

# China, Climate Change & Effective Communication

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May 19, 2009

Middlebury College  
Environmental Studies 401 Seminar

## **Table of Contents**

I. Objectives.....	2
II. Introduction	
Background.....	3
Historical U.S. – China Relations.....	6
China’s Leading Political Thinkers.....	6
III. Review of Policies	
China’s Official Policy on Climate Change.....	9
Brookings.....	10
Asia Society and Pew.....	11
NRDC.....	12
USCC.....	14
IV. Effective Communication	
Political Considerations.....	16
Talking Points.....	17
Cultural Understanding.....	17
Thinking Forward.....	18
V. Literature Cited.....	19
VI. Other Useful Resources.....	20

## **Objectives**

Through this project we hope to outline concrete talking points to facilitate communication between Chinese and American interests with respect to climate change. With this in mind, we understand that China and the U.S. see climate change from two very different perspectives: developmental and environmental. However, while these opposing viewpoints seem mutually exclusive, both parties' concerns stem from the shared desire to ensure global economic and environmental health for current and future generations.

In an attempt to understand differing perspectives on climate science and development in China, we have reviewed the published policies of various NGOs and government organizations in order to deal with climate change and engage Chinese interests in conversations of sustainability. We synthesize these findings into suggestions for effective communication strategies, illustrate shortcomings associated with current (and proposed) policies, and highlight roadblocks to stimulating effective conversation.

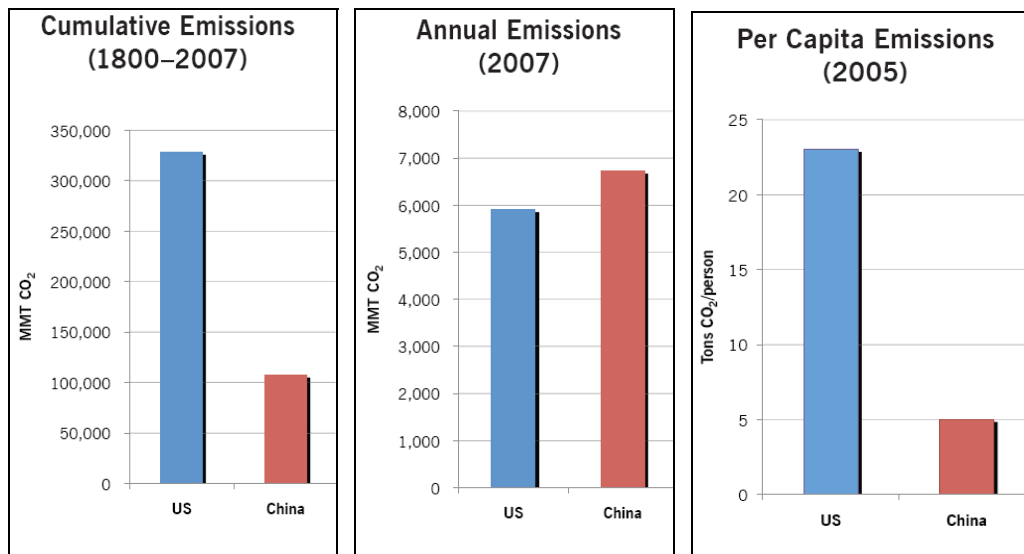
It is critical that our body of work is not interpreted as a proposed solution or final determination in the challenges the U.S. and China face. Rather, by synthesizing information from several unique perspectives and stressing the importance of open-mindedness and avoidance of cultural stereotyping, we hope to enable others to effectively engage in conversations about climate change with more informed and balanced opinions. Ultimately, transparency and communication lie at the heart of dealing with this complex transnational issue; only when both U.S. and Chinese policy makers are able to collaborate in an atmosphere of trust, will they succeed in modeling a transition to an era of global sustainability with economic and environmental well-being.

# Introduction

## Background

Since 1991, China has been the fastest growing economy in the world, with annual increases in GDP and total energy consumption of 10.2% and 5.6% respectively (CNCCP 2007). While this immense growth has played an instrumental role in alleviating poverty throughout the country, such large-scale development resulted in severe environmental degradation and substantial increases in carbon emissions. In 1979, China legislated its first environmental policies, and the government has continued to express increasing concern about environmental issues—particularly climate change—through stricter national environmental laws and regulations as demonstrated in China’s eleventh Five Year Plan (Paloni 2008).

