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The EU's global climate and energy policies: gathering momentum?

FRIDE

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Somewhat unnoticed amidst the dramas of the eurozone crisis, the European Union's (EU) global energy and climate policies appear to have gathered impressive momentum in the last three years. The EU has agreed a number of new documents that promise to strengthen Europe's presence in international energy policies. These include an EU 'Energy 2020' strategy; a communication on external energy security; policy documents outlining a reinforced 'climate diplomacy'; and an 'Energy Roadmap 2050' presenting scenarios for the next four decades. This raft of new initiatives was supplemented with strong EU performances at the last two United Nations climate change summits, in December 2011 and December 2012 respectively. Most recently, at the end of March 2013, the Commission published a green paper to begin consultations over a framework for energy and climate policies up to 2030. The EU has rarely had such an intense period of advancement in the external dimensions of its energy policies.

This paper assesses the extent of this gathering momentum in the EU's global energy policies. It argues that impressive foundations have been laid for a more coherent and proactive international climate and energy strategy, but that critical issues remain unresolved. Crucially, the EU's leadership in global climate policy is increasingly compromised by tensions between its internal and external policies, as well as between traditional energy security and climate change aims. Internal European cooperation on both climate change and energy market integration serves as the launch-pad for EU global influence; but the lack of clarity in these same internal policies also increasingly detracts from the EU's international projection.

These features reflect policy preferences but also the EU's complex institutional structures. The EU is a *sui generis* actor in energy policy. It is a multi-level organisation, with a complex division of energy competences between its supranational bodies and the member states. It relies heavily on a regulatory approach to energy questions. Common EU rules co-exist with fiercely independent member state policies, especially in the broader international arena. Some aspects of European global energy policies constitute highly-geopolitical paths followed by member state national governments. Other aspects have a more institutionalist character, with outcomes explained by the structure of EU cooperation processes. Crucially, this multi-faceted nature of EU energy 'actorness' is both a

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strength and weakness. The EU's policy challenge is to combine the rules-based and geopolitical approaches in a more reinforcing fashion. At present, the return of very traditional approaches to both domestic economic policy and international energy security threatens to subvert EU global climate leadership.

Domestic doubts?

Experts and European officials ritually claim that the EU's lead role in climate policies enables it to influence the broader international dimensions of global warming. But are EU climate commitments really exemplary enough to lay the foundations for it to play a lead role in global energy politics?

At the Durban summit in December 2011, the EU pushed hard and on the basis of its proposed accord China, India and the US finally agreed to emissions targets with legal force – albeit only from 2020. And 35 states agreed to a second round of post-Kyoto commitments. Climate commissioner Connie Hedegaard celebrated: 'The EU's strategy worked. When many parties after Cancun said that Durban could only implement decisions taken in Copenhagen and Cancun, the EU wanted more ambition. And got more. We would not take a new Kyoto period unless we got in return a roadmap for the future where all countries must commit'.

The EU is by far the largest importer of energy, buying in nearly twice the US's energy import and five times that of China. But it has the lowest energy intensity of all regions (measured as energy supply per unit of GDP) and the highest demand for renewable energy.[1] The EU is on track to meet its target to have 20 per cent of its energy generated from renewables by 2020. Two-thirds of the new generating capacity in the EU now comes from renewable sources. Gradually, the more ambitious target of securing 80 per cent reductions by 2050 has come to dominate policy deliberations. The Danish government that took office in November 2011 made a commitment to pursue the goal of having the county's entire electricity and heat supply come from renewable sources by

1. European Commission Staff Working Paper, 'Key facts and figures on the external dimension of the EU energy

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2035. In 2012, the EU agreed a new energy efficiency directive. It has also set efficiency targets within public procurement rules.

Low carbon technology now represents a €300 billion market and provides employment to over 3 million workers in Europe. The Commission has supported 12 large-scale pilot projects on carbon capture and storage (CCS). The 2009 EU Energy Programme for Recovery committed €4 billion of investment in infrastructure and interconnections, alongside renewable projects. Of this total, €1 billion went to CCS projects. A first license for the commercial implementation of a CCS project was granted in France in 2011. In 2010, the European Investment Bank (EIB) channelled a record €19 billion in credits to low carbon initiatives, a 20 per cent increase from 2009 and two-thirds of all EIB loans in Europe.[2] Across all its various budget lines, by 2010 the Commission was putting €1 billion into 'frontier' low carbon research and development. In February 2013, the European Council confirmed that a minimum 20 per cent of EU spending between 2014 and 2020 must be related to climate action.

The UK has launched a Green Investment Bank, with £3 billion of capital. In April 2012, the British government launched a new £1 billion scheme for the commercialisation of CCS, and another £125 million for research on CCS. For the period 2011-2014, the German government increased its research and development funding for green technologies by 75 per cent over the preceding three-year period, partly in response to the decision to phase-out nuclear power generation by 2022.[3] Late in 2011, the EU agreed to make €300 million of Emissions Trading Scheme (ETS) revenues available for CCS and other renewables projects through the EIB.

