

## How The United States Can Reinforce Chinese Action on Climate Change

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## About the Authors

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In addition to his authorship of two books, Busby is the author of several studies on climate change, national security, and energy policy from the Council on Foreign Relations, the Brookings Institution, the German Marshall Fund, and the Center for a New American Security (CNAS). Busby is one of the lead researchers in the Strauss Center project on Climate Change and African Political Stability (CCAPS) and is the principal investigator for the project Complex Emergencies and Political Stability in Asia (CEPSA). He has also written on US-China relations on climate change for CNAS and Resources for the Future. His articles have appeared in *International Security*, *International Studies Quarterly*, *Perspectives on Politics*, and *Security Studies*, among other publications.

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## Introduction

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In November 2014, on the margins of the Asia-Pacific Economic Cooperation (APEC) forum summit, Presidents Barack Obama and Xi Jinping signed onto a potentially significant agreement through which China pledged to reach “peak carbon” around 2030 and to increase the amount of non-fossil fuels in its energy mix to 20 percent by 2030, if not earlier. In fact, both of these targets were reaffirmed when China submitted its “Intended Nationally Determined Contribution” (INDC) to the United Nations (UN) in June 2015.<sup>1</sup>

The APEC summitry outcome represented a welcome, and long-term, strategy on Beijing’s part. It has become increasingly apparent that “band-aid” measures, designed to address the problem in piecemeal, rather than an integrated, fashion and in a limited timeframe are insufficient to meaningfully bend the curve on carbon emissions in China. What’s more, like in the United States, climate change remains a distant abstraction for most Chinese, who are much more attuned to the very noticeable threat of horrendous air pollution.

So the central government has deftly used air pollution as a rallying cry to confront environmental woes and as

a backdoor into addressing climate at the same time. Such an approach may be politically resonant and command public support, but it may not have the intended effect in achieving China’s carbon goals.

While analysts rightly tout the co-benefits for air pollution by addressing climate change, reduction of greenhouse gases (GHGs) can also be treated as a co-benefit of dealing with air pollution. However, even though curbing air pollution and GHGs simultaneously is possible, some of the

measures China has explored to address air pollution, such as coal-to-liquids, will likely worsen the climate problem.

Given China’s recent growth deceleration and the uncertainties that accompany its economic restructuring effort, it is all the more challenging and complex to determine an optimal mix of policies that can address air pollution without undermining climate efforts and putting pressure on an already weaker economy. In fact, China has tabled numerous domestic policies and actions, some of which quite ambitious, to address both the air and climate.

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Many have already examined at length the slate of policies that China has released on these fronts. This essay instead focuses on how the international policy environment can help shape China's choices to more vigorously reduce its carbon footprint

without compromising the political imperative to address air pollution.<sup>2</sup> More specifically, the paper looks at actions the United States can take to incentivize and reinforce China's carbon reduction efforts.

## Reconciling Choices and Trade-Offs

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**B**efore discussing the international dimensions of reinforcing China's efforts, a quick recounting of the current state of China's general strategy when it comes to pollutants and GHGs is merited to provide some context.

Ahead of the APEC summit, for example, Beijing undertook emergency measures to avoid the embarrassment of poor air quality. And much as it had done before the 2008 Beijing Olympics, the Chinese government pulled out all the stops as it prepared to host a major international event.

For one thing, Beijing restricted car travel to certain days of the week based on license plate numbers. For another, government offices and schools were closed for an "APEC holiday" to reduce traffic. And factories were ordered to shut down en masse during the summit.

Although such extraordinary measures did usher in a few uninterrupted days of blues skies, some of the actions also backfired. Companies could simply anticipate that they would be forced to halt operations during APEC and thus worked overtime in advance of the meeting, bringing bad air and bad press to Beijing on the eve of the gathering.