From a historical perspective, the U.S.’s cumulative CO<sub>2</sub> emissions far exceed China’s past emissions (Figure 1). Indeed, in 1994 China’s CO<sub>2</sub> emissions were measured at 2.6 billion tons per year, but by 2007 it surpassed the U.S. to become the world’s largest CO<sub>2</sub> emitter with nearly 7 billion tons of CO<sub>2</sub> emissions for that year (Paloni 2008; Asia Society and Pew 2009). Yet, per capita emissions in the U.S. are more than four times as high as China’s. Furthermore, not only do the bulk of Chinese emissions stem from heavy industry—in contrast to U.S. emissions that are primarily concentrated in the service sector (Figure 2)—but also, 28% of China’s energy consumption is directly linked to export production (USCC 2008).



*Figure 1:* Annual emissions from 2007 (center) show that China’s CO<sub>2</sub> emissions have surpassed those of the U.S. However the U.S.’s cumulative emissions (left) and per capita emissions (right) far exceed those of China (Asia Society and Pew 2009).

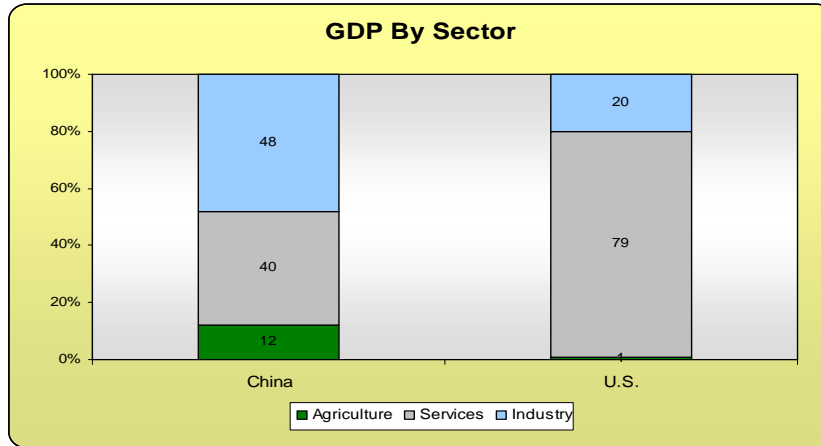


Figure 2: GDP breakdown indicating the proportional discrepancy between sectors of the U.S. and China’s economies (Asia Society and Pew, 2009).

China meets approximately 75% of its energy consumption through coal, which contributes greatly to atmospheric CO<sub>2</sub> levels, as well as environmental and public health deterioration (Asia Society and Pew 2009). Indeed, as China’s current political system relies on an 8% increase in economic growth in order to ensure national stability, it is of great concern that in 2004 there was a 3.05% loss in GDP due to environmental degradation, a figure that increased to 7.1% in 2007 (Paloni 2008; Asia Society and Pew 2009). Furthermore, the country’s coal consumption is projected to undergo a two-fold increase by 2030, which translates into another 86 billion tons of carbon added to the atmosphere (Figure 3; Asia Society and Pew 2009). Despite government efforts to decrease energy consumption per capita (which is currently one fourth that of the U.S.), the country’s energy demand from 2002-2006 was greater than that of the previous 25 years (Asia Society and Pew 2009).