These all represent significant advances. However, the EU's general performance on climate change policy has been far from faultless. Many observers doubt the logic and impact of the EU's talismanic '20/20/20 by 2020' strategy: its arbitrariness is reflected in the convenience of all the numbers being 20. The EU decided against moving unilaterally from the 20 to a 30 per cent emissions reduction target. Also, European states are not

2. *Platts EU Energy*, Issue 252, 25 February 2011.
3. *Platts EU Energy*, Issue 264, 26 August 2011, p. 5.

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on target to meet their energy efficiency targets. The Directorate-General for Energy has lamented that 'the quality of National Energy Efficiency Action Plans, developed by member states since 2008, is disappointing'.[4] The Commission's March 2013 green paper hit the headlines by intimating that it might be preferable to have a binding target only for emissions in 2030, not renewables or efficiency. [5] Environmental organisations consequently slammed what they saw as a decrease in ambition on the part of the Commission.[6] The 2012 energy efficiency directive has created a new legislative framework but member states are still to be subjected to binding targets for efficiency gains.

The effect of the economic crisis is such that the 20 per cent emissions target is now achievable without great effort; even the 30 per cent target would not require much additional reform. Moving from 20 to 30 per cent reductions would only cost the EU 0.1 per cent of its GDP, according to the European Commission. Yet despite all this, the EU promises to increase to a 30 per cent reduction target only if others follow suit. Moreover, this is not a firm or ambitious enough commitment to make states like the US calculate that they would be better off in terms of net welfare gain by increasing their own offers.[7] The new green paper acknowledges that by making its offer of a 30 per cent emissions target conditional on others' similar moves, the EU has not brought forward new pledges from around the world, and that a post-2015 international agreement remains highly uncertain.[8]

Some member states, like the UK, have moved to the higher 30 per cent target, in binding fashion. They argue that these moves should be 'Europeanised' if the EU as a whole is to retain credible climate leadership. The UK has been one of the European states most committed to combating climate change, but still needs to double its rate of emissions reductions to meet its long-term targets. Moreover, the UK lags behind other Organisation for Economic Cooperation and Development (OECD) states in low carbon

4. DG Energy, 'Energy 2020', Brussels, 2011, p. 5.
5. European Commission, 'Green Paper: A 2030 framework for climate and energy policies', *COM(2013) 169*, Brussels, 2013.
6. *Euractiv*, 27 March 2013, www.euractiv.com
7. T. Bréchet, J. Eyckmans, F. Gerard, P. Marbaix, H. Tulkens, and J. Van Yperselle, 'The impact of the unilateral EU commitment on the stability of international climate agreements', *Climate Policy* 10 (2010), 148-166.
8. European Commission, *COM(2013) 169*, op. cit., p. 11.

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European Commission Project Number: 266809

research and development which is now at too limited a level to make any notable impact.[9] In autumn 2011, the British chancellor, George Osborne, caused waves when he declared that henceforth the UK would seek to move no faster on green commitments than its EU partners, in an effort to conserve jobs.

Respected expert Dieter Helm insists that the EU has only made progress on its emissions targets by dint of the collapse of Soviet-era industries in Eastern Europe, a switch from coal to gas and now the economic recession. Moreover, the EU simply has not constructed the infrastructure for feeding significant amounts of renewable energy into the grid. The EU has focused on subsidies for renewables, but the broader structure of the energy market has not changed, meaning that even current levels of green electricity sit idle unable to get into the grid.[10] Europe's grid cannot absorb sufficient amounts of renewables-generated power to meet the EU's targets. Indeed, the March 2013 green paper recognises that advances in renewables risk being undermined by the need for 'massive investment in transmission and distribution grids [...] to accommodate renewable energy'.[11]

Member states' different forms of support for renewables are effectively undercutting any prospect of a single market in green energy. No European government will subsidise green energy in another member state.[12] Some analysts fear that the variety of liberalisation (or 'unbundling') options now available to national energy champions will fragment the European market even more. Renewables-generated electricity is still not traded across borders, holding back its take-off. Proposals for a North Sea super-grid interconnector for wind farms at sea have been held up by national protection of home markets. The Commission has targeted France and the Czech Republic for failing to comply with rules on access for renewable power into national grids.

9. A. Bowen and J. Rydge, 'Climate change policy in the United Kingdom', Grantham Research Institute for Climate Change, *Policy paper*, August 2011, p. 13 and p. 16.
10. D. Helm, 'What next for EU energy policy?', in K. Barysch (ed.), 'Green, safe, cheap: where next for EU energy policy?', London: Centre for European Reform, September 2011. Similar points are made by Gaventa and Mabey in the same volume.
11. European Commission, *COM(2013) 169*, op. cit., p.5.
12. C. van Agt, 'The energy infrastructure challenge', in K. Barysch (ed.), op. cit. Zachmann develops similar points in the same volume.

