Low carbon Policies and the management of EU-China Trade Relations

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Abstract

Low carbon society objectives have won a large support from the political elites in the EU and China and have become routinely invoked on both sides as the most promising response to the challenge of climate change. Praised as a common response to a common challenge, these political endorsements in both regions have raised enormous expectations of collective action and increased bilateral and strategic cooperation on climate change and energy security. These hopes have been embodied in the EU-China partnership on climate change. Yet, whereas some cooperation has indeed taken place, paradoxically this convergence of policy goals has also led to growing trade and political tensions. Therefore, this paper asks whether the emphasis on low carbon development strategies in China and the EU is actually capable of triggering the expected benefits for “win-win” cooperation on climate change. It argues that these contradictory patterns of cooperation and competition illustrate a tension between environmental objectives and economic competitiveness. This tension is inherent in the low-carbon society concept and has not been sufficiently appraised in EU-China relations. In particular, it demonstrates that the threats of ‘trade wars’ over low-carbon energy technologies indicate a growing tendency to construe these technologies as strategic national resources and crucial assets for ensuring national economic growth and jobs, tilting the balance towards multipolar competition for emerging markets and clouding the horizon of the ‘green’ “end of history”.
Introduction

Low carbon society objectives have won substantial support from political elites in the EU and China and have become routinely invoked on both sides as the most promising response to the challenge of climate change. The EU, which has assumed a leadership role in global climate governance since the inception of the multilateral regime at the 1992 UN Conference on Environment and Development, has fully integrated the ‘low carbon society’ vocabulary into its 2020 development strategy aimed at delivering “smart sustainable and inclusive growth”. It is also the preferred path towards achieving EU’s ambition to reduce greenhouse gases emissions by 80 to 95% by 2050.

China, which since 2008 has surpassed the US as the world’s largest emitter of GHG, has also hailed the pursuit of a “low carbon economy” as the future development path for China. The 12th Five-Year-Plan (FYP) (2011-2015) and the white paper on “Addressing climate change” released by the National Development and Reform Commission (NDRC) in 2012 detail a number of measures to achieve an overall 17% reduction of CO2 emissions per unit of GDP by 2015 and 40-45% by 2020 from 2005 levels. Meanwhile, China has already become the world’s leading investor and producer of renewable energy technologies and the FYP, together with follow-up “Work Plan for Greenhouse Gases Emissions Control in the 12th Five-Year Plan Period”, makes investment in low carbon technologies a top priority in achieving the goal to have 15% of its total energy demand sourced from renewables by 2020. Meanwhile, CPPCC officials and Prime Minister Li Keqiang have vowed that over ¥3 trillion RMB would be poured into industries related to environmental protection during the 12th FYP. This shows that the new leadership is likely to keep the pursuit of an ‘eco civilization’ on the top of its agenda for the decade to come.

Praised as a common response to a common challenge, these political endorsements in Europe and China have raised enormous expectations of collective action and increased bilateral and

1 EU 2020 Strategy, see website: http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/priorities/index_en.htm
strategic cooperation on climate change and energy security\(^3\), which have been embodied in the EU-China partnership on climate change and other sectorial dialogues.

Yet, whereas some cooperation has indeed taken place and European companies have been among the first to seize the issuing market opportunities (B. Buijs, L van Geuns, 2012), this convergence of policy goals has paradoxically also led to growing trade and political tensions. More specifically, the promotion of low carbon energy technologies and other carbon pricing instruments have triggered significant, still unresolved, trade and political disputes.

Following tensions on subsidies for wind turbines, and the still on-going dispute on the inclusion of international aviation in the EU ETS\(^4\), the latest opus came about in September 2012, when the European Commission launched both anti-dumping and anti-subsidy investigations into Solar panels’ imports from China, after the US began imposing duties between 30-250% on the same imports from China. The escalating dispute between the two primary markets for low carbon technologies may read as a signal of a global trend towards a "race for green markets" and correlated "green protectionism" which may hinder the desirable large-scale, cost-efficient deployment of these technologies.

In such a context, it is worth questioning whether the emphasis on low carbon development strategies in China and the EU is actually capable of triggering the expected benefits for “win-win” cooperation on climate change.

This paper argues that the contradictory patterns of international cooperation and competition illustrate a tension between environmental objectives and economic competitiveness. This tension, which is inherent in the ‘low carbon economy’ concept, has not been sufficiently analysed in EU-China relations. Since the launch of China’s reform and opening up period in the late 1970s, the Chinese leadership has constantly subordinated environmental issues to its economic development goals. Even though environmental degradation and climate change have gained political clout, the leadership has made clear that economic development remained the ultimate priority for the developing state. The ‘low carbon society’ has thus unsurprisingly been formulated as the way to “accelerate the shift in its economic

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\(^3\) EU China Joint Declaration on Energy Security, Outcome of the 1\(^{st}\) EU-China Energy Dialogue, Brussels, 3 May 2012