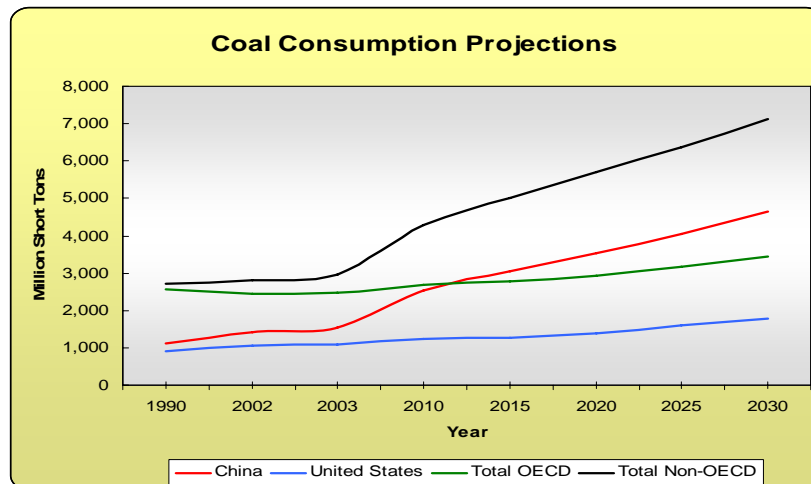


Figure 3: Coal consumption for China spiked in 2003 and is projected to grow steadily through 2030. U.S. coal consumption is also projected to increase, but at a lower rate (Energy Information Administration 2006).

The Chinese government recognizes “population growth and increasing urbanization” as principle factors contributing to climate change, while also acknowledging the role of “changes in the pattern of economic development and consumption, the expansion in people’s daily necessities, the adjustment in economic structure and economic progress, and the changes in forestry and ecological preservation and construction” (PRCINCCC Executive Summary 2004). China’s population accounts for 20.4% of the world’s total population (CNCCP 2007). In 2005 more than 23 million people living in rural were living below the poverty line<sup>1</sup> which solidifies poverty eradication as a pressing goal of the government (CNCCP 2007). Further population problems include the rapidly rising urbanization rate, which puts enormous pressure on densely populated areas where carrying capacity is already predicted to decrease as climate change progresses (Brookings 2008).

The government has identified several key impacts of climate change. The Bohai Gulf, Yangtze River delta and Pearl River delta are high risk areas due to sea levels that have been rising at a rate of 2.5mm/year over the last 50 years (Brookings 2008, CNCCP 2007). This will not only impact the lives of hundreds of millions of people as the carrying capacity of these regions is compromised, but also the national economy, as the economic productivity of these three regions amounted to 38% of China’s total GDP in 2002, and is expected to rise to 65% by 2020 (Brookings 2008). Additionally, current water supply and demand is not stable. While the north is expected to experience severe drought, southern China anticipates increased flooding within the next century (Asia Society and Pew 2009; Brookings 2008; CNCCP 2007). Models predict an increase in precipitation of 2-3% by 2020, and 5-7% by 2050 which will primarily impact southern regions, while extreme weather events are predicted to increase in frequency nationally (CNCCP 2007). A compounding factor is the 21% reduction in glacier cover (in 2007), a figure that is to increase to 27.7% in western China by 2050, thus exacerbating drought conditions (Brookings 2008).

These factors combine in a perfect storm of decreased agriculture outputs. Climatic and meteorological changes combined with shifting arable land distribution result in a predicted 37% reduction in wheat, maize and rice yields (Brookings 2008). This productivity plummet will be aggravated by an increase in production costs and “changes in... structure of agricultural production as well as in cropping systems and varieties of the crops” (CNCCP 2007). The frequencies of insect and disease outbreaks are likely to increase, both for domestic animals and agricultural species, as well as in natural ecosystems (CNCCP 2007). These reductions in agricultural production will severely affect the more than 23 million people living below the poverty line in rural China (CNCCP 2007). Finally, China recognizes the impact climate change will have on its endemic biodiversity, particularly flagship conservation species such as the giant panda, Yunan snub-nose monkey, and Tibet antelope (CNCCP 2007).

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<sup>1</sup> Defined as earning an average of 683 RMB (~US\$85) per year

## **Historical U.S.-China relations**

Realizing the possibility for China-U.S. cooperation must flow out of a broader understanding of historical relations. Over time, China and the U.S. have become intrinsically linked through economic, political, social and security-related dimensions (Asia Society and Pew 2009). In 1972, the introduction of the Open-Door Policy under Deng Xiaoping fortified the relationship between the two countries, especially after the famous Nixon trip to Beijing that year (Asia Society and Pew 2009). The two countries found common ground regarding the Soviet Union, and established security concerns as the primary focus of interactions (Asia Society and Pew 2009). However, this fragile engagement suffered after the events at Tiananmen Square in 1989. As Strobe Talbott argues, “the U.S.-China relationship was damaged in a way from which it has yet...fully to recover” (2003). Nonetheless, during the Clinton administration and with the accession of China to the World Trade Organization in 2001, economic ties between the U.S. and China were solidified (Brookings 2007). This has led to collaboration between both countries relating to foreign policy and economic and trade agencies, as well as “public health and communicable diseases, environment, housing, and energy” (Brookings 2007).