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The recession has eaten into funding for renewables. Italy has announced cuts in solar power incentives. Spain has cut subsidies for solar investments, leaving many companies in severe difficulties. Denmark has gradually reined back on its use of wind farms as these were proving to be inefficient and of intermittent use. EU officials fret that R&D on renewables has slowed dramatically due to the economic crisis.[13] The Commission's flagship research budget, FP7, provides only €2.35 billion to low carbon research out of a €50 billion total allocation. The Commission proposal 'Horizon 2020' inks in €5.7 billion for renewable research out of a total €80 billion budget for post-FP7 research; both the business community and NGOs criticise this as woefully insufficient. The 2010-2011 Renewable Energy Attractiveness Index ranked China and the US in the top positions, displacing European governments. The share of low carbon power has grown but two-thirds of this is still nuclear.

A 2012 mid-term report on the EU energy infrastructure fund reveals that most projects actually underway are for gas power generation; of four eligible CCS projects, three have collapsed. In mid-2011, the Commission started infringement proceedings against nearly all member states for having failed to implement the 2009 directive on the development of CCS.[14] At the end of 2011, Swedish utility Vattenfall cancelled its CCS project in Germany.

The EU's much-lauded ETS has not had a dramatic impact on emissions levels. The March 2013 green paper admits that the ETS 'has not succeeded in being a major driver towards long-term low carbon investment'.[15] Even in its third phase, the scheme remains well short of full auctioning, which is what is really needed for it to have a major impact. Carbon offsets compromise the system's ostensible rationale: nearly all EU states have carbon footprints way in excess of their national reporting, because they simply buy the right to pollute outside the EU. Sectors excluded from the ETS still account for 50 per cent of the EU's total emissions. In part due to the economic recession, the ETS carbon price fell to successive all-time lows during 2012. Two highly-regarded observers of EU policies have noted that the ETS has proven not be as 'crisis-proof' as was

13. *Platts EU Energy*, Issue 246, 3 Dec 2010, p. 8.
14. *Platts EU Energy*, Issue 263, 29 July 2011, p.1.
15. European Commission, *COM(2013) 169*, op. cit., p. 4.

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originally assumed and now struggles to act effectively as the 'cornerstone' of any European push for a global carbon market.[16]

Also pertinent, the touted nuclear renaissance is now on hold. A majority of member states was considering moving back into nuclear power by 2010. After the Fukushima disaster in April 2011 many backtracked, in particular Germany, Belgium, Italy and (non-EU) Switzerland. There are exceptions. France is the most nuclear-dependent country in the world and the Czech Republic wants to become a 'nuclear superpower'. With 58 reactors covering 40 per cent of its energy, France insists on a discourse of 'low carbon' rather than 'renewables'. Nuclear energy supporters say it will not only help meet emissions targets but also boost security: uranium supplies are plentiful in stable allies like Canada and Australia. But the trend is now firmly away from nuclear power, despite this making emissions reductions much harder to achieve.

In contrast, high-polluting coal production is booming. Germany, Spain, Poland and others have been slow to reduce state aid to the coal sector. European states are only on target for their emissions targets because they are relying on coal-based production in China and other markets. They have reduced carbon production on their own territories but have increased carbon consumption, simply importing goods from carbon-rich producers. Moreover, Germany and others plan to increase coal usage as they shift away from nuclear. Several German state-level authorities have sought to extend the operating licenses of coal-fired plants in the wake of the federal government's commitment to phase-out nuclear power stations.

In short, the mainstream components of EU environmental policies have advanced but are not without serious shortcomings. It cannot be said that the EU's commitment to mitigating climate change is so strong that there is a significant or natural spill-over of climate-related considerations into its global policies. The EU regularly claims that the example of its own climate leadership serves as the foundation for an internationalisation of its influence in this area of policy. But this domestic-external read-over is not without blemish. The advance of EU environmental policies has certainly

[16]. C. Egenhofer and M. Alessi, 'EU policy on climate change mitigation since Copenhagen and the economic crisis', *Working Document* 380, Brussels: Centre for European Policy Studies, 2013.

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European Commission Project Number: 266809

been pervasive enough to ensure that other areas of European external policies can no longer remain immune from climate change considerations. But neither has their progress been so exemplary so as to guarantee a natural externalisation of climate primacy across the wider panoply of global energy issues.

Global climate funding

This qualified internal-external read-over can be seen in the scale and nature of EU climate funding. European ministers and policy-makers routinely allude to the significant scale of their climate funding commitments. They conceive of such generous funding as a concrete contribution to a global presence in energy policy: European climate aid is aimed at helping adaptation in ways that are designed to reduce the strategic knock-on effects of climate change. The Copenhagen summit distinguished between two types of climate finance for developing countries. Fast-start finance enshrines a commitment by developed countries to provide new and additional resources, approaching $30 billion for the period 2010-2012, supposedly with a balanced allocation between adaptation and mitigation. Long-term finance then mobilises $100 billion a year by 2020 to address the underlying needs of developing countries, and in the context of meaningful mitigation actions and transparency on implementation. [17]

For 2010-2012, the EU's total climate funding contribution was to be €7.2 billion. Of this, €2.2 billion was raised in 2010. This was split between 48 per cent for mitigation, 33 per cent for adaptation and 16 per cent for reducing emissions from deforestation and forest degradation. Just over half was given in the form of loans, and 48 per cent as grants. Nearly 60 per cent went through multilateral organisations.[18] To date, Denmark, Finland and Germany have been the most generous proportionate contributors, allocating between 12 and 15 per cent of their bilateral aid to climate projects.

