Climate change and energy in the EU: global challenges, collective responsibilities

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Theme[1]

The geopolitical challenges posed by climate change and increased energy demand require global commitments and binding instruments. For the EU to be able to exert effective influence over climate-energy diplomacy, Member States must first define a common strategy, identifying collective interests and endowing the EU with the legal capacity it needs to act in the current world order.

Summary

The coming years will see an increased prevalence in the effects of climate change and a rise in global energy consumption. In January 2013, the EU started to implement the primary legal measures of its 2020 climate-energy package. In the absence of a post-Kyoto multilateral order, the EU has committed itself to reducing emissions by at least 20% by 2020. As a complementary policy, action on energy has emerged as a crucial strategy, not only to abate emissions, but to limit the EU's energy dependency and economic vulnerability. However, the new Treaty provision on energy, introduced under the Lisbon Treaty, has proved to be insufficient to ensure common, effective action at both the internal and external levels.

Analysis

Climate change and energy dependency as global geopolitical risks

It is widely accepted that climate change is mainly due to human activity. Since the industrial revolution, the burning of fossil fuels, agricultural practices and land use changes have led to the release of huge amounts of carbon dioxide and other pollutant gases, whose concentration in the atmosphere is responsible for the increase in global temperature with devastating repercussions.

Over the last hundred years, the effects of climate change have been particularly pronounced: thawing of the ice sheets, a rise in sea levels, increased prevalence of heat waves and the recurrence of extreme weather events such as hurricanes, floods and droughts, among others.[2]

The social and economic impact of these events is significant in all countries. However, developing and lesser-developed countries suffer the consequences most, due to their lack of resources for reducing emissions (mitigation) and for preparing the basic infrastructure to cope with climate change (adaptation). In the developing world, therefore, climate change has become a risk-multiplier, interacting with structural needs and making it even more difficult to tackle poverty, disease and underdevelopment.

1 This paper is one of the **Elcano Royal Institute**'s contributions to the **European Global Strategy Project**.
2 For a detailed analysis of these effects, see United Nations Environment Programme, UNEP Year Book 2012, in particular Chapter one, available at **http://www.unep.org/yearbook/2012/**.

Global warming also poses a threat to international security, since its effects are provoking conflicts and exacerbating existing tensions deriving from shortages of natural resources, such as water, cultivable lands and energy. Another noticeable feature of climate change as a geopolitical threat is that posed by human displacements across the planet due to recurrent natural disasters, with the number of environmental refugees currently outstripping that of political refugees.[2]

The severity of the destructive effects of global warming is likely to increase in the future, coinciding with a rise in energy consumption and a subsequent escalation in gas emissions. According to the latest projections from the International Energy Agency (IEA), energy demand is set to double by 2035 as a result of population growth and economic expansion, especially in developing countries. Part of this rise in demand will be due to increased mobility and transport, which will entail an increase in oil consumption. As for the oil supply, the main providers will continue to be the countries of the Middle East and North Africa, a region of particular instability due to political tensions which are having significant implications on the global oil supply and price.[3]

Oil and other fossil fuels, such as coal and natural gas, will continue to be the dominant energy sources in 2035. The forecasted increase in energy consumption places the international community at risk of failing to limit the rise in global temperatures to 2° C, as agreed by the Conference of Parties (COP) in Copenhagen (2009). There is a widespread scientific consensus that a temperature increase of over 2° C would push the planet across the 'tipping point', a point of no return with irreversible changes even if drastic mitigation measures were to be adopted.

Nonetheless, despite this forecasted trend in energy use, the share of fossil fuels in the total demand for energy is likely to decline. In the case of oil, for instance, the US is currently the world's largest oil importer, but the application of energy-efficiency measures in transport and an increase in domestic oil supplies from deep offshore drilling could help reduce its oil dependency dramatically. The EU is also highly dependent on oil imports and is currently the world's largest importer of natural gas. As regards natural gas, the cleanest of the fossil fuels, global demand is expected to outstrip coal by 2035. This kind of fuel can play an important role in the transition of growing economies, such as China and India, to a low-carbon energy model. In addition, the supply of natural gas is more widely distributed geographically, a positive factor in terms of energy security. Nevertheless, emissions from an increased consumption of natural gas will have to be captured and stored, in addition to the use of other mitigation tools.

Indeed, decarbonisation of the energy model is one of the greatest technological challenges of the 21st Century. However, this shift in energy investment strategies also holds out an economic opportunity. Climate change and energy security are therefore also viewed as being medium and long-term economic chances. For the time being, however, they primarily interact as a dangerous threat that requires immediate global action.