\(^4\) Trade tensions have also previously emerged on Chinese subsidies of wind turbines. Although in that case the EU did not launch a probe, it contributed to the investigations undertaken in the United States. Furthermore, the lingering dispute on the inclusion of emissions from international aviation in the EU ETS, denounced as an illegal carbon tax by China and other countries, has also threatened of using trade retaliatory measures.
development mode and promote industrial transformation and upgrading\(^5\). With the emerging industry still in search for a new global trade balance, China’s “green power” ambitions challenge European clean-tech industrial leaders, particularly on their capacity to deliver on the welfare dividends expected from the ‘green revolution’. Hence, EU’s 2008 “climate package” legislation, just like the Commission’s strategy for a “low carbon competitive economy by 2050”, illustrate Europe’s anxiety, reinforced by the economic crisis, to ensure that low carbon regulatory and industrial policy choices enhance, and do not impede European competitiveness in the globalised economy. Accordingly, bilateral tensions have risen since the adoption of the 12\(^{th}\) FYP, despite widespread political applauds regarding its ‘green’ orientation.

Low carbon energy technologies have been presented as part of the solution to alleviate energy security concerns of competition over shrinking natural energy resources\(^6\). Interestingly, because they are developed and traded by private actors, these technologies have initially not been considered as a similar source of competition between states. Yet, although the perspective of addressing climate change through the global deployment of low carbon technologies has proved scientifically persuasive (Stern, N, 2006; C, Karakosta, H. Doukas, J. Psarras, 2011), this paper investigates the issue from another perspective and argues that the threats of ‘trade wars’ over low-carbon energy technologies indicate a growing tendency to construe these technologies as strategic national resources and crucial assets for ensuring national economic growth and jobs. Seen in this way, the role of low carbon energy technologies in tilting the balance towards either international cooperation to address climate change or multipolar competition for emerging markets appears much more ambivalent than preached by the advocates of the ‘green’ “end of history”\(^7\). Moreover, although this race is global in nature, with the United States now fully engaged in it\(^8\) (M.A. Schreur, 2012), it has particular significance for the EU-China relations because of the primary importance of their

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\(^5\) China’s Policies and Actions measures for addressing Climate Change, China National Development and Reform Commission, 2012, p 3


\(^7\) Reference to Francis Fukuyama, « The end of History and the Last Man » (1992), predicting the advent of western liberal democracy as the end point of humanity’s socio-cultural evolution capitalism after the fall of the Berlin wall.

\(^8\) A good illustration stems from President Obama State of the Union Address, 12 February 2013, in which he said pleaded that the US must lead the path towards sustainable energy resources and “cannot cede to other nations the technology that will power new jobs and new industries” but instead must “claim its promise”.

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respective markets for the initial deployment of these technologies and because of their leadership role in global climate governance.

The first section of this paper details the low carbon objectives adopted by the EU and China and pinpoints the commonalities of language and measures in both region’s low carbon development strategies. Subsequently, the second section dwells on the dialectic of competition and cooperation inherent in the low carbon concept and how it affects EU-China relations on climate change in the absence of a coherent multilateral framework supporting cooperation on this issue. The solar panel dispute is used as a case study of this dilemma.

I. Low carbon objectives in the EU and China

1. The Low Carbon Economy concept and its ramifications

Neither China nor the EU have properly defined “low carbon economy” or “low carbon society” in their policy documents, regulations and declarations, nor have they clarified the difference with other concepts such as “green economy” or the latest ‘made in China’ concept of “eco-civilization” endorsed by Premier Wen Jiabao in December 2012\(^9\). The same vagueness appears in UN sources, which seem to use all concepts interchangeably to promote a set of overlapping policy actions\(^{10}\).

But vagueness has many acknowledged advantages in international politics and there is little doubt that UNEP was keen on developing a concept large enough to bridge the gap between developed and developing countries, carved along the line drawn by the “common but differentiated responsibilities” principle of the United Nations Framework Convention on Climate Change (UNFCCC, 1992). Historically, both “green” and “low carbon” ideas are fairly recent concepts that have emerged in the political discourse in the early 2000s, during the EU campaign for rescuing the Kyoto protocol. The UK’s 2003 Energy White Paper entitled “Our future Energy – Creating a Low Carbon Economy” was among the first policy documents to endorse this terminology, although again without defining it. The idea was then swiftly promoted throughout the UN system, as it offered a way out of the development/climate dilemma invoked in the US to dump the protocol and was seen as a way

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\(^9\) Then-Premier Wen Jiaobo endorsed the concept of “ecological civilization” in a declaration upon his attendance to the Annual General Conference of the China Council for International Cooperation on Environment and Development (CCICED) in December 2012.