17. http://ec.europa.eu/clima/policies/finance/index_en.htm
18. http://ec.europa.eu/clima/publications/docs/spf_startfinance_en.pdf

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British climate aid serves as an illustrative example of on what such funding is spent. UK climate-mitigation aid has included the inception of an Environmental Transformation Fund; funding for the Global Environment Facility; and a £17 million Climate and Development Knowledge Network designed to enhance developing countries' access to high quality research and information on climate adaptation. Bangladesh has received the UK's largest country-specific climate change fund, with a budget of £75 million by 2013. Other notable UK initiatives include a £15 million Strategic Climate Institutions Programme in Ethiopia, designed to help build organisational and institutional capacity within the Ethiopian government, civil society and the private sector to increase resilience to climate variability, adapt to future climate change challenges and benefit from the opportunities for low carbon growth.

While regularly trumpeted as a leading edge of EU climate policies, the scale of climate funding has elicited much disappointment. Even many senior officials themselves express frustration with the EU's failure to award top priority to this area of financial support. Funding for both mitigation and adaptation outside the EU is still subject to such limits that raise doubts over how much importance is really attached to the external dimensions of climate change.

Economists point to the gap in existing climate finance: current allocations stand at around $15 billion a year; the 2020 target is $100 billion a year; $200 billion is required to make any kind of tangible impact.[19] The amount of climate funding negotiated through the United Nations Framework Convention on Climate Change (UNFCC) is a tiny percentage of the potential estimated cost of climate change – 0.5 per cent compared to 20 per cent of OECD GDP.[20] Yet governments have haggled over the distribution of such funding allocations. Development commissioner Andris Piebalgs acknowledges that the scale of climate financing agreed so far within mainstream Commission development budgets can assist in a minor amount of adaptation at the margins but not help prepare more anticipatory solutions to the strategic impact of global warming. DG Energy officials recognise that there is still a need for a more systematic use of research

[19]. E. Haites, 'Climate change finance', *Climate Policy* 11/3 (2011), special edition, 963-969, p. 967.
[20]. N. Mabey, 'Climate change and global governance', E3G memo, October 2009, pp. 5-6, available at: www.e3g.org

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and development budgets to include neighbours in renewables development. Member state officials also acknowledge that dialogue with consumer countries on cooperation in climate aid projects has so far remained pitifully limited.

The EU is still not on target to meet its commitments on climate financing for developing countries. It raised hackles on the first day of the Cancun summit by revealing that half its fast-start funding would take the form of loans and private equity instead of grants. Many environmental campaigners express concerns that the EU still has to demonstrate that it will resist the temptation simply to divert existing development aid. Some accuse the EU and member states of using the climate adaptation agenda as a covert means of introducing new forms of conditionality and even trade barriers. Governments have rejected novel proposals, such as ring-fencing future taxes on banks for climate adaptation. Italy has been singled out for its particularly poor record in delivering on its promised funding.[21]

Member states still have different ideas on additionality and on reporting criteria. Most governments over-report climate funds to least developing countries. France is guiltiest on this issue of additionality; much of its climate funding commitment simply repackages existing aid projects in disingenuous fashion.[22] Member states have pushed up to 50 per cent the share of ETS revenues to be allocated to climate projects, so as to reduce the burden on their own budgets. This represents another dent in the spirit that new climate aid promises should bring additional money to the table, not simply divert resources from other revenue sources.

The balance between internal and external funding for renewables now engenders fierce debate. Most member states express unease over increasing external renewables support relative to funding for projects *within* Europe. Consultations for the new EU Energy 2020 strategy revealed growing doubts on the part of most member states about large-scale funding for adaptation projects in non-EU states. The most common member state position is to argue that the EU should reduce subsidies for renewable energy and adaptation outside Europe and instead channel

[21]. http://www.europeanvoice.com/article/2010/11/italy-blamed-for-eu-failure-on-climate-change-aid/69421.aspx
[22]. I. Scholz, 'European climate and development financing before Cancun', *EDC2020 Opinion* 7, December 2010, p.2.

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funds towards internal energy efficiency. Poorer member states express explicit opposition to huge transfers for climate funding to the likes of China, countries growing fast and suffering less economically than many EU governments. Officials advocate much more formal and high-level political backing to sell renewable technology developed in Europe to other consumer countries around the world. This reflects an apparently more mercantile than developmental approach to climate funding.