2 See UN High Commissioner for Refugees, 'Climate Change, Natural Disasters and Human Displacements: a UNHCR Perspective', available at **http://www.unhcr.org/4901e81a4.html**.
3 International Energy Agency, 'World Energy Outlook, 2012'. Chapter 2 includes an in-depth analysis of the energy trends to 2035, available at **http://www.worldenergyoutlook.org/**.

The EU's response to climate and energy threats: major goals and gaps in the transition to a low-carbon economy

Just one year before the Copenhagen Summit (December 2009), which was intended to reach an agreement on a post-Kyoto climate order, the European Council approved a climate-energy package for the period 2013-20. Three years later, the international community has yet to adopt a new multilateral agreement, but the EU started to implement the package's main measures and tools in January 2013. This comprehensive framework aims to achieve the EU's ambitious energy and climate targets for 2020: to reduce greenhouse gas (GHG) emissions by 20%, to increase the share of renewable energy to 20% and to achieve a 20% improvement in energy efficiency.[4]

In March 2011, looking beyond these short-term objectives, the European Commission proposed a roadmap for cutting EU emissions by 80%-95% by 2050.[5] This goal has serious implications for the energy sector, since energy-related emissions currently account for almost 80% of the EU's total emissions. Transformation of the energy model by 2050 is therefore the greatest challenge currently faced by the EU.

In this scenario, energy efficiency is considered the most decisive means of reducing GHG and, at the same time, improving energy security. For now, however, this is the one objective of the 2020 targets that appears more difficult to reach unless more substantial and drastic steps are taken, particularly to achieve higher energy savings in buildings, transport and products.[6]

The increased use of renewable sources of energy is also a key piece in any move towards a low-carbon economy. It is widely acknowledged that renewable energy production, as well as carbon capture and storage (CCS) and other green technologies, can create employment and boost the economy. However, the European renewable energy industry is relatively young and financing for this developing sector is currently an important challenge. The European Commission has estimated that around €1 trillion will be needed over the next 10 years, not only to diversify energy resources, but also to replace equipment and cater for rapidly changing energy requirements.[7]

The full integration of energy networks and systems and the opening-up of energy markets to complete an internal energy market are also essential for achieving such a shift and for ensuring energy supplies at the lowest possible cost. The EU has set the deadline of 2014 for settling the internal energy market. However, the target is unlikely to be met, largely due to a lack of political will among Member States to enforce EU legislation on time and to a reluctance to move away from national options and priorities.

The lack of a common vision explains the current fragmentation of energy policies and markets, all of which undermines energy security due to delays in investments and technological progress. Likewise, at the international level, there is no common approach

4 The legal acts implementing this package are available at **http://ec.europa.eu/clima/policies/package/documentation_en.htm**.

5 European Commission, 'A roadmap for moving to a competitive low-carbon economy in 2050', COM (2011) 112 final. This roadmap is one of the long-term plans envisaged under the Resource-Efficient Europe-flagship initiative under the Europe 2020 strategy, available at **http://ec.europa.eu/clima/policies/package/documentation_en.htm**.

6 'Europe 2020 Targets: climate change and energy', pp.3-4, available at **http://ec.europa.eu/europe2020/pdf/themes/13_energy_and_ghg.pdf**.

7 European Commission, 'Energy 2020. A strategy for competitive, sustainable and secure energy', COM (2010) 639 final.

towards partners, suppliers or transit countries, making the EU vulnerable to unforeseen oil and gas supply risks. The inclusion of energy in the Treaty on the Functioning of the EU (TFEU) demands a change, both ad intra and ad extra.

Proposals for enhanced common action and international influence

(1) A more sustainable economic model requires a common European policy

In the area of climate change, the EU has engaged in a significant degree of common action over the past 13 years. The wide-ranging policies and measures adopted at the EU level have become a global reference point and the most consistent element of the Union's environmental policy. European action on climate change is currently framed within Title XX, Articles 191-193 TFEU, as amended by the Lisbon Treaty. Among the objectives, Article 191 now expressly envisages promoting measures at the international level to deal with regional and worldwide environmental problems, 'and in particular combating climate change'.

In contrast, there is no such common action when it comes to energy. Besides being a strategic security factor, the EU's energy policy is linked to action on climate change, as a key element in emission mitigation and the promotion of renewable energy sources.

The Lisbon Treaty introduced Article 194 TFEU on Energy. Like environment, energy is a policy of shared competence. The new, sole provision on energy sets out the EU's goals in this sector: the energy market, supply security, energy efficiency and the interconnection of energy networks. The EU has been adopting legal measures to address these aims over the past few years. However, as Article 194.2 stipulates, Member States retain the competence to decide on the conditions for 'exploiting their energy resources, choices among different energy sources and the general structure of their energy supply, without prejudice to article 192(2)(c)'.