\(^{10}\) UNEP, “Green Jobs : Towards Decent Work in a Sustainable, Low-Carbon World”, Report, September 2008
to lower the hostility of business communities towards the climate cause. The ‘low carbon economy’, seems more narrowly conscribed to energy security than "green economy" and thereby avoids the often discredited business-oriented environmental romanticism. Nevertheless, beyond the language tricks, both concepts have served to promote the same core policy strategies: energy efficiency and the development of low carbon and renewable energy technologies.

This emphasis situates the “Low carbon economy” at the crossroad between climate change, economic development and energy security. Put simply, it proposes a common solution to the multiple trade-offs among these three dimensions by “getting the world on track to mitigate climate change in the near term, while also meeting demand for energy services, providing energy access to the world’s poorest, boosting the global economy, bolstering energy security and improving the natural environment and human health.” (J.L. Sawin, W.R. Moonaw, 2009). As a result, addressing climate change from a low carbon perspective contributes towards reformulating this fundamentally environmental problem into a development issue. Hence, as an avant-garde UK-Japan Low Carbon Project concluded in 2006\textsuperscript{11}, the pursuit of a low-carbon society instead focuses on climate-development possible co-benefits, powerfully summarised by the Stern Review in the following terms: “tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries\textsuperscript{12}.” But this ‘positive-sum’ relies on the prerequisite that ‘low carbon policies’ uphold the promises of the “Green New Deal\textsuperscript{13}”: a new technological frontier and increased social welfare through jobs creation.

2. The Low carbon economy strategies of Europe and China

While the EU took a leadership role in global Climate governance a long time before China became a tangible international actor in this field, it is interesting to note that ‘low carbon’ ideas have climbed the political agenda in Europe and China within a very short time lap, starting after the entry into force of the Kyoto Protocol in 2005. Only two years separate Sir

\textsuperscript{12} Sir Nicolas Stern, Stern Review: The Economics of Climate Change, Executive Summary, 2006, p 8
Nicolas Stern Review of Climate Economics (2006) from the publication of the “Introduction of Low-Carbon Economy” (Zhang et al, 2008) in China. Subsequently, Europe’s “low carbon roadmap” and China’s “low carbon” 12th FYP were both adopted in 2011, while bilateral cooperation on low carbon technologies was already on-going since 2006.

The normative diffusion took place extremely fast following endorsement by the G8 environment ministers 14 in 2009, despite – or perhaps because of - a grim background of disarray at the diplomatic failure of the Copenhagen Summit in 2009 and a creeping global economic and financial crisis. It shows the strong appeal of the 'low carbon' concept to policy makers on all sides and demonstrates the power of ideas and their communication in world politics 15.

Table of comparison of low carbon policies relative to low carbon technologies: EU Low Carbon Strategy – China 12th FYP

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<th>China 12th FIVE YEAR PLAN</th>
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<td>By 2020 from 1990 levels</td>
<td>20% net reduction of GHG emissions</td>
<td>By 2015 from 2010 levels</td>
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<td>20% of energy contribution from renewables</td>
<td>17% reduction of CO2 per unit of GDP</td>
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<td></td>
<td>20% improvement in energy efficiency</td>
<td>(and 40-45% by 2020 from 2005 levels)</td>
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14 LCS.R Net website: http://lcs-rnet.org/index.html
16 See China’s engagement in the Copenhagen Accord, 2009, reiterated by NDRC minister Xie Zhenhua at the COP 17 in Durban, December 2011
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<td>Adjusting the industrial structure: MIIT Plan for Industrial Transformation and Upgrading (2011-2015) with strong emphasis on developing “strategic emerging industries” and the “service industry”</td>
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* The above is just a preliminary account of the most relevant texts, by no means an exhaustive list

But the concept is, and has always been, intended to be broad enough to accommodate different priorities, notably from developed and developing countries (J. Skea, S. Nishioka, 2008). In Europe, besides the environmental cause, the low carbon agenda arguably pursues two other major policy objectives. The first one relates to Europe’s commitment to achieve its binding target under the Kyoto Protocol and thereby enhance its leadership in the multilateral negotiations towards a legally binding global climate compact. The second dimension stems from the Lisbon/Europe-2020 Agenda and the ambition to make the EU a competitive and dynamic knowledge-based economy. Related to these aspirations, the EU Energy Technology Strategy envisioned Europe as a “thriving and sustainable economy, with world leadership in a diverse portfolio of clean, efficient and low-carbon energy technologies as a motor for prosperity and a key contributor to growth and jobs.” This second dimension of EU climate policy has been reinforced with the economic crisis. With imperceptible or even negative growth and severe public budget cuts in many European member states, the upfront investments demanded by climate change mitigating policies have been challenged, requiring politicians to find more tangible economic and political justifications than the mere compliance with remote international environmental obligations. Moreover, with