Global partnerships for renewable technology

The September 2011 Commission communication offers a number of proposals to enhance cooperation with international partners on renewables. These include a range of new international partnership agreements that identify cooperation on renewables as their 'primary' aim; an initiative to get other fora such as the G20 to prioritise global rules on renewables development; an enhanced framework for a Mediterranean Solar Plan; the extension of carbon pricing to non-EU states under the rubric of external agreements; the extension of EU initiatives at the level of cities beyond the Union's borders; reciprocity in access to renewables research programmes; an extension of the Energy Charter treaty's mandate to include rules on the renewables sector; widening of the EU Energy Initiative on access to energy in Africa for the first time to include assistance on renewables; a strategic group for International Energy Cooperation made up of member states and Commission representatives; and a database of member states' energy projects in third countries.[23]

Indeed, when the Commission held a public consultation prior to elaborating this communication, the majority of suggestions forwarded by companies, civil society organisations and experts focused on means of providing incentives to European actors to support renewables beyond the EU's borders. Proposals included were that external renewables cooperation projects should count towards member states' 20/20/20 targets; that the EU use diplomatic pressure to reduce regulatory uncertainty in renewable sectors in third countries; that the EU should push through its geostrategic

[23]. European Commission, 'On security of supply and international cooperation – the EU energy policy: engaging with partners beyond our borders', *COM (2011) 539*, Brussels, 2011.

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European Commission Project Number: 266809

tools for greater energy efficiency in European Neighbourhood Policy (ENP) countries; that the EU should extend feed-in tariffs to ENP states; and that the EU should combine renewables cooperation and broader economic support for growth.[24]

One of the most visible initiatives has been EU-China cooperation on low carbon zones and CCS. An EU-China Partnership on Climate Change embraces a range of activities related to clean energy technologies. In 2007, the EIB signed a Climate Change Framework Loan of €500 million to fund climate change mitigation projects in China. A more specific and targeted China-EU Action Plan on Energy Efficiency and Renewable Energies promotes industrial cooperation relevant to protecting the global environment. A biennial EU-China energy conference brings together high-level representatives from European and Chinese industries and governments. The EU-China Clean Development Mechanism (CDM) Facilitation Project aimed to strengthen the role of the CDM to help China's path to sustainable development, until it was wound up in January 2010. The UK leads the EU-China Near-Zero Emissions Coal initiative, which aims to build demonstration plants in China to test the feasibility of CCS technology on an industrial scale. Phase II of this initiative (2010–2012) examined the site-specific requirements for actual demonstration plants. Phase III will focus on the construction and operation of a commercial-scale demonstration plant in China.

The EU classifies this cooperation as one of its most notable success stories. Diplomats acknowledge that the need for such coordination with China has placed greater onus on deepening a strategic alliance with Beijing and has relegated the importance of other areas of policy in relation to which the EU and China have for many years not seen eye to eye. It is widely recognised that in climate policy, all other challenges pale alongside the need to cooperate with China on low carbon and CCS. The EU-China CCS initiative is seen as such an exemplary model that the EU has been keen to extend a similar initiative to India.

[24]. European Commission Staff Working Paper, 'Results of the public consultation on the external dimension of the EU energy policy', *SEC (2011) 1023,* Brussels, 2011.

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Other partnerships are also afoot. As a possible harbinger of future alliance-building priorities, Spanish companies are spending heavily to increase uranium supplies from Canada, Kazakhstan, Niger and Namibia. Scotland is turning to Middle East sovereign wealth funds for renewables investment. The British and German foreign ministers launched a joint initiative in 2011 to encourage Russia to adopt firmer plans on energy efficiency. The EU's Energy Roadmap 2050 calls for a partnership with Russia and Ukraine especially on biomass.[25]

Notwithstanding such initiatives, there is widespread agreement that the EU has so far taken only a few tentative steps in relation to the international development of renewable sources. Middle Eastern states now seem to be considering nuclear programmes rather than clearly prioritising renewables. Independent observers are qualified in their judgement of the EU-China CCS programme, suggesting that the scale of EU efforts in China have been relatively modest; they also point out that China will not adopt low carbon technologies unless the EU does so in its own coal industry.[26] A House of Lords report concluded that the pace and depth of cooperation between the EU and China on CCS has been extremely limited in practice. Only limited funding was found for phase II of the EU-China CCS initiative; no funds have been committed for phase III.[27]

There are certainly concerns that European governments have been unduly tempted to use scarce resources to favour indigenous firms rather than helping more international projects. Economists criticise the EU for relying too heavily on subsidies going into green industry development. Subsidies are likely to be beneficial only where countries already possess some skills, existing expertise and infrastructure; they can help deepen a competitive advantage but not create it from nothing.[28] Companies like Shell have warned that the scale of European governments' domestic subsidies may contribute to a more general unravelling of at least the spirit if not the formal letter of the internal market. And the focus on such large-scale subsidies also undermines prospects for the international extension of a carbon

[25]. European Commission, 'Energy Roadmap 2050', *COM (2011) 885/2*, Brussels, 2011, p. 11.
[26]. T. Burke and N. Mabey, 'Europe in the world', London: E3G, 2011, p.30.
[27]. House of Lords, *Stars and Dragons*, 2010, p. 55.
[28]. M. Huberty and G. Zachmann, 'Green exports and the global product space: prospects for EU industrial policy', *Working Paper* 7, Brussels: Bruegel, 2011.

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market – which many such companies see as more likely to provide a harmoniously-governed system for tackling climate change than a zero-sum subsidies race. Criticisms are voiced that the extent of European subsidies now weakens the market mechanisms of the ETS and undercuts the EU's credibility when it seeks to encourage non-EU states to buy into the ostensible disciplines of the ETS.