Put simply, emergency measures are far from sufficient to tackle the regular appearance of haze that hangs over major urban areas because of a combination of particulate matter and other pollutants. Indeed, the relationship between reducing air pollution and carbon dioxide (CO<sub>2</sub>) is not as straightforward as many presume. Cutting air pollutants does not always, or even necessarily, lead to a reduction in CO<sub>2</sub>.

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As Valerie Karplus and her Tsinghua University colleagues have noted in [another paper](#) in this series, the

complex chemistry of air pollution means that improvements in some air pollutants (associated with coal burning) without improvements in others, such as the release of ammonia from agriculture, will actually result in lower improvements in air quality.<sup>3</sup>

For instance, certain kinds of airborne particulate matter, which typically remain in the atmosphere for about a year, may dampen global warming effects by brightening clouds and reflecting light back into space. However, other types of particulate matter, such as black carbon (or soot), may *enhance* warming by absorbing

sunlight, particularly when deposited on white surfaces such as snow.<sup>4</sup>

Given the complicated relationship between the need to improve air quality while cutting carbon, it is no surprise that the Chinese government is grappling with a multiplicity of solutions and options. Settling on the optimal mix of actions involves serious consideration of choices, challenges, and tradeoffs.

At the broadest level, Beijing has adopted a two-pronged strategy to wean its economy off dependence on carbon-intensive fuels and reduce and relocate emissions where pollution currently occurs.

As is well known by now, coal is ultimately the biggest culprit when it comes to China's CO<sub>2</sub> emissions and is still responsible for nearly 70 percent of China's energy.<sup>5</sup> But a clear consensus has emerged among Chinese experts and policymakers that reducing the level of coal consumption relative to other fuel sources, such as gas and nuclear, in the country's energy mix is the *sine qua non* of an effective Chinese [energy strategy](#). This can be done in either of two ways: through more efficient processes and/or replacement with less carbon-intensive sources, which would simultaneously reduce air pollutants and GHGs in the near term.

For instance, dramatically ramping up renewables and even natural gas in the energy mix will have near-term benefits for air pollution and climate change.

But end-of-pipe strategies such as coal scrubbers inevitably require potentially carbon-intensive energy to function. What is more, relocating factories or power plants to interior provinces<sup>6</sup> or even abroad<sup>7</sup> would improve urban air quality but *not* reduce GHGs.

And there are other examples of this problem: constructing plants that convert coal to gas could improve urban air quality, on the one hand, but produce even more GHGs than would burning coal for energy production.<sup>8</sup> And while mass penetration of electric vehicles (EVs) might help mitigate transportation-related emissions from gasoline, it could increase CO<sub>2</sub> emissions if EVs are charging their batteries primarily from coal-fired electricity in China.<sup>9</sup>

The bottom line is this: Beijing finds itself in the unenviable position of trying to determine a balanced approach among numerous options, all of which could yield unintended outcomes for addressing climate.

In this context, therefore, many opportunities exist for additional US and international engagement, in large part to help China sort the better options from suboptimal ones, drawing on US and international experiences. US engagement could also help to reinforce the incentives for China to pursue actions that target carbon more directly.

Before turning to where US engagement could be supportive and

complementary, it is useful to offer a snapshot of recent Chinese policies.

## ***New Force of Law?***

China's swiftly evolving policy landscape for tackling both pollution and carbon has included a patchwork of policies, from setting emissions reduction targets and coal production caps to stronger environmental enforcement capabilities and stiffer penalties for polluters. But an important new weapon in the toolbox is to leverage the letter of the law.

In September 2014, China released draft revisions to its national Air Pollution Prevention and Control Law (APL) for public comment. These revisions to the air pollution law came on top of earlier revisions to the Environmental Protection Law (EPL) that took effect in January 2015. Although still limited in some respects,<sup>10</sup> the EPL reflects a ground-breaking shift in China's environmental code, since it establishes a new set of principles such as time-based fines, provides citizens' groups with the right to sue, creates criminal liability for some offenses, and improves data monitoring.<sup>11</sup>



Photo: Lei Han/Flickr

In addition, and perhaps most important, the Chinese central government can now include environmental and climate criteria in assessing the performance of local officials, including party secretaries, mayors, governors, and even state-owned enterprise leaders, which can in turn determine their future career advancement.<sup>12</sup> This alteration in the performance assessment of local officials could, if well enforced, have a large impact over time by changing the underlying political incentives embedded in the current Chinese growth, and political, model.