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17 MIIT stands for China’s Ministry of Industry Information and Technology
18 In China, policy documents issued by the ministries have equally binding status than Laws and regulations
20 EU Strategic Energy Technology Plan (SET-Plan), COM(2007) 723 Final, 22 November 2007, p 4
unemployment becoming the highest concern of political leaders across Europe, the expected ‘job creating’ and ‘competitiveness’ benefits of the low carbon “New Deal” have monopolised the public debate on climate policies in Europe\(^{21}\) and taken precedence over other dimensions, including energy security, in all the policy communications of the European institutions\(^{22}\). This characteristic appears even more strikingly by looking at the green policies adopted by some of EU member states, who retain most of the power to determine their ‘green’ domestic industrial and tax policies. For instance, Schreur explains that Germany’s - Europe’s ‘role-model’ economy throughout the economic crisis - “success story” in renewables promotion, which lifted Germany to become the world’s 1\(^{st}\) exporter of renewables by 2010, has been claimed to have fostered the creation of over 370 000 jobs in this emerging industry. She also underlines the consensus in the German society that “innovation in environmental and clean energy technologies is a means of creating new jobs, modernizing the economy, and preparing Germany for the future” (Schreur, 2012).

In China, the endorsement of the ‘low carbon society’ concept by the State leadership has spurred academic discussions around its meaning and implications (Hu, Zhou \textit{et al}, 2011; Pan, Zhuang \textit{et al} 2010; Jiang \textit{et al}, 2010, Z. Zhang, 2010; Cai \textit{et al}, 2012). A direct result of this has been that an unprecedented number of research institutes have sprung up to build scientific capacity in this field following the adoption of China’s first “Climate Change White Paper” in 2007 (in 2012, Cai counted 18 new institutes having ‘low carbon’ mentioned in their name , Cai \textit{et al}, 2012); Most of the recent academic contributions from these institutes take as their starting point the understanding of ‘low carbon society’ provided by China’s Minister for the Environment (MEP) Zhou Shengxian as “an economic pattern characterized by low energy consumption, low emission and less pollution whose essence resides in higher energy efficiency and a cleaner energy structure\(^{23}\)”. All these Chinese authors emphasise the fact that in China, the concept of “low carbon Society” mainly represents a new mode of economic development. This conclusion is not surprising, considering the fact that since the outset, climate change policy has been the prerogative of the National Development and


\(^{22}\)Among others, the EU Energy Roadmap which outlines a “Secure, Competitive and Decarbonised energy system by 2050”, COM(2011) 885 final of 15 December 2011

Reform Commission, in charge of driving China’s economic and industrial development, and not the Ministry of Environment Protection (MEP).

At the central level, the Work Plan for GHG emissions control during the 12 FYP period clearly states that ‘China should view proactive responses to climate change as an important strategy for economic and social development as well as an important opportunity for accelerating the transformation of the economic development mode and for adjusting the economic structures and promoting a new industrial revolution”. To this end, the plan quotes 7 “strategic emerging industries”, including renewable industries, as a priority for government action. These industries should make up 8% to China’s total GDP by 2015 (from less than 2% in 2011). This, together with massive investment in R&D and the constant push, through various means, to encourage or compel technology transfers from developed markets clearly demonstrate the Chinese government’s ambition to transform the country into a technology world leader, starting with renewables and other clean technologies. At the local level also, the link between energy efficiency and renewable energy promotion on the one hand, and economic growth and local revenue on the other hand, has helped transforming climate change from a distant global issue into a local priority (Qi, Ma et al, 2008). But this is not unique to China. A comparative study by the Climate Policy Initiative of German and Chinese solar industry policies found that economic incentives were also an important explanatory factor for the solar industry expansion in Germany24.

From this brief account, it appears that the lure of the “new green industrial revolution” and its linkage to enhanced economic competitiveness in the globalised economy and continued economic growth is a key common rational underlying the promotion of a low carbon economy in Europe and China, although expected short-term benefits may be different (‘green jobs’ for Europe and for China, leapfrogging from its current ‘black’ industrial revolution directly into the ‘green industrial revolution’). But whereas convergence on climate goals can be expected to trigger international cooperation, enhancing the competitiveness of national industries is likely to lead more towards a ‘zero sum game’ competition.

II. The Dilemma of Cooperation for the Climate versus competition for markets and its impact on EU-China Relations

1. Climate friendship among nations? The multiple foundations of the multilateral diffusion of low carbon technologies

The literature on climate change abounds in diverse advocacies for a widespread diffusion of low carbon technologies through multilateral cooperation, in particular in a 'North-South' direction. This approach is supported by a series of arguments. The first and most significant argument is environmental. Environmental NGOs have repeatedly stressed that Climate change being a global issue, it requires global action and international cooperation to avoid a "tragedy of the commons" scenario. The literature on climate change emphasise two models of international cooperation. At the risk of simplification, a centralised governance system based on multilaterally agreed national commitments to reduce GHG emissions, promoted by the EU, coexists with a decentralised model of cooperation via technology diffusion and capacity building, advocated mainly by the US (Bo, Chen, 2009; MacNeil, Paterson, 2012). China has been keen on promoting its national interests through both approaches (Bo, Chen, 2009) consistent with its 'practical' approach to "proactively attract and absorb advanced international technologies, and learn from and draw on successful international experience"25.