Tensions have arisen with several non-European states over the terms of cooperation over renewables. The frequent complaint from developing countries is that the EU is engaged in a quick grab for large-scale renewable projects oriented towards exporting energy to European markets rather than in a genuine partnership to maximise renewables' potential for host societies too. ActionAid worries that European governments are pumping funds into large-scale, export-oriented renewables projects that are likely merely to worsen local resource scarcity. This is especially the case with Desertec. The latter is budgeted at nearly $600 billion and is driven by German companies who say it will meet 15 per cent of Europe's electricity needs by 2050. This project is seen in particularly negative light in North Africa as cables will take the energy out into EU markets and not supply local demand; Desertec is often held up as symptomatic of an incipient eco-colonialism that could place severe new strains on relations between developed and developing countries.

This is an area where private investors and companies see the EU as too slow and cumbersome. Even those that accept that member states' unity-breaking bilateralism may have been inadvisable in oil and gas argue that such flexibility is appropriate in the field of renewables as a means of generating competition and getting funding quickly into promising projects. It is widely felt that future policy needs to be flexible rather than predicated primarily on standard forms of EU institutionalised cooperation, which most investors berate as slow-moving and opaque.

Companies like Areva complain that EU-backed investment in basic renewables infrastructure linked to non-European states remains limited. They warn of approaching bottlenecks restricting renewables exports and imports unless more infrastructure and interconnections are funded and developed very soon. Investors insist that regulatory predictability is still

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lacking in non-EU states and the EU has wielded limited influence in improving this situation.

The opposite argument is made by organisations like Counter-Balance, who admonish the EU for having been overly seduced by high-visibility geo-engineering projects. For critics, the solutions these promise are illusory. Indeed, relying heavily on a search for all-conquering technological breakthroughs could create more problems than it solves, to the extent that such a focus diverts policy-makers' attention from getting to the core drivers of resource scarcity. From this perspective, European governments stand accused of colluding too tightly with non-EU regimes on techno-fixes none of which exhibit convincingly proven potential, rather than targeting the more deep-seated governance pathologies that weave the most menacing links between climate change and geostrategic tension.

Energy security versus climate change?

A further area of tension has arisen between the EU's climate policies and its approach to energy security. Formally, the EU insists there is no conflict between these two areas of policy. Policy documents conceive energy security through the lens of a longer-term horizon that incorporates renewables and climate-related considerations. Then UK energy minister Chris Huhne argued that the climate security versus energy security debate presented a false dichotomy, to the extent that climate change is likely to disrupt the supplies of oil and gas too.[29]

However, in practice, the way in which the EU has come to attach priority importance to a rather traditional understanding of energy security sits uneasily with its declared climate aims. Part of this is to do with intensified oil and gas diplomacy; part is to do with the focus on non-conventional fossil fuel sources.

Much recent effort has been invested in enhancing the EU's external energy security strategy. The Energy 2020 strategy begins by stating that: 'The

[29]. C. Huhne, 'The geopolitics of climate change', Speech at the Royal United Services Institute, London, 7 July 2011.

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European Commission Project Number: 266809

same collaboration and common purpose that has led to the adoption of the EU's headline energy and climate targets is not yet evident in external energy policy'.[30] It commits the EU to injecting substance into this external dimension of EU energy security coordination. The September 2011 Commission communication caught most attention by introducing a new mandatory information exchange on bilateral energy accords and a provision for the Commission to negotiate new energy treaties on behalf of member states (as it had done with Azerbaijan and Turkmenistan on development of the Trans-Caspian pipeline)

The EU has signed a plethora of bilateral energy accords. After an EU-Uzbekistan memorandum of understanding was signed in 2011, all Central Asian states now have such agreements. Under a new EU-Azeri deal, Baku commits to the so-called 'southern corridor'. Commission president José Manuel Barroso made what was interpreted as a particularly significant visit to Turkmenistan in 2011, in an effort to secure sizeable supplies for the beleaguered Nabucco pipeline project. Indeed, on the back of this visit Turkmenistan committed to supplying Nabucco, EU enticements contrasting with problems experienced under the country's 2007 deal with Moscow to supply northwards into Russian networks. The twists and turns of 'pipeline diplomacy' have taken up an increasing amount of policy attention in the last two years, as three alternative southern corridor routes – the Nabucco, Trans-Anatolian and the Interconnector Turkey-Greece-Italy (ITGI) projects – vie for pre-eminence. The Nordstream pipeline that directly connects Russia with German markets started pumping on 8 November 2011.

Within these accords, policy remains centred on very traditional access issues. The energy NGO Counter Balance argues that the EU is if anything more obsessed with large oil and gas infrastructure projects now and less focused on the broader implications of low carbon than it was in the mid-2000s. This is despite the serious setbacks encountered in all such projects. The proposed Trans-Sahara pipeline has overshot its budget by an estimated $15 billion and with no-one interested in investing that kind of money construction has still not commenced. The opening of

[30]. DG Energy, op. cit., p. 20.