Yet, there are several areas of tension that still remain as a result of the U.S.’s role in the international community and China’s high-speed development (Brookings 2007). This has resulted in “underlying *distrust* of the long-term intentions of each toward the other [which has] nevertheless actually *increased*” (Brookings 2007). China assumes the U.S. may attempt to curb its economic growth and political clout, while the U.S. is threatened by perceived marginalization in Asia (Brookings 2007). The 2008 economic crisis puts a new twist on Sino-U.S. relations, and the responses of each country will shape “long-term capabilities and intentions of the other” (Brookings 2007). Climate change, then, must be understood within this context, and take a central position on the agenda of these two nations.

## **China’s Leading Political Thinkers**

Today, many of the major Chinese thinkers, economists, and policy-makers argue for a questioning of western ideals and capitalism. Due to the lack of partisan opposition in the Chinese government, these intellectuals play a crucial role in shaping policy decisions. Rather than following the Euro-American model, they propose that China think and make decisions independently, drawing on western models and Chinese history simultaneously. The primary traditions emerging from the country’s history are equality and justice, spurred by the Mao Zedong era and Confucian Culture. These entail a moral education that serves to maintain hierarchy and enforce laws passively, using a respect and recognition of authority rather than force. That said, the Chinese openly admit that if necessary, force will be used to prevent Taiwanese and Tibetan secession (Leonard 2008).

In 1993, Cui Zhiyuan, a Tsinghua University professor, published an article calling for a ‘Second Liberation of Thought’, following the freeing of China from orthodox Marxism. This liberation entails a release from an unquestioning acceptance of Western capitalism.

Pan Wei, Director of the Centre for China and Global Affairs and professor in the School of International Studies, holds a conservative orientation within the Chinese political system. He proposed that China follow the political system of Singapore, a unicameral legislative republic, rather than a Western liberal democracy. Wang Xiaodong is an ultra-nationalist strongly in favor of a 'Walled World' in which nation states are preserved in an age of globalization. "Chinese thinkers want to create a world where national governments can be masters of their own destiny rather than subject to whims of global capital and American foreign policy. They want investment, technology and market access from the rest of the world, but they do not want to absorb Western values. Their goal is not to cut China off but rather to allow China to engage with the world on its own terms. In short, they want to stop China being 'flattened' by globalization" (Leonard 2008:118).

In the past couple of decades, a division has emerged in the Chinese political system, delineating a 'New-Left', which believes the government should address inequality and environmental pollution, and a 'New-Right', which believes in the developmental power of the market. Although the two groups support different means, their desired ends are identical: socio-economic development.

The leading thinker of the New-Left, Hu Angang, has been a revolutionary figure for the Chinese political economy through his promotion of increasing state power. Along with Wang Shaoguang, another member of the New Left, he published China's State Capacity Report, which spurred major tax system reforms. Wang Hui and Gan Yang are other major intellectuals with New-Left sympathies. According to Wang Hui, "We cannot count on a state on the German or Nordic model. We have such a large country that the state apparatus would have to be vast to provide that kind of welfare. That is why we need institutional innovation. Wang Shaoguang [a political economist] is talking about low-price health-care. Cui Zhiyuan [a political theorist] is talking about socialized capital and reforming property rights to give workers a say over the companies where they work. Hu Angang [an economist] is talking about Green Development." (Leonard 2008:34)

On the New-Right, Zhang Weiyong, one of the most famous, controversial, and well-respected economists in China, created the idea of 'dual-track price reform'. This system was used to transfer China from a system in which prices were set by the central government to a market-based system. Over the span of a couple decades, state-priced goods were slowly transferred to a market-priced system, until the majority of the economy was market-based and operating in a global system. Regardless of the delineation between New-Right and New-Left, nearly all of these intellectuals believe that China needs to create its own political and economic system, separate—but influenced by—western thought.