Against a background of staging multilateral negotiations, the second model of cooperation has raised increasing expectations, especially since it was presented with an additional economic argument, according to which renewable technologies cooperation would allow investors to mitigate investment costs, realise global economies of scale in production, boost mass production and lower prices, with making these technologies affordable for the desirable mass-consumption their ultimate goal (Stern Review, 2006, Hourcade, Shukla, 2013).

In addition to this, another powerful argumentation in favour of cooperation in the field of low carbon technologies lies in international equity and legal principles enshrined in the UNFCCC obligation for developed countries to transfer climate technologies and build capacity for climate mitigation and adaptation in developing countries26. Taken as a concrete

25 Notice of the State Council on Issuing the Work Plan for Greenhouse Gas Emission Control during the 12th Five-Year Plan Period, paragraph 23
26 UNFCCC article 4.5 stipulating that “the developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or
manifestation of the cardinal principle of “Common but Differentiated Responsibilities” of Convention and the Kyoto Protocol - notably the Clean Development Mechanism (CDM) and Joint Implementation (JI) mechanisms -, the transfer and deployment of green technologies formed the essence of the “Bali Roadmap” and “Bali Action Plan” (2007) for the post-Kyoto era and a key equity component of the bargain to entice developing countries to the climate change agenda. In this regard, part of the EU’s effort to reach out to developing countries in the multilateral negotiations has been to acknowledge and uphold these demands. However, China’s rapidly growing economic power has created perceptions in the West that it was taking undue advantage of its position in the ‘developing countries’ camp. China, on the other hand, has constantly raised the failure of developed countries to fulfil their commitments to low carbon financing and technology transfer to rebut Western demands that it accepts internationally binding commitments.

The adoption of similar “low carbon development” domestic strategies in Europe and China has blown fresh hopes of cooperation following the bitter mutual disappointments of the Copenhagen climate summit in 2009. The EU-China bilateral partnership on climate change (the Partnership) was first established at the 8th EU-China summit meeting in Beijing in September 2005. With the two sides acknowledging common challenges of energy security and climate change, it was poised to become a key pillar of EU-China “Comprehensive Strategic Partnership” (2003). Remarkably, all the cooperation projects undertaken under the Partnership have fallen within the ambit of the “Low Carbon Economy”. These include: the early EU-China CDM Facilitation Project (2007-2010) aimed at the deployment of renewable energy technologies; the on-going EU-China Near-Zero Emissions Coal (NZEC) initiative on carbon capture and storage (2005-2020); the recently launched EU-China Partnership on low-carbon urbanisation and the latest project on the ETS signed at the latest EU-China in September 2012. More recently, the first EU-China Energy Dialogue also promoted bilateral

access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention.

27 The EU has committed the largest share to the international climate finance fund: see http://ec.europa.eu/clima/policies/finance/international/index_en.htm

28 Interviews with EU officials in Brussels, May 2010

29 These divisions have sprung again in the recent establishment of the Green Climate Fund in August 2012, where the contributions of “developed” and “developing” countries opposed China to the US and the UK. See Fiona Harvey, “Green Climate Fund to Discus $100bn pledged by rich countries”, The Guardian, Thursday 23 August 2012


31 EU and China Partnership on Climate Change, Press Release MEMO/05/298, Brussels, 2 September 2005
cooperation on renewables and low carbon technologies.32 Besides, many projects have also been concluded with individual member states.

Transnational cooperation between China and Europe has also flourished among research institutions and universities, businesses and other civil society organisations, on a much wider scale than what has been strictly undertaken through intergovernmental agreements. Hence, a persuasive argument for bilateral EU-China low carbon cooperation has been the high potential for business opportunities between the world’s two largest markets, which already enjoy the world’s most prominent inter-regional trade relation33. In addition, the ‘strategic aspect’ of the bilateral cooperation also resides in the hope that it will induce rapprochement in the multilateral framework34.

Thus, both at the bilateral and global levels, advocacies for cooperation on low-carbon technologies have monopolised the entire official discourse on climate governance, particularly in EU-China relations. While these political efforts and experts recommendations are perfectly justified and legitimate from an environmental point of view, they have also contributed to creating a political taboo around the issue of potential national competition in the field of renewable energy. This peculiarity is not found in other related areas of international relations where competition among nations is instead expected and politically assumed, for instance in the domains of energy security and trade relations at large35. The failure to take into account this dimension goes some way towards explaining the surprise and political unease created by the rising trade frictions in this field.