Already, there is evidence that these new political and legal conditions are emboldening

China's environment bureaucracy. Two days before the law took effect, the Ministry of Environmental Protection (MEP) levied \$26 million in fines on six companies for polluting the country's waterways, the largest penalties ever imposed.<sup>13</sup> In early 2015, citizens' groups tested the government's resolve on the new law by filing complaints with local governments. Environmental groups, too, have filed at least six lawsuits in Chinese courts.<sup>14</sup>

Measures in the APL go beyond typical anti-pollution actions by targeting the source of a large fraction of air pollutants, namely coal. These legal provisions aim to restrict imports, production, and sales of low-grade coal, prohibit coal-producing power plants from being built in certain regions, and establish national coal consumption targets or potentially caps.<sup>15</sup>

In addition, China has also moved forward with plans to extend pilot projects for carbon emissions trading.<sup>16</sup> The first step in this direction was taken in the 12th Five-Year Plan (2011-2015), when China announced it would set up seven pilot emissions trading schemes (ETS) in the cities of Beijing, Shanghai, Tianjin, Chongqing, and Shenzhen, and

in the provinces of Guangdong and Hubei,<sup>17</sup> the last of which was rolled out in June 2014.

Encouraged by the success of these regional-level initiatives, China is now reportedly preparing to unveil a national ETS program by 2016, two years earlier than anticipated.<sup>18</sup> (Whether this is feasible appears to be under continued debate internally.) In December 2014, the National Development and Reform Commission (NDRC), China's top economic planning agency, released basic rules for the national ETS. Over the next year, the NDRC is slated to develop more detailed rules, including national emissions limits as well as provincial ones, which will then require State Council approval.<sup>19</sup>



## Lessons for the United States and China

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**W**hen Obama came to office in 2009, there was considerable optimism about the scope for bilateral cooperation on climate change. Leading up to the Copenhagen negotiations in 2009, Obama traveled to China and left Beijing with a series of technical exchange agreements on carbon capture and sequestration, clean energy vehicles, and collaborative clean energy research, among other areas.

The expectation was that these preliminary moves would lay the groundwork for deeper cooperation at Copenhagen and a more ambitious set of domestic goals from China.<sup>20</sup> Instead, as is now widely known, the Copenhagen negotiations yielded considerable acrimony between the United States and China for a variety of reasons.

Indeed, despite the adoption of a new approach to climate diplomacy based on bottom-up pledges of national intent, China was cast by many other countries in the role of a spoiler that apparently frustrated the realization of a more ambitious agreement. In subsequent meetings, China actively sought to avoid such opprobrium by taking a lower profile, adopting softer rhetoric, and making greater use of the media and civil society organizations to showcase

China's climate-related efforts and actions.<sup>21</sup>

US-China relations have since entered into a period of tensions over numerous security and economic issues. But while disagreement and friction exist and will persist, the two countries have continued to find mutual interest and seek collaboration in the realm of climate change and energy, the latest manifestation of which was the long list

of outcomes from the seventh round of the Strategic and Economic Dialogue.<sup>22</sup>

An important challenge for

Washington, then, is to leverage measures in its policy toolkit that would incentivize stronger Chinese action on climate change while following through on its own commitments.

Several areas, in the authors' view, are most ripe for US attention:

### ***Sustaining Momentum At Home***

The most important way to encourage China's sustained implementation of its own climate commitments is through US leadership at home and to follow through on its international commitments of finance to developing countries. Most important, the United States needs to make good on its pledge

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to reduce its emissions by 26-28 percent below 2005 levels by 2025, a pledge reaffirmed in Washington's March 2015 submission to the UN climate secretariat in its INDC.<sup>23</sup>

If the United States suffers significant setbacks in implementation, whether legal or political, China's leadership will likely have less incentive and political cover to stay the course on their own costly measures that will yield GHG reduction benefits.