Though China's most influential thinkers offer many unique and often conflicting perspectives, it is clear that each holds sustained economic development and some level of political independence in high regard. While there is little agreement on how China's political landscape should be shaped for years to come, there is a general consensus that economic growth and development must continue – an objective only possible if the

country's environmental obstacles (specifically, controlling CO<sub>2</sub> emissions) are met promptly and sustainably. In that vein, the next section examines China's official policy as well as proposals from several NGOs regarding climate change and the steps the central government plans to, or should consider taking, to facilitate swift and effective action.

## **Review of Policies**

### **China's Official Policy on Climate Change**

In 2007, China's National Development and Reform Commissions (NDRC) introduced *China's National Climate Change Programme*. The document outlines China's official stance regarding climate change by identifying past and current trends (in development and emissions levels), challenges facing the country, key areas for adaptation and mitigation, and objectives for pursuing sustainable development practices.

China refers to itself explicitly as an *undeveloped* country with the goal of responsible development, and uses this position to point out that the existing CO<sub>2</sub> atmospheric levels are due primarily to historical emissions of developed nations (Figure 1). Indeed, today emissions from developed countries, such as the U.S., stem from consumption habits, whereas Chinese emissions originate primarily in the industry sector as it continues to develop. However, they subscribe to the UN Framework Convention for Climate Change (UNFCCC)'s idea of "common but differentiated responsibilities," acknowledging the need for change within China, focusing on observation and monitoring, mitigation, and adaptation to climate change as well as increased public awareness. Any shifts in policy, according to the Chinese government, must occur within a "sustainable development strategy". For this reason, they concentrate on the need for the sharing and advancement of new technologies as well as co-development projects. The following outline highlights the critical aspects of this document and frames the unique perspective of the Chinese government.

#### *Guidelines*

- To give full effect to the Scientific Approach of Development;
- To promote the construction of socialist harmonious society;
- To advance the fundamental national policy of resources conservation and environmental protection;
- To control greenhouse gas (GHG) emissions and enhance sustainable development capacity;
- To secure economic development;
- To conserve energy, to optimize energy structure, and to strengthen ecological preservation and construction;
- To rely on the advancement of science and technology;
- To enhance the capacity to address climate change.

#### *Principles*

- To address climate change within the framework of sustainable development
- To follow the principle of common but differentiated responsibilities
- To place equal emphasis on mitigation and adaptation

- To integrate climate change with other interrelated policies
- To rely on the advancement of science and technology
- To participate in international cooperation actively and extensively

### *Objectives*

- To control GHG emissions
- To enhance capacity of adaptation to climate change
- To enhance research and development
- To raise public awareness and improve management

The release of *China's National Climate Change Programme* makes clear that China acknowledges climate change as a serious threat and is prepared to take action in addressing this critical issue. However, China's formal policy recommendations, in many cases, are quite robust and will require a level of domestic cooperation yet unseen within the country. In order to control GHG emission levels, there will need to be significant improvement in communication and cooperation between central, provincial, and local governments. Local entities must be held accountable to enforce national policies regarding climate change while receiving ample support from more centralized branches. Similarly, China's central government must be willing to engage in global policy discussions with the U.S. and other developed nations to ensure multilateral communication continues and produces real and quantifiable results. Improving transparency and sharing information will prove critical to this process, both internationally and within China's borders.

### **Brookings**

The Brookings Institute is private U.S. nonprofit organization that researches and publicizes important issues of domestic and foreign policy. In January 2009, Brookings released a paper by Kenneth Lieberthal and David Sandalow entitled *Overcoming Obstacles to U.S.-China Cooperation on Climate Change*. The report outlines the views and recommendations of the authors and should not be interpreted as official government policy. The document is based around nine recommendations that the authors feel embody the principles of cooperation that will help leaders to more effectively engage each other and work to combat climate change.