2. Increasing polar competition affecting EU-China relations on climate change: the example of solar panels

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33 According to EU Commission DG Trade website, China and the EU are the world’s two largest traders, China being Europe’s second trading partner after the US and Europe being China’s first trading partner
34 European Commission, “Limiting Global Climate Change to 2 Degrees Celsius, the Way Ahead for 2020 and Beyond”, COM (2007) 2 Final, Brussels, 10 January 2007, p 12
35 See the "trade annex" to EU Communication, "EU-China: Closer partners, growing Responsibilities", COM(2006) 631 final, 24 October 2006, by Global Europe, entitled "EU-China Trade and Investment: Competition and Partnership"; see also Trade Commissioner De Gucht speech following the launch of the EUCCC position paper 2012/2013, "EU-China, A Partnership for Growth", 18 September 2012, which starts with the statement that "Despite the continuing growth of our commercial relationship there are clouds in the sky over both our economies"
The Stern review took a neoliberal vision of the way the global market can address the world's "biggest market failure" and solve the development/climate equation through the diffusion of technology innovations. It completely ignored the potential risks of strategic competition for global markets in this emerging, potentially extremely lucrative industrial sector. Taking as its starting point the fact that technologies would mainly be developed by private entrepreneurs, it saw the role of States as mere support platforms for technological development through regulatory measures and investment incentives. But, the relationship between governments and national industries is much more complex (Breslin S, 2010), particularly with regard to those that are still in a very early development stage and require time and investment to become economically viable on the free market, such a renewable energy technologies.

As shown in previous sections, Europe's and China's low carbon strategies both place high hopes in the development of their domestic low carbon industry. In this regard, more attention should be paid to the fact that a possible negative interplay of low carbon policies, industrial policies and trade policies can lead to important frictions between these economic powers. This mainly takes two forms: Firstly, the race to push each economy’s domestic industry to the top export leadership in the emerging global market in the low carbon field increases pressure on governments to intervene and proactively support their ‘champions’ against foreign competitors. This runs the risk of raising trade barriers, as each market will face increasing domestic pressure for protection from foreign competitors. Secondly and consequently, fears of carbon leakage and unfair trade that threatens the expected returns on investment from the green ‘new deal’, associated with fears to be on the ‘loser side’ of the this new globalisation can also pressure against free trade. In Europe, but also elsewhere, the economic crisis has made it crucial for the economic benefits of the ‘green industrial revolution’ to produce dividends at home, measured in terms of economic activity, jobs and revenue for the state. As an example of how this translates into policy documents, the EU Energy Roadmap warns against a “potential trade-off between climate change policies and competitiveness” if the EU was alone to take regulatory measures to price and curb CO2 emissions. The EU, it argues, must safeguard the competitiveness of its domestic industry against “carbon leakage”. Consequently, the Commission states that “opportunities for trade and cooperation will require a level playing field beyond the European border”.  

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36 EU Energy Roadmap 2012
EU-China trade relations have become increasingly tense. Despite the setting up of a High-Level Trade Dialogue in 2008, China has become the main target of anti-dumping measures by the European Commission\(^\text{37}\), and China is also a regular user of anti-dumping against European products. Moreover, European businesses in China have increasingly voiced their frustration that while "China's rise in competitiveness has been largely due to the technology transfers brought through investments made by foreign companies based on prospects of a fair and equitable marketplace in China, it has also been bolstered by practices not in line with China’s WTO commitments, including discriminatory subsidies, remaining export quotas, licensing difficulties and equity restrictions that China argued were necessary to protect domestic industries upon opening\(^\text{38}\). As a result, since it introduced its first anti-subsidy tariffs against China in May 2011 (on coated fine paper\(^\text{39}\)), the trade defence statistics show that out of 5 new anti-subsidy investigations initiated by the Commission in 2012, 3 targeted China\(^\text{40}\).

In the field of low carbon technologies in particular, European firms have denounced the fact that Chinese renewable energy equipment manufacturers have had both official and unofficial access to bank financing from state-owned banks that their foreign counterparts have not, quoting, among other things, a Bloomberg news article that China Development Bank had granted US$ 47.3 billion worth of loans to Chinese wind and solar companies\(^\text{41}\).

The anti-dumping and anti-subsidy\(^\text{42}\) investigations launched by the European Commission in September and November 2012 into imports of Solar panels from China shows how the renewable energy industry is progressively being caught-up in these worrying trade tensions. The EU probe, -launched after the US DDTC (Directorate of Defense Trade Controls) began

\(^{37}\) Out of 186 anti-dumping investigations launched by the European Commission between 2003 and 2012, 73 were directed at China and measures were adopted in 52 cases, see Europolitics, "Trade spat escalates on eve of Summit", 19 September 2012

\(^{38}\) European Business in China Position Paper 2012/2013, p 11 (emphasis added)


\(^{40}\) European Commission, « Anti-dumping anti-subsidies safeguards - Statistics covering full-year 2012, 14 February 2013