The Obama administration's pledge of \$3 billion to the Green Climate Fund (GCF) in advance of the November 2014 G-20 meeting was important in this regard. The

GCF is intended as the main financing mechanism to support mitigation and adaptation in developing countries. However, a pending test will be whether the US Congress proves willing to appropriate these funds.<sup>24</sup> The Obama administration proposed \$500 million for its fiscal year 2016 budget, but House Republicans proposed no money for the commitment.<sup>25</sup>

China itself has no expectation of receiving funding from the GCF, but failure by the United States to fulfill this commitment would be viewed in Beijing as weakening US credibility. It may well

be exploited by the Chinese to defend a slower pace of implementation, with an argument along the lines of, "we would have done more if you had lived up to your commitments."

Pledges to the GCF in 2014 exceeded \$10 billion, yet actual contributions to the fund as of March 2015 amounted to just \$100 million, or a mere 1 percent of the pledged amount. Since its creation

in 2010, the process of establishing operating procedures, locating its secretariat in the Republic of Korea, and raising funds has been long and arduous. In March 2015, the GCF was accrediting different partners—civil society, private, and government—to help

aggregate and shepherd applications for allocating funds. How the GCF will leverage additional resources and disperse these funds hinges on turning pledges into actual contributions.<sup>26</sup>

Even more important than funding commitments will be whether the Obama administration is able to stay the course on its ambitious emissions reductions commitments, including using existing federal regulatory authority to regulate new and existing power plants and roll out additional measures, such as rules for methane leakage, which were released before



Photo: V.T. Polywoda/Flickr

the president's 2015 State of the Union address.<sup>27</sup>

Obama plans to use existing legislative and executive authority to meet these goals, such as already announced vehicle fuel emissions standards, efforts to phase down hydrofluorocarbons (HFCs) at home and abroad, efficiency standards on appliances, and new goals for reducing emissions by the federal government and expanded use of renewables.<sup>28</sup> But whether those measures can survive political opposition remains to be seen.

Indeed, the 2016 presidential election could shape up to be a critical moment in the trajectory of US climate policy. Some measures the Obama administration has enacted such as fuel efficiency standards on automobiles will likely endure whatever the outcome in 2016. But others, such as the rules on power plants, may be more dependent on the particular occupant of the White House. Recent court decisions in mid-2015 suggest the rules may survive judicial review, though legal challenges may ultimately reach the Supreme Court.<sup>29</sup>

While Congressional Republicans remain firmly opposed to action on climate change, there appears to be more alignment among the American public<sup>30</sup> and the business community<sup>31</sup> in supporting greater action. Nevertheless, staying the course on climate change could well see a large dose of

uncertainty depending on the 2016 election outcome.

## ***Fostering Transparency through Research Partnerships***

Meanwhile, the 2015 Paris climate agreement, if it is concluded, will ultimately be based on countries putting forward what each thinks it can do domestically—the so-called INDCs.<sup>32</sup> These will not be legally binding internationally, although they may have legal teeth domestically in certain countries. As a number of experts have argued, this is, in a sense, a step forward from the Kyoto Protocol, most important because the United States can potentially participate. (Approval of a treaty requires advice and consent from the US Senate, a high bar that makes it extremely difficult to commit to legally binding emissions reductions through international negotiations).<sup>33</sup>

As a result, whether these international commitments are kept will largely be a function of domestic politics, combined with “global peer pressure”—in other words, where states are subject to “naming and shaming” for future failure to live up to their commitments.

This type of pressure can have a modest impact on state behavior.<sup>34</sup> So in this context, transparency and compliance—alternatively known as Measurement, Reporting, and Verification (MRV)—will be important to spur meaningful action domestically.