1. Acknowledge the legitimacy of each other's perspectives
  - a. Emphasis on pragmatic cooperation
2. Build a clean energy framework for cooperation
  - a. "Clean energy" provides a more politically attractive framework for U.S.-China bilateral cooperation than does climate change per se.
3. Highlight one or two major headline initiatives
  - a. Think big and aim high

4. Emphasize co-development of technology
5. Promote local-to-local cooperation
6. Promote capacity building
  - a. U.S. should assist in enhancing China's capacity to monitor and evaluate its energy policy outcomes
  - b. Beijing should follow U.S. examples in areas such as standards setting, regulation and law drafting, large-scale database management, etc.
7. Seek common ground on the nature of future commitments
  - a. Most problematic area
8. Use and improve existing structures for cooperation
9. Highlight clean energy in a U.S.-China summit

The Brookings report identified the following obstacles to be overcome in addressing climate change and encouraging cooperation:

1. Mutual distrust
2. Different expectations on technology
3. Different expectations on finance
4. Common expectations of high cost

Lastly, the Brookings report has identified several broad recommendations for anyone involved in cross-cultural conversations regarding climate change and/or other development issues:

1. Respect and work with each other's concerns
2. Think big
3. Select several flagship projects
4. Build for the long term
5. Do not start with efforts that require substantial new budgetary appropriations
6. Focus on economic opportunity

### **Asia Society and Pew**

The following recommendations are based on a report written in partnership between Asia Society's Center on U.S.-China Relations and the Pew Center on Global Climate Change, in collaboration with The Brookings Institution, Council on Foreign Relations, National Committee on U.S.-China Relations, and the Environmental Defense Fund. The report explores the climate and energy challenges facing both countries and recommends

a concrete program for sustained, high-level, bilateral engagement and on-the-ground action. The following key points are critical outcomes of their collaboration:

1. Deploying low-emissions coal technology
  - a. Conduct joint carbon capture and sequestration (CCS) demonstration
  - b. Ensure any coal plants deployed are high efficiency
  - c. Develop regulatory framework for CCS to facilitate timely deployment
  - d. Map geological storage
  - e. Conduct joint research and development on new CCS technologies
2. Improving energy efficiency and conservation
  - a. Expand energy efficiency programs
  - b. Target company-level incentives and opportunities
  - c. Seek a global agreement to improve vehicle fuel economy
3. Developing an advanced electric grid
  - a. Develop new technologies to improve grid efficiency
  - b. Demonstrate smart grid systems
  - c. Study grid stability measures for expanded renewable energy systems
4. Promoting renewable energy
  - a. Jointly refine and develop new renewable energy technologies
  - b. Address crucial information barriers to renewable energy development
5. Quantifying emissions and financing low-carbon technologies
  - a. Improve emissions measurement and monitoring
  - b. Expand scenario analyses
  - c. Promote training programs

### **National Resource Defense Council**

Established in 1970, the National Resource Defense Council (NRDC) uses law, science and a network of over 1.2 million members to research and raise awareness for environmental issues. For more than twelve years, NRDC has worked on environmental policy in China, with a focus on improving energy efficiency, developing alternative energy sources, and bolstering environmental law. The following is a list of nine key steps NRDC has recommended for the new administration, U.S. Congress, and leaders in China to strengthen U.S.-China engagement regarding climate change and energy.