\(^{41}\) European Business in China Position Paper 2012/2013, p 218; according to other sources, this information is however unverifiable and potentially inaccurate, see Choudhury, Nilima, "Unraveling the China-Europe Trade War", PV-tech, 4 January 2013. Yet, Some Chinese experts have accused Chinese banks' loans of being responsible for the over-capacity which has led to recent turmoil in the sector in China, see Gao Yang, "Should China Bail Out its Solar PV Industry?", China Dialogue, 12 September 2012;

imposing duties between 30-250% on the same products from China-, almost turned into a diplomatic incident on the eve of the annual EU-China Summit in September 2012. The “EU Prosun” ad hoc association of European Solar PV companies who lodged the complaint with the European Commission (dominated by the German Solar PV manufacturer Solarworld), asserted that “EU Solar manufacturers are going bankrupt and the industry is being destroyed by the massive subsidisation and dumping of Chinese solar panels in the EU 43”. These allegations were immediately opposed by some leading Chinese Solar PV companies, which, in a joint statement in July 2012, refuted the subsidisation accusations and warned that anti-subsidy tariffs from the EU would impose a fatal blow on the already weakened industry44. According to these companies, Europe is China’s single most important export market, representing 60% of total exports for a value worth $35.8 billion in 201145. The Chinese ministry of Commerce launched a large diplomatic campaign against what it termed a political use of trade defence instruments and ‘green protectionism’46. It also swiftly retorted by announcing new investigations into dumping and subsidies of solar-grade Polysilicon, an ingredient for solar panels manufacturing produced and exported mainly by the EU47. In addition, more recently China also filled an anti-subsidy case with the WTO into the renewable energy feed-in tariff programmes of Greece and Italy48, adding to the pile of pending cases involving diverse solar industry subsidisation schemes around the world49. Then, the latest to hit the ball of reciprocal escalation has been the EU Prosun Glass, affiliated with the original claimant, who filled an additional complaint with the European Commission on solar glass imports from China. The Commission officially accepted to launch the probe on 28 February 201350.

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46 Xinhua, "Delegation to discuss EU probe", Chinadaily, 12 September 2012; Xie Dan, "Crisis for Local Economies as China's Green Economy Sector Crashes", China Dialogue, 31 January 2013
47 Germany is the main exporter of solar-grade Polycilicon, according to the above mentioned Trina Solar joint statement
49 The EU already filled a case against solar industry subsidies in the Canadian province of Ontario, India, US Korea
50 European Commission, Press Release, “EU initiates anti-dumping investigations on solar glass from China”, MEMO/13/153
Interestingly, the European Commission published a rather unconventional note aimed at justifying that EU's Solar probe did not harm Europe's climate goals, reasserting that "making sure there is a level playing field for Europe's renewable energy industry is essential to Europe's energy targets." It further stressed that trade defence instruments are non-political and merely legal instruments based on WTO law. Germany’s Chancellor Angela Merkel, however, expressed the intention to solve the dispute through bilateral talks. Hence, several difficulties stand in the way of the Commission’s determination. Among them, the complexity of the claims and counter-claims involved in the case triggers many difficulties. This is related to finding the required ‘EU community interest’ in the solar PV production chain, which is a common feature of anti-dumping cases involving globalised industries. In addition, in the present case, there are various difficulties and sensitivities related to determining illegal subsidisation in a transition economy. Furthermore, China's decentralised implementation of policy goals means that the local governments have been put in charge of achieving climate policy goals. In the ‘solar case’, local authorities seem to have played an instrumental role in accelerating the boom of China’s PV industry (Deng, H, 2011). With these difficulties in investigating the claims, any finding by the Commission is likely to be contested both inside and outside Europe.

Without entering into the details of claims and counter claims, it is clear that, by launching anti-subsidy investigations into each other’s industrial policies, domestic trade agencies (the European Commission in Europe and the Ministry of Commerce in China) are embarking on a very intrusive exercise of exposing each other’s industry subsidisation policies, undertaken to sustain their respective low carbon development agendas. In this respect, the solar case shows that the linkage between climate change and trade risks playing against the former if it leads countries to raise tariffs and thereby hinder the desirable large-scale, cost-efficient deployment of these technologies.

The solar and wind industries are test cases for the future, as other low carbon technologies are planned to follow the same growth path, notably in the field of energy conservation and