These limitations to the EU's competences clearly explain the current fragmentation of the energy markets. The entitlement of Member States to frame their own national energy policies is not compatible with the stronger, concerted action required to address global challenges. Wider regulatory powers, therefore, need to be conferred on the EU. Within Title XX on Environment, Article 192(2)(c) provides that the Council –acting unanimously in accordance with a special legislative procedure and after consulting the European Parliament, the Economic and Social Committee and the Committee of the Regions– can adopt 'measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply'. The simplified revision procedure envisaged by Article 48.7 of the Treaty on European Union (TEU) could replace Council unanimity and the special legislative procedure with the ordinary legislative procedure, making it easier to engage in common actions.

In the meantime, a commitment from Member States to cooperate and coordinate action with EU institutions is crucial to achieving energy-climate goals. Cooperation mechanisms,

such as those envisaged by the Renewable Energy Directive, could provide helpful guidelines to this end.[8] Likewise, coordination instruments could be established by the European Commission itself through delegated acts, though this capacity would require prior delegation of power by the Council and the European Parliament.

(2) A strong global role for the EU requires a variable, functional diplomacy to cope with structural changes in the international system

More integrated action should allow stronger external action and influence. However, this has not always been the premise in all EU spheres.

The EU has been a significant international actor in climate change negotiations since 1995. In recent years it has progressively reinforced its ability to speak with a single voice through the reform of EU coordination and representation mechanisms. Important outcomes of this process include the establishment of the Working Group on International Environmental Issues/Climate Change in 1996, the reinforcement of the groups of expert negotiators in 2004 and the creation of a specific Directorate-General for Climate Action within the Commission in 2010.[9] From a legal perspective, emission mitigation commitments for both the first and second Kyoto periods have been established at the EU level. The most significant mitigation tool, the EU Emission Trading Scheme, offers an example of how an international trading scheme can work for economically and politically divergent states when there is a common will to combat climate change together.

Nevertheless, this internal cohesion has not always been matched by a stronger international position for the EU, as shown by the latest COP meetings. In Copenhagen, for instance, the EU failed to provide a post-Kyoto legal protocol and in Durban (COP-17), the EU sought a rapid mandate to negotiate a new legally-binding instrument. This was a precondition for its agreement to extend the second commitment period of the Kyoto Protocol from five to eight years, as finally adopted by the COP-19 at Doha.[10]

This loss of leadership reflects the effects of shifts in global power on climate governance. Some states, such as China, India and Brazil, which were classed as developing countries at the time the Kyoto Protocol was adopted (1997), have since become emerging powers. As large GHG emitters they now wield considerable influence in international negotiations. In addition, since President Barack Obama took office in 2009, the US has returned to the forefront of international climate negotiations.

In this new world order, the EU has found it difficult to regain its former leadership. At present, its stance and its emission-reduction ambitions are mainly supported by less powerful coalitions of states, such as the small-island and least-developed country groups.

Consequently, in addition to internal reforms, the current world context requires the EU to re-orientate its climate diplomacy, traditionally based on the quest for multilateral solutions. This will require the establishment of ad hoc partnerships –variously binding–

8 Articles 7-11 Directive 2009/28/EC, OJ L140/16 of 5 June 2009.
9 Oriol Costa (2012), 'Puestos a liderar. Unidad e influencia de la UE en la política internacional del clima', in Esther Barbé (Dir.), *Cambio mundial y gobernanza global. La interacción entre la Unión Europea y las instituciones internacionales*, Tecnos.
10 Detailed information is available at **http://unfccc.int/meetings/doha_nov_2012/meeting/6815/php/view/decisions.php**.

with diverse groups of countries (eg, developing, developed and emerging economies, oil exporting and producing countries).

As regards energy, there is no global multilateral framework comparable to the UN's on climate change. With 55 members, the Energy Charter Treaty (ECT) is currently the most important legally-biding multilateral instrument. The ECT was developed out of the 1991 Energy Charter, promoted by the EU in 1991 at a time when there was no common energy policy envisaged under the Treaties. However, this international instrument is currently in decline following the departure of the Russian Federation in 2009, mainly as a result of discrepancies with the EU on the international energy model. At the same time, the EU has lost its influence in this international context, just at a time when the Lisbon Treaty has provided it with a specific legal foundation on energy.

This loss of influence can also be explained by structural changes in the international energy system. The global energy markets are becoming tighter, with the most pressing demand coming from Asia and the Middle East, while the power of producers over consumers has increased. This new scenario clearly contrasts with that of the early 1990s, when energy resources were cheaper and more abundant.