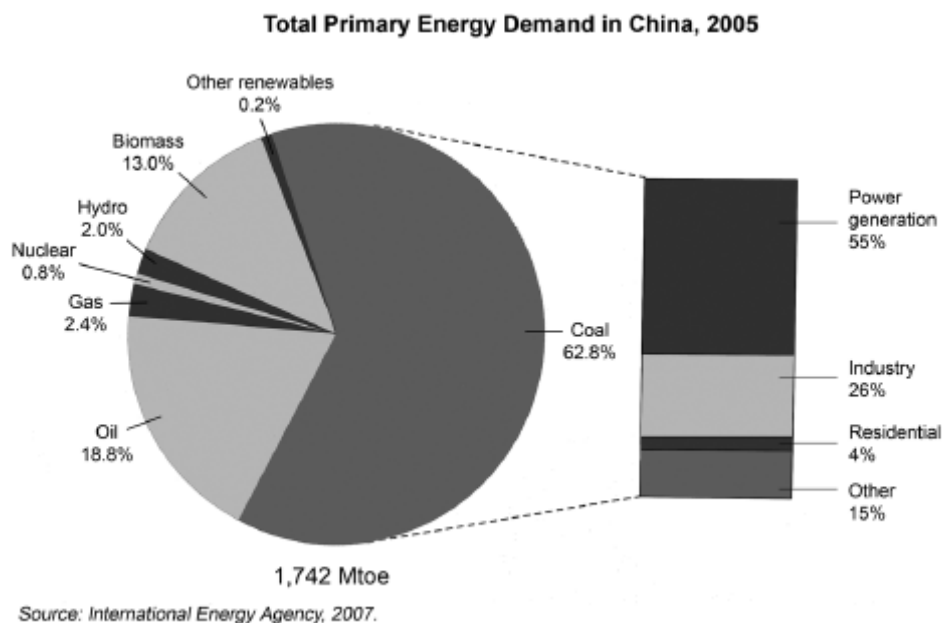
1. Engage in serious bilateral meetings on climate change
  - a. The U.S. could accelerate this process by taking immediate and meaningful steps to reduce domestic GHG emissions as a sign of good faith to developing nations who need our leadership

2. Establish a U.S.-China forum w/ emphasis on green jobs and economic recovery
  - a. Appropriating funds from both countries' economic stimulus plans would have immediate positive effects
3. Mobilize untapped potential of energy efficiency
  - a. Treat energy efficiency as a high priority energy resource
  - b. Integrate energy efficiency in power sector reform, resource planning and investment decisions
  - c. Provide funding to deliver energy efficiency where cost-effective
  - d. Increase financing opportunities for energy efficiency investment
  - e. Provide regulatory and tax incentives for consumers and businesses
  - f. Focus on industrial energy efficiency gains to revitalize U.S manufacturing sector and reduce transportation-related emissions from imports
  - g. Capture energy efficiency potential of new and existing buildings through mandatory market-based programs and strong enforcement
  - h. Make accessible data on energy performance and cost of key appliances
4. Assist in deployment of renewable energy sources and technologies
  - a. Increase exchange on specific renewable development topics (technical, policy, investment, manufacturing)
  - b. Cooperate on joint research and development
  - c. Facilitate joint-venture commercial-scale projects
  - d. Share experiential learning and information through trial and error
5. Promote low-carbon, high-efficiency vehicles, fuels, transportation systems and community development
6. Expand research and investment on carbon CCS technology
  - a. Establish a joint CCS advisory group to lead studies and development of CCS technical and legal standards
  - b. Launch capacity building efforts in China on site selection, evaluation and monitoring
  - c. Initiate joint public forum to promote, communicate and educate on CCS
  - d. Established a joint U.S.-China fund on CCS to develop and finance large-scale demonstration and experimentation projects for enhanced oil recovery and storage in deep saline aquifers
7. Improve GHG monitoring and data transparency
8. Conduct co-benefit analysis on GHG emissions controls
  - a. Fund research to analyze cost-benefits of reducing GHGs in both countries
9. Invest in improved enforcement of environmental laws and energy efficiency standards

## U.S. Chamber of Commerce (USCC) – U.S. China Economic and Security Review Commission

In November 2008, the U.S.-China Economic and Security Review Commission submitted an extensive report to congress which addressed several key aspects of the complex relationship between the two countries, including China's energy and environment policies and activities. The following outline includes the key points of U.S.-China engagements with respect to energy and recommendations by the commission regarding policy and governance.

1. China and U.S. are in similar places as their supply/demand patterns largely govern global energy markets
2. Use government to make changes (policy as opposed to technology)
3. Industry dominates energy demands (Figure 4)



*Figure 4: Energy demand in China 2005. Industry makes up 26% of energy demands (USCC 2008).*

4. Advocate for infrastructure development to allow for continued development
5. Sustainable mass-transit systems are crucial to maintain transport
6. Remove government subsidies on electricity, coal, oil to reveal true market prices
7. Employment of free market mechanism to modernize China's energy portfolio
8. Total cost of air & water pollution in China: 5.8% of GDP (\$112 billion) or 750,000 deaths
9. Need for communication between central, provincial, and local governments