That is because countries will only be confident of the effectiveness of the regime as a whole if they believe that *other* states, too, are upholding their commitments.<sup>35</sup> Yet that will require some regular reporting and external monitoring of what other states are doing to ensure that self-reports are accurate. As US Special Envoy for Climate Change Todd Stern argued in Lima in December 2014, “We see the sunlight as one of the most important parts of this.”<sup>36</sup>

Still, the mechanism by which “sunlight” is refracted need not be wholly or mainly driven through the United Nations Framework Convention on Climate Change (UNFCCC). As David Victor from the University of California at San Diego has argued, countries like China are likely to resist intrusive external monitoring through a large negotiating forum, particularly if they are unsure what that would entail in terms of “UN inspectors traipsing around China.”<sup>37</sup>

Indeed, at the 2009 Copenhagen climate negotiations, the issue of MRV proved to be especially contentious, with the United States pressing for robust external review of country-specific climate actions and China stonewalling.

But although China opposed MRV when elevated to an international diplomatic level, the country historically has been willing to accept US capacity building in developing GHG registries, for example. What is more, in other areas such as

drug quality and food safety, where China’s access to US markets could be restricted for running afoul of US law, China has even allowed foreign inspectors from the US Food and Drug Administration to be embedded locally.<sup>38</sup> In short, there is precedent for China’s acceptance of external, independent reviews.

If MRV were, therefore, depoliticized and moved from national politics to the arena of technical cooperation, the prospects for concluding a deal in Paris are likely to be much improved. Foreign research groups, designated nonprofits, and national laboratories could facilitate a more robust monitoring of China’s commitments in partnership with Chinese agencies, universities, and other actors.

Some of these partnerships could even be partially financed by the US government, as many projects already are progressing under the auspices of the jointly funded US-China Clean Energy Research Center (CERC), which was renewed as part of the November 2014 bilateral agreement.<sup>39</sup> (The CERC is also expanding to incorporate a new center on the energy-water nexus).<sup>40</sup>

Already, there is a robust space for such work in the pollution and climate arenas, where there are at least four prominent collaborative research groups that have helped China to project scenarios and better understand the scope for an accelerated pace of coal diversification and decarbonization of its

economy. Involving a range of Chinese and American academic institutions, NGOs, and foundations, these studies have helped provide the evidentiary base for China to establish peak coal targets and reconcile air pollution and climate goals.<sup>41</sup>

It may be possible to boost capacity in these groups to serve a limited function in vetting the country's commitments.<sup>42</sup> But more important, such research projects could also help the Chinese government understand the GHG implications of pollution control projects, such as coal-to-gas or translocation of coal plants to the Chinese interior. Moreover, these groups would be well placed to share best practices on the basis of international experience or even pursue collaborative energy and pollution projects modeled on the CERC's Technology Management Plan process to navigate concerns about intellectual property.<sup>43</sup>

These partnerships could make Beijing more aware of China's contribution to transnational pollution in other countries, including Japan, South Korea, and the United States.<sup>44</sup> In the 1980s, for example, clarity about UK responsibility for forest die-off in continental Europe from acid rain helped shift Margaret

Thatcher's impetus to intensify British efforts to combat air pollution.

### ***Pursuing Complementary Processes***

What does this mean for the UN process? Already, there are signs that the United States is taking lessons to heart about the need to leverage other processes and actors to facilitate analyses of country commitments and actions.



Photo: Arend Kuester/Flickr

In the lead up to the Lima round of negotiations in 2014, for example, the United States signaled that although legally binding emissions reductions might not be feasible, other parts of the Paris agreement *could* be legally binding, namely those

aspects related to accounting, reporting, and review.<sup>45</sup>

Prior to Lima, Washington also submitted its ideas for the transparency regime to the UNFCCC, where it signaled flexibility in how to accommodate differences in national capacity. All states would have to report biennially on national circumstances, emissions inventories and removals, progress in achieving commitments and understanding local risks, and provision of support for finance, technology

transfer, and capacity building. A technical expert review would then assess that submission and make recommendations on how to improve it. These reports would be subject to “facilitative examination” by other countries to ask questions and share lessons learned.

