Coaxing the mitigation phoenix from the ashes of the EU ETS”, 26 April, <http://kevinanderson.info/blog/coaxing-the-mitigation-phoenix-from-the-ashes-of-the-eu-ets/>
- 5 This paper focusses on the measures that are likely needed to transform European energy and industry for a post-fossil fuel world. However, there are reasons to oppose the EU ETS other than its environmental ineffectiveness. The ETS (despite over-allocation) has also been the main driver of demand for CDM permits – reinforcing local and global injustices. For more detail, see Gilbertson, T. and Reyes, O. (2009) *Carbon Trading: how it works and why it fails*, Uppsala: Dag Hammarskjöld Foundation.
- 6 See Jaraitė, J. and Di Maria, C. “Did the EU ETS make a difference? A case study of Ireland and Lithuania”, p.3 http://www.webmeets.com/files/papers/EAERE/2011/910/Micro_Paper_21_September.pdf , The study offers detailed case studies and finds that the ETS was not responsible for cuts in CO₂ emissions in either case. Calel, R. and Hepburn, C. (2013) “Can permits to pollute be bought too cheaply”, *The Conversation*, 1 August, <http://theconversation.com/permits-to-pollute-can-be-bought-too-cheaply-16492> note that emissions reductions in ETS sectors were 8 per cent between 2005 and 2010, the same as emissions reductions in non-ETS sectors. They suggest that “the lion’s share of cuts has been driven by other factors such as the EU’s energy efficiency and renewables targets, the recession, and the high price of oil.”
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- 8 Prieß, H-J., and Stein, R. (2012) “Developments in the amendment to the Energy Taxation Directive”, London: Freshfields, Bruckhaus, Deringer LLP, <http://www.freshfields.com/uploadedFiles/SiteWide/Knowledge/Developments%20in%20the%20amendment%20to%20the%20Energy%20Taxation%20Directive.pdf>. On aviation and shipping, see European Parliament (2011) “Draft Opinion of the Committee on Transport and Tourism for the Committee on Economic and Monetary Affairs on the proposal for a Council Directive amending Directive 2003/96/EC restructuring Community framework for the taxation of energy products and electricity”, http://www.europarl.europa.eu/meetdocs/2009_2014/documents/tran/pa/878/878366/878366en.pdf ;
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- 11 Van Renssen, S. (2011) Climate-action department warns that energy-efficiency plans could deflate carbon prices, *European Voice*, 16 June
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- 17 Keohane, N. and Wagner, N. (2013) “Judge a carbon market by its cap, not its prices”, *Financial Times*, 16 July, <http://www.ft.com/intl/cms/s/0/de783c62-ee23-11e2-816e-00144feabdco.html#axzz2b8gcXV5U>
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- 19 Gallagher, E. (2009) *The Pitfalls of Manufacturing a Market: Why Carbon Will Not Just Sit Down, Shut Up, and Behave Like a Proper Commodity* Washington DC: New Americas Foundation, p.2, http://www.newamerica.net/files/Pitfalls_Manufacturing_Carbon_Market.pdf . The supply of carbon is “uniquely at the mercy of the political pen – where it was conceived” because the act of allocating permits (or determining quantities available for auctioning) is the result of a political decision rather than something that is indexed to a real-world product. The combination of this factor with the difficulty of identifying clear price drivers makes for arbitrary volatility. That is compounded by the fact that the underlying asset (“carbon”) is fundamentally unstable: there is no clearly identifiable commodity being traded, but merely an assemblage of incommensurable activities re-packaged to form a tradable commodity. For more on this point, see Lohmann, L. (2009) *When Markets are Poison: learning about climate policy from the financial crisis*, Sturminster Newton: The Corner House, pp. 28-30

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