Nevertheless, unlike climate-change action, the introduction of legal and institutional instruments on energy has not been accompanied by the definition of European political contents. The current gap between common goals –as formulated by Article 194.1 TFEU– and the actual compatibility of national energy strategies –as recognised by Article 194.2 TFEU– is the decisive obstacle to the EU becoming a credible player in the global competition for energy. Differences in energy mixes, market sizes and long-consolidated ties to certain energy suppliers, not only hamper the completion of an internal energy market but also lead to a diversity of external energy policies.

Formally, the legal basis for the EU's international negotiations and action on energy is Article 194 TFEU. However, Member States also retain the right to conduct their own bilateral relations with third countries as they deem fit. There is therefore a certain ambiguity when it comes to the definition of the EU's and Member States' respective competences. This fosters confusion, dispersion and complexity in the EU's representation and external action, all of which undermine its influence in international energy relations.

The new international energy scenario requires that the EU be able to design new formulas for differentiated cooperation with strategic partners. As a security strategy, the EU aims to diversify its links, particularly with neighbouring countries, while at the same time seeking to contribute to the development of poorer economies by ensuring their access to energy. However, with no capacity to negotiate effective international solutions, the EU will become more vulnerable to supply risks.

Conclusion

Global risks, climate change and energy security need to be addressed at EU level. A strong legal basis in the Treaties for common action enhances the EU's response to these challenges, at both the internal and external levels. However, regulatory power and internal cohesion are not by themselves sufficient to enable the EU to play a credible role in today's shifting multi-polar world.

As an international actor, the EU has traditionally stressed multilateralism as an effective approach. But the international context is not so much multilateral as politically fragmented, with new poles of influence emerging in different regions of the world.

As a key element of a European Global Strategy (EGS), therefore, the EU should have the means to deploy a functional, regionally-differentiated diplomacy that should enable it to engage in ad hoc partnerships with groups of countries.

On climate change, the existing coordination mechanisms could serve the EU and its Member States to identify strategic partners and define common ambitions and normative commitments. The EU should then agree with each specific group on shared interests, collective goals and respective commitments. At the same time, the EU could continue to work on and negotiate a post-Kyoto climate order in coordination and within the UN framework. This trans-regional network of partnerships, of a diverse binding strength, would undoubtedly make it easier to work on and negotiate global solutions within the multilateral UN framework.

In the sphere of energy, an internal dimension is still far from having been achieved. External action is carried out on a bilateral basis. In the absence of a stronger legal basis for a common policy, the EU could indirectly reinforce its influence on domestic energy options through climate action, an area of greater consensus and more cohesion. In this respect, the goals of 20% of renewable sources and 20% of energy efficiency by 2020 established under the climate-energy package are already leading Member States to adapt their respective energy mixes to meet national targets. This adjustment also affects their international energy-related alliances with third countries. Similarly, the EU's regional partnerships on climate change, including climate-related energy measures, could also have an impact on Member States' bilateral agreements.

Completion of the internal energy market should aid the development of further consistent external action. However, the EU's loss of influence within the ECT highlights the fact that exporting the European market-based model is perhaps not the best way to contribute to energy governance. New formulas of international dialogue therefore need to be used in the current world context.

A crucial step in this direction is the definition of a common energy security strategy as an essential part of an EGS. In this respect, Member States and the European Commission should first identify the issues that are of common concern and collective interest (eg, oil

and gas import dependency, diversification of suppliers and access to energy for poorer economies). The EU should then be provided with the means to establish strategic regional partnerships with country groups, particularly with energy suppliers. Indeed, the EU has already initiated or proposed regional pipeline projects of European interest (such as Nord Stream, Nabucco and the Mediterranean energy ring), but there is no actual cooperation between the EU and Member States within these common initiatives.

In the absence of a common vision, coordination mechanisms must be improved upon, not only in terms of policy options, but also to ensure that Member States act in the EU's benefit in international negotiations. Besides legal instruments,[11] one of the means of channelling this coordination should be the European External Action Service (EEAS). As a new structure it offers the opportunity to the EU and its Member States to coordinate their action and act as a unified whole.

Finally, reinforcing the external dimension of the EU's energy policy within the framework of an EGS would, at the same time, entail more consistency with other external policies (neighbourhood policy, trade, development cooperation, climate change, etc), thereby improving the EU's position in global governance.

11 Article 3 of Decision 944/2012/EU of 25 October 2012 establishes a mechanism for the exchange of information on intergovernmental agreements between Member States and third countries having an impact on the internal energy market or on the security supply in the EU. Member States were required to submit to the Commission the information on existing intergovernmental agreements by 17 February 2013. OJ L299 of 27 October 2012.

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