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European Commission Project Number: 266809

the Medgaz pipe was continuously postponed until 2011, by which time it was running at $1 billion over budget and had to be expensively rescued by EIB loans. And most emblematically, the much-awaited Nabucco project remains stuck: it is still not clear where supplies into the line will come from and, despite a €200 million injection from the European Commission, the consortium has insufficient cash to finish construction work. Nabucco's prospects have been undermined especially by the Trans-Anotalian pipeline project now led by Turkey and Azerbaijan, as well as by several EU member states joining the South Stream consortium. Little progress has been made on the long-touted Trans-Caspian pipeline. These pipelines represent the very opposite of the localism needed to mitigate climate change: they entail huge environmental damage, significant energy losses in transmission and deepen reliance on hydrocarbons.[31]

The EU's third energy liberalisation package remained aimed primarily at the Russia challenge; while it did not bring in unbundling of ownership it did require a certain fragmentation of Gazprom operations across the EU, and member states would be less completely autonomous in their bilateral deals with Russia.[32] The Commission's move to open a case against Gazprom's dominant market position dominated headlines in 2012. Yet the EU has also offered an 'Energy Roadmap to 2050' to assuage Russian demands for security of demand. While many hope that cooperation with Russia on renewable energy sources can overcome the zero-sum dynamics of gas pipeline politics, this has not become a major strand of the EU-Russia relation. Standard bilateral deals for gas supply tie-ins continue unabated; RWE and Gazprom signed such a deal in July 2011.

In an attempt to counteract the prevalence of member states' opaque bilateral deals with producer states, in 2012 EU leaders agreed to share data on third country energy deals. This was celebrated as an important step forward in guaranteeing transparency. It did not specify what type of information should be revealed and did not empower the Commission to act on information relating to deals that might undermine the spirit of a common EU energy policy.

[31]. www.counterbalance-eib.org
[32]. K. Barysch, 'The EU and Russia: all smiles and no action', *Policy Brief,* London: Centre for European reform, 2011.

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European Commission Project Number: 266809

Senior officials now talk enthusiastically of a new emancipation of energy policy from climate policy. The economic crisis and squeeze on competitiveness, combined with a new rise in oil prices, have produced a swing away from the priority attached to climate policy. Experts and policy-makers are increasingly minded to argue in favour of gas and against renewable sources. Long-term energy security is increasingly a matter of the 'dash for gas'. The UK March 2012 budget provided a significant tax break for oil and gas production in Shetland.

Policy-makers' main concern is now quite clearly with the advent of sizeable shale gas supplies. Unconventional sources have changed the energy panorama. Gas markets now look extremely vibrant. Experts opine that combining traditional and unconventional gases, the world has 300 years of supplies left. Countries like Algeria claim that they have more shale than natural gas. The policy priority in this sense is to delink gas from oil markets, by completing the single market in gas infrastructures and linkages.

The US's increasing energy independence should be good for the EU as fungible oil supplies are freed up internationally now that North American demand is decreasing. In March 2013, the UK company Centrica signed a sizeable deal to import shale gas from the US. As unconventional gas supplies have taken the US towards energy independence, this has driven down liquefied natural gas (LNG) prices, enticing European buyers. Contrary to increasingly-voiced fears, the US will still need to stay involved in policing global energy markets. New energy sources should tilt the balance away from monopoly geopolitics to markets as competition intensifies between a wider range of sources. Yet, the general impression among industry experts is that the EU has been slower to react to this revolution than the United States. As gas prices have fallen due to shale output in North America, EU companies are left locked into what now seem extremely overpriced long-term contracts with Gazprom.

The policy focus has shifted away from the question of access to non-European renewable sources to debates over how far shale should be incorporated into the European energy mix. Some experts predict that the high potential for shale extraction in Poland is the factor that definitively

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European Commission Project Number: 266809

kills off the Nabucco project. ExxonMobil and Total have joined forces to explore for shale gas in Poland through large-scale investments. Several other member states have held back on shale gas exploration because of its environmental costs. Most notably, France has prohibited the development of shale reserves. In direct contrast, in July 2011 the UK government decided against restrictions on shale gas drilling; indeed, it has created an Office for Unconventional Gas. Experts generally concur that shale gas extraction is more technically challenging in Europe than in the United States. European shale plans have recently hit all kinds of problems, including in Poland, site of the most promising basin.

Unconventional oil has disastrous implications for climate change; unconventional gas is relatively clean but still prolongs the reliance on fossil fuels. The new glut of natural gas has slowed down the drive toward renewable energy. And with shale present in many stable, advanced and friendly countries, the security worries appear less too. Some say this is not disastrous for climate change aims. Industry experts even calculate that using natural gas as a bridging solution would reduce the cost of meeting the EU's 20/20/20 targets relative to the huge subsidies ploughed into wind and solar. And more environmentally-friendly drilling techniques are being developed for shale. However, this focus does mean that debates have returned to very traditional questions of the balance between hydrocarbon exploitation and environmental concerns.

The regulatory approach: bad for climate policy?

It is impossible to understand EU global energy policies without reference to the Union's distinctive model of energy governance. The EU has set itself the aim of pursuing a range of energy interests through the extension of its own rules and regulations beyond the Union's borders. The EU looks for institutional predictability in neighbours rather than a free market *per se*. EU officials describe the approach as distinct from neo-liberalism and predicated instead on regulatory reliability.