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51 European Commission, DG Trade, "Why the EU's Investigation into solar panel imports from China does not harm Europe's Climate goals", Fact Sheet, 10 September 2012.
52 Reuter quoted the German Chancellor as having said in a Press conference that "We want a dialogue...This is not just Germany's wish but also the European Commission's wish. We want to solve this dispute politically", Reuters, "Merkel wants dialogue to solve China-Europe solar panels dispute", 17 September 2012
53 Ahn D, Lee J, "Countervailing Duty against China: Opening a Pandora's Box in the WTO System?" Discussion Paper No 615, Research Seminar in International Economics, University of Michigan, 26 April 2011
54 Choudhury, Nilima, "Unraveling the China-Europe Trade War", PV-tech, 4 January 2013
energy infrastructure. Moreover, as shown in previous sections, it is assumed that these technology deployment strategies will require tremendous amounts of investment from both private actors and public authorities. For instance, the EU energy roadmap foresees that, only for the deployment of ‘smart’ power grids in Europe, between €1.5 Trillion and €2.2 Trillion Euros would need to be invested by 2050. Another example relates to the “stimulus packages” adopted in 2009 to mitigate the economic crisis at EU and member state levels, a large share of which targeted “Green stimulus spendings”. On the other side, Chinese experts foresee that over the 12 FYP period up to ¥8 trillion RMB ($1.28 trillion) will be invested in developing China’s green economy, including ¥2.4 trillion in emissions cutting projects. But determining how public investment schemes can comply with international trade rules remains far from clear, as demonstrated by the growing literature on the interplay between the climate and trade regimes (Von Molkte, K 1997, Pieters G.P, Hertwich E.G 2007; Cosbey A, 2008; Meltzer J., 2012). Moreover, non-compliance with WTO rules may well be politically assumed by resilient members if perceptions of the national interest command it (for instance, the EU assumed non-compliance with WTO ruling in the Hormone case against the United States). A hint in this direction is that in the current row over solar panels, despite anti-subsidy tariffs being already imposed by the US and the threat of EU also imposing tariffs, China’s National Energy Administration (NEA) nonetheless recently announced a significant lift of the target of installed PV capacity by 2015 from 21 GW to 35 GW (the fourth adjustment since the adoption of the plan in 2011). According to Chinese experts, this signals the level of support that the government is still prepared to give to its PV industry, which by 2020 is expected to reach RMB250 billion (US$40 billion).

III. Conclusions

The provocative question raised in the introduction of this paper was not meant to insinuate that low carbon policies are wrong or should not be pursued. Instead the above argumentation tried to raise attention to a series of conflicts inherent in the low carbon economy that need to

55 EU Energy Roadmap 2012, p 6
56 International Institute for Labour Studies (IILS), "Green Stimulus Measures", EC-IILS Joint Discussion Paper Series No 15, 16 November 2011
57 Statement by Hu Angang, President of the Institute for Contemporary China Studies at Tsinghua University and a delegate at the 18th National Congress of the Communist Party of China (CPC) in November last year estimated Wei Tian, “$1.28 trillion to be invested in green economy”, China Daily, 13 November 2012
be fully appraised by policy makers, in order to avoid that trade tensions eventually jeopardise the attainment of legitimate climate protection and development goals. The contribution that this preliminary research wishes to make can be summarised as follow.

Firstly, the convergence of policy agendas towards a 'low carbon' economic development goal in all major economies will not automatically lead to a 'positive sum' game of cooperative actions at the international level. The low carbon society concept has been purposely kept sufficiently broad to embrace a variety of values and interests, so that its unilateral endorsement by individual governments is insufficient to propel collective action or alleviate the global equity challenges faced in the multilateral negotiations.

Secondly, the race for markets and intertwined industrial and national interests push major economies towards zero sum games calculus, which indicates that hopes for a decentralized climate governance based on the unimpeded deployment of low carbon technologies can be delusive. Furthermore, relying on trade rules to solve the inevitable trade conflicts may prove increasingly difficult, as the multiple trades-offs between free trade, the environment and job markets demand a legitimate and transparent political settlement.

Thirdly, in this complex interplay, several areas deserve more thorough attention from experts communities and policy-makers. One relates to the role of private transnational actors. It has not escaped media attention that "EU Prosun" was led by the same German multinational, SolarWorld, who had originated the probe in the United States. Considering the fact that the renewable industry is born in the age of globalisation, a closer monitoring of the transnational patterns of chain production will help identify the private interests behind the probes and better assert the establishment of the "level playing field" for the emerging market's players.

In addition, whereas this paper has focused on the EU level, it is also well-established that the policies and economic interests of EU member states vis a vis China are not always congruent, as is also true of their low carbon strategies. Poland for instance vocally resisted the adoption of EU energy roadmap 2050. Others have hinted that the EU-China solar dispute was in fact a German affair, despite Ms Merkel's attempts to present it as a European consensus. Exploring how member states' low carbon policies diverge would contribute to drawing a more accurate, if more complex, etat des lieux of the relation with China.

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59 Reuters, "Merkel wants dialogue to solve China-Europe solar panels dispute", 17 September 2012
Finally, this paper has focused on the "industrial" facet of low carbon policies. However, another area of potential conflict among nations concerns the regulation of markets for climate mitigation purpose (carbon trading, carbon taxation, feed-in tariffs and other price-incentives). As the on-going dispute on the inclusion of international aviation in the European ETS has shown⁶⁰, different methods of pricing carbon emissions have also triggered trade disputes. In this regard, the fresh announcement by China's Ministry of Finance that it will soon introduce a domestic carbon tax⁶¹ is likely to raise concerns among foreign investors and their governments. All these areas of potential tensions require cool-headed analysis to be carried out –ideally- without the hindrance of either "China threat" or "low carbon revolution" ideological bias.

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