For its part, the United States acknowledged real differences in reporting capacity and suggested different levels of detail that are appropriate for specific national circumstances. But while country capacities could change over time, this model would accommodate different expectations for countries with lower national capacity.<sup>46</sup>

Still, it is unclear just how the United States evaluates China’s current capacity and where it would fit in these tiers. One could imagine that the United States might prefer China to be subjected to the most demanding standards while being realistic in practice about what China would agree to at the Paris talks. As long as there is a graduated process that leads to revisions of China’s expected level of reporting over time, the United States could, at least in theory, be confident that any new agreement would not lock countries like China into a low level of reporting.

This would avoid the problem that bedeviled the Kyoto Protocol, which lacked a graduation procedure, and thus divided countries between those

that had made emissions reductions commitments and those that had not. In that instance, there was no way for countries to take on commitments as they became richer.

At Lima itself, the United States pressed for language under which states would report their INDCs in early 2016 along with what these commitments should contain in terms of quantifiable targets, a base year, timeframes for implementation, scope, assumptions and other details on proposed methods of accounting so that commitments could be compared.<sup>47</sup> However, whereas Europe supported a review process before Paris to be able to challenge commitments deemed insufficiently ambitious, the United States argued that such an idea was “not fundamental” to the agreement. Fearing that Europe’s plan would discourage individual state engagement, Washington signaled it would be “perfectly happy to have a consultative process.”<sup>48</sup> Stern argued that although the United States could support proposals for a formal review process, “we don’t need it per se.”<sup>49</sup>

Taken together with the US-China bilateral agreement, this suggests a determined effort by the United States to extract as much as it can through the UNFCCC process but not depend on it as the *sole* venue to attain its aims. In short, Washington is seeking to strike a balanced approach, recognizing that pushing China further on MRV in Paris might be counter-productive.

The International Energy Agency (IEA) may serve as one potential venue where progress on external review might be possible, not least because the organization has a strong track record of energy-related data collection. Victor has made a similar argument for complementary processes to the UNFCCC to facilitate external review in a setting that is less likely to engender pushback from China, remarking that “... Countries like China might get skittish about a global peer review. But they might team up with other countries they do trust to do a mutual peer review.”<sup>50</sup>

China is of course currently not an IEA member, which serves as a club for advanced countries—essentially the energy analogue to the G7. To qualify for membership requires, at a minimum, having a strategic petroleum reserve (SPR) equal to ninety days of imports. China should easily meet such a requirement once it completes all phases of its SPR expansion, which was initiated in the late 2000s partly with an eye toward eventually joining the IEA.

However, merely having an SPR is necessary but insufficient: membership also obligates China to adhere to full transparency and cooperation on the reserve, as well as engage in coordinated actions in case of an oil supply shock. Although China has shared some data with IEA before, it sees its

SPR as central to its security and may not want to be subject to full disclosure.

These concerns notwithstanding, membership could afford China important practical and prestige benefits to shape energy policy in the way that the World Trade Organization (WTO) offered on trade or the G20 could on determining the global economic agenda. China would have a formal seat at the world’s premier energy body and, in exchange, Beijing could conceivably

agree to adopt more robust reporting on energy data including climate-related forcings and policies. By championing Chinese membership through

a constitutional revision to the IEA, the United States could ensure continued IEA relevance as energy demand increasingly shifts to Asia.<sup>51</sup>

Another potential venue for continued engagement on MRV is APEC itself, the site of the 2014 bilateral breakthrough. Since a number of APEC members are affected by downstream air pollution emanating from China, this multilateral setting could serve as an important forum for discussing how climate change and air pollution policies can be mutually reinforcing.<sup>52</sup> Such a regional dialogue might be important to encourage China to accelerate its transition away from coal rather than pursue questionable actions such as synthetic gas production or relocation of coal plants to the interior.