The EU's basic philosophy is encapsulated by officials' insistence in defining the 'European energy space' as extending more widely than the

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European Commission Project Number: 266809

EU itself, spreading across to the Caspian and down to the Sahara. The extension of formal EU energy rules and obligations is enshrined in the so-called Energy Community treaty, which has been adopted by Western Balkan states, Ukraine and potentially Turkey. All these states have signed up to abide by EU legal requirements in the management of their energy markets. Under this rubric, for example, in February 2011 Macedonia introduced a far-reaching raft of laws to align with EU energy markets. The EU's March 2011 new policy document responding to the Arab spring intimated at North Africa also being offered a place in the Energy Community. A majority of member states expresses support for the idea of extending the Energy Community to both North Africa and the Caucasus.

Some effort is apparent also to incorporate climate change into external relations through this regulatory approach. Wide support exists among member states and the Commission to bring the Renewable Energy Directive (RED) *acquis* into the Energy Community. DG Energy argues that the RED must expand and change as the 'market for renewables is moving from a local to cross-border supply'.[33] The Council of European Energy Regulators welcomes moves to prepare for the integration of the Renewable Energy Directive into the Energy Community. It argues that the EU needs to support more twinning and capacity-building projects to help new members of the Community implement the RED.

The Emissions Trading Directive is being 'externalised' to provide investment certainty for European companies in renewables development in non-EU countries. There is talk of strengthening its rules to impose penalties on third countries for intervening negatively in renewables projects. Under the RED, electricity generated by renewable sources outside the EU can count towards a country's national renewables targets. It is proposed that the Energy Charter treaty begins to apply its rules to low carbon sources too. Some member states advocate extending the ECT's *acquis* comprehensively to cover renewables. Some officials see relevance for the Middle East and North Africa in using the 20/20/20

[33]. DG Energy, op. cit., p. 12.

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European Commission Project Number: 266809

targets as a form of experimental governance to galvanise cooperation on climate change mitigation.

Significantly, however, many fear that the regulatory, external governance approach is insufficiently flexible or focused to prioritise renewables development in EU external relations. Both Moldova and Ukraine have, for instance, progressed only very slowly with approximation and reforms under the Energy Community. The focus on regulatory export makes the EU a ponderous actor in the foreign policy dimensions of energy policy. And one implication of this is to compound the difficulties of incorporating climate-related factors into foreign policy planning and initiatives. An underlying concern among some policy-makers has been the need to have a different approach to regulatory convergence in renewables compared to hydrocarbons. They worry that the EU has sought to carry over its basic regulatory model from oil and gas to the renewables sector in a way that is blind to the very different dynamics governing these sectors.

A wide-ranging public consultation held prior to the elaboration of the Energy 2020 strategy revealed growing doubts about the wisdom of the approach based primarily on the export of EU regulations. In these consultations, governments and companies argued for a more direct approach in energy relations with non-EU states, including on the link with supplies of power generated from renewable sources. The French government argued that in the Mediterranean more stress was needed on infrastructure connections than regulations; it wanted Mediterranean states brought into the EU energy market, but on a more pragmatic basis. The main priority should be to push Arab governments on investment protection, especially in renewables. Other member states made similar points: an overly complex set of technical and regulatory convergence criteria are holding up external energy cooperation.

Conclusions

In the last three crisis-bedevilled years, the EU has raised its ambitions in global energy policy. Many impressive new commitments have been introduced. The EU now has a more comprehensive range of instruments at

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European Commission Project Number: 266809

its disposal. On climate change, some of the ghosts of the ill-fated 2009 Copenhagen summit have been laid to rest. The efforts to mainstream climate diplomacy across all areas of EU external relations are commendable. On energy security, a slightly more geopolitical angle has hardened the edges of EU foreign policy. External unity has tightened; the long-standing jibe that the EU has no common external energy policy is no longer entirely fair.

Curiously, however, even as the EU's strategies have gathered momentum, so have new uncertainties filtered into its climate and energy policies. Progress on at least some domestic climate targets has faltered; and the external ramifications of this are apparent. A crisis-compounded strategic introspection increasingly undermines the vitality of external aims; the effect is evident in detailed areas of policy such as climate funding and global renewables partnerships. If anything, in the last two years EU policy commitments in the external dimensions of traditional energy security have advanced further than European global climate policies. The new prominence of unconventional sources of fossil fuels looks set to intensify this trend.

These scenarios capture the difficult policy challenges with which the EU is now grappling. More conceptually, it also raises questions about what kind of energy actor the Union is and should seek to be. The EU has staked out two core pillars to its identity in global energy politics: the primacy of climate diplomacy over 'hard security' *realpolitik*, and the use of its own internal commitments and regulations as the best basis for its international projection. These principles still apply but both are more equivocal. Some degree of flexibility in the EU's approach to climate and energy questions is certainly merited. It is not clear, however, that the current evolution of European strategy represents an enlightened readjustment rather than short-term, *ad hoc* expediency.

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