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While discussions might initially focus on better understanding the regional risks of air pollution, they could set the stage for an agreement on Asian regional air quality down the line. In fact, in the 1970s, a similar process took place on acid rain in Europe, which set the stage for the Convention on Long-Run Transboundary Air Pollution. More recently, ASEAN has haltingly tackled the risks of air pollution from forest fires in Southeast Asia through a consultative process that culminated in a 2002 agreement on haze pollution. (But Indonesia, the main culprit country, only ratified the agreement in 2014.)

Still, both of these regional efforts suggest such processes can provide a scientific basis for action that are then reinforced by diplomatic pressure. Even if the discussion principally focused on air pollution, such a process could shepherd a stronger regional commitment to decarbonizing energy production and thereby yield significant co-benefits for climate change.

### ***Considering Border Tax Adjustments***

The United States has realistic expectations with respect to transparency in China, but could nonetheless explore measures that may prove costly to China should the country's climate pledges not be matched by action. International peer review is likely to be one weak and low-cost mechanism to encourage China—or the United States for that matter—to

adopt stronger policies or to have an impact on politically powerful interests.

In such a case, border tax adjustments may be needed as an additional tool, both to establish incentives for China's compliance with its commitments and to avoid so-called carbon leakage—the relocation of firms from areas with costs on carbon to those without. Border tax adjustments would impose a tax on products that fail to include carbon costs in their final sale price. This would, of course, be *conditional* upon the United States having imposed a comparable carbon price domestically.

There are two primary objections to the deployment of border taxes. First, there is a fear that these would violate WTO rules. Second, such measures could undermine the nascent bilateral agreement between the two countries and cast a pall over broader US-China economic relations, leading to tit-for-tat reciprocal actions by China. And there are concerns about the complexity of administering such a tax, as well as fears that such a tax could be seized by domestic constituents as a protectionist tool to ward off foreign competition and stall trade.

But both these objections miss the mark. With respect to the first, Jennifer Hillman of the German Marshall Fund and a former member of the WTO Appellate Body has argued that a border tax for climate change could indeed be WTO compatible “provided that policymakers ... [keep] in mind the



basic requirements of the WTO not to discriminate in favor of domestic producers or to favor imports from certain countries over others.”<sup>53</sup>

In the first Obama administration and in the lead up to Copenhagen, there was more active discussion of this policy instrument, making it a seeming possibility. Indeed, over the White House’s objections, the House of Representatives’ cap-and-trade bill included such a measure. And many observers were convinced that if any bill were ultimately to pass both chambers, it would need to include border taxes.<sup>54</sup>

Today, however, as enthusiasm behind climate legislation has dissipated, the Obama administration has largely relied on *existing* legislative authority and executive action. Still, California, which has a cap-and-trade policy of its own, has explored so-called “border carbon adjustments” (BCA) for the cement sector since early 2014.

California is, for example, assessing the technical and legal feasibility of border carbon adjustments to avoid the problem of “leakage,” where companies subjected to carbon regulations in California would source their operations or imports from unregulated entities outside the state. There are numerous ways to administer BCAs, one of which is by requiring importers to purchase

allowances, just like other covered entities, in the cap-and-trade program or in a special auction pool set up for cement producers.<sup>55</sup>

At the national level, meanwhile, the conversation about border adjustments appears to be reviving as well. In early 2015, the low price of gasoline created a political opening for a possible carbon or gas tax. Perhaps surprisingly, advocates of such policies spanned the political spectrum, including former Treasury Secretary Larry Summers, who endorsed a border tax,<sup>56</sup> and conservative

columnist Charles Krauthammer, who endorsed a gas tax.<sup>57</sup>

The idea has also gained renewed traction among some economists,

for example Yale University’s William Nordhaus who, in his 2014 presidential address to the American Economic Association, endorsed the idea of “carbon clubs” where members would agree to put a price on carbon. This would invite participation by non-members through its incentive mechanisms, including such penalties as “uniform ad valorem tariffs on the imports of non-participants into the club region.”<sup>58</sup> Since China, for instance, is already planning on a national cap-and-trade scheme of its own, then it could conceivably become a founding member of Nordhaus’ conceptual climate club and avoid being subjected to the tax.

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In the unlikely event that current debate on carbon and/or gas taxes is translated into policy, would incorporation of border carbon measures trigger a trade war? There is some evidence to suggest that the US-China economic relationship has sufficiently matured to weather it, even amid new divergences and conflicts over geopolitics, cyber theft, and global institutions.

For instance, the United States has imposed tariffs on Chinese solar panels and unsuccessfully pursued an antidumping case in the same area against China at the WTO.<sup>59</sup> And these cleantech trade actions will likely continue with or without a climate agreement at Paris. In fact, both countries have found the WTO to be an effective mechanism in addressing trade spats without having it spill over into the broader relationship.

What is more, trade is one of the few arenas where enforcement is more robust, unlike the notoriously weak enforcement of international agreements such as the Kyoto Protocol. This is mostly because WTO rules legitimize bilateral imposition of punitive measures and are viewed by both sides as a generally impartial and fair means to adjudicate disputes. When the WTO determines that a country has violated free trade rules, the organization does not impose penalties, states do.

Provided that the United States can develop WTO compatible border restrictions, or even threaten to impose them, Chinese firms may do more to improve the efficiency of their operations, cut costs, and retain access to US markets. Privately, China's central government might be able to tolerate such border restrictions to the extent that it would help them exercise leverage over energy-intensive and inefficient manufacturers in the areas that have resisted stricter policies on air pollution and the concomitant shift away from heavy industry.

In other words, these restrictions could act as external pressure that serves Beijing's own objective of forcing its energy-intensive firms to exit the market.

Ultimately, border taxes may potentially reinforce whatever review mechanisms are established with more significant "sticks." To be sure, that carries significant risks and should not be considered lightly.<sup>60</sup> This strategy might best be pursued after a successful conclusion to negotiations in Paris. But the United States would be well-served by reviving discussion of border taxes earlier as part of a wider national discussion amid the steep decline in oil prices.

## Conclusion

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To reconcile climate change and air pollution will ultimately require more robust policies that make China more energy efficient and less reliant on coal, including enhanced environmental enforcement. While changes in China's laws and institutions suggest this effort is underway, the United States can reinforce these trends by making good on its own climate commitments, supporting research partnerships to foster transparency, pursuing complementary venues for progress such as the IEA, and reviving the national discussion of border tax adjustments to beef up the weak global peer review system that will likely emerge.

Transparency measures generated by international climate negotiations will inevitably be weak instruments, but the US scientific, research, and policy communities have the capacities—and partnerships—in place to help China better grapple with its emissions landscape and implement appropriate policies. China will need, and want,

these capabilities in any case, so the United States would be wise to adopt a pragmatic approach to MRV for the upcoming Paris talks.

At the end of the day, China has stronger political incentives to deal with air pollution urgently than it does with climate change. To that end, the Chinese government will likely be tempted to embrace measures such as movement of coal plants to the interior that might ameliorate air pollution immediately but make the country's climate problem worse.

To avoid this situation, the United States should entertain, as California already has, the possibility of border carbon mechanisms that would subject imports to the same kinds of costs domestic producers face, but only in the event that a carbon tax is also imposed in the United States. Ultimately, the United States has a strong interest in helping to enable, and potentially hasten, China's clearly articulated interest in transitioning to a low carbon economy.

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## About The Paulson Institute

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The Paulson Institute, an independent center located at the University of Chicago, is a non-partisan institution that promotes sustainable economic growth and a cleaner environment around the world. Established in 2011 by Henry M. Paulson, Jr., former US Secretary of the Treasury and chairman and chief executive of Goldman Sachs, the Institute is committed to the principle that today's most pressing economic and environmental challenges can be solved only if leading countries work in complementary ways.

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