10. Facilitate technology sharing while maintaining intellectual property rights
11. Possible inclusion of conditions (ex: mandate usage, strict enforcement)
12. Control energy pricing and craft energy policy

*USCC Recommendations*

1. The Commission recommends that Congress encourage the administration to monitor the transboundary environmental impacts of China's energy consumption and to report on the effects of China's air pollution on air quality in the United States.
2. The Commission recommends that Congress encourage the administration to seek from China more complete reporting of the economic and environmental effects of China's energy use and to enhance cooperation with China in collecting information about those effects, especially in collecting data on China's CO<sub>2</sub> emissions.
3. The Commission recommends that Congress urge the administration to implement fully the goals of the 10-year energy and environmental cooperation framework that was signed with China during the fourth meeting of the Strategic Economic Dialogue in June 2008.
4. The Commission recommends that Congress encourage the administration to seek greater opportunities for public-private cooperation in the development and deployment of clean coal technology and CCS technology in the United States and in China.
5. The Commission recommends that Congress urge the administration to establish a bilateral dialogue with China to discuss strategies to reduce CO<sub>2</sub> emissions, especially from coal-fired power plants, and to mitigate the effects of climate change.
6. The Commission recommends that Congress encourage the administration to work with China toward a mutually acceptable multilateral solution for adoption in international climate change negotiations.
7. The Commission recommends that Congress urge the administration to press China to reduce or eliminate in a timely fashion its tariffs on environmental goods and services so as to encourage the import of clean energy and pollution control technologies into China.

## **Effective Communication**

### **Policy Considerations**

China acknowledges climate change and the need for adaptation and mitigation. However, they maintain their stance as a developing country and have expectations for more developed (western) nations to take responsibility for historical emissions. They are upfront about where they need help from the U.S. and others to mitigate climate change as well as other environmental and developmental issues.

Brookings, though a bit idealistic, acknowledges the historical context in which action must take place. Their emphasis is on international cooperation and co-development. They focus on mutual respect, working together and pursuing achievable objectives. However, they offer few, if any, specific suggestions for how to attain such a balance. Their proposal is targeted more at effective ways to facilitate communication and build a base upon which ground-level strategies can be developed.

The Asia Society and Pew focuses its proposal on addressing China's energy needs. Specifically, they call for clean coal technology, improving energy efficiency, upgrading the electric grid infrastructure, and promoting and financing renewable energy sources. Interestingly, these recommendations mirror popular policy proposals within the U.S.

The NRDC maintains a holistic approach which incorporates broad goals of facilitating communication and specific energy-related objectives. In addition, they advocate improving monitoring and data transparency as well as more stringent environmental law enforcement. NRDC also explores a wider range of energy-related goals and objectives than Asia Society and Pew.

The USCC draws similarities between the U.S. and China with respect to energy infrastructure as their supply and demand patterns largely govern global energy markets. They recommend the Chinese government take a leadership role in implementing effective policies to address climate change, instead of relying on technology improvements. Specifically, they call for the removal of government subsidies on electricity, coal, and oil to reveal true market prices, technology and informational property sharing, and improved communication and cooperation between central, provincial and local governments regarding climate change policies. The USCC also advocates mass infrastructure development including mass-transit systems and communications technology to better facilitate sustainable growth. Perhaps most importantly, the USCC makes several recommendations to the U.S. congress as well – primarily focusing on improving communication between the U.S. and China, encouraging cooperation and joint-ventures, and developing effective strategies that will produce feasible and realistic goals for the future.

The following section highlights key talking points to keep in mind when engaging Chinese interests in conversations about climate change. We have put these ideas together by examining the literature addressed above and our own synthesis of the

information. We have also outlined several points regarding cultural understanding and some forward-thinking questions that must be kept in mind when engaging in these conversations.

### **Talking Points**

- Infrastructure development
  - Improvement of grid infrastructure
  - Employment of smart grid technology
  - Development of demand-reduction technology instead of increasing supply capacity
- Promotion of energy efficiency and conservation
  - Enhancement of residential and commercial energy efficiency
  - Implementation of new building regulations
  - Retrofitting existing structures
- Promotion of renewable energy (wind & solar)
  - Establishment of government funding and financial incentives to develop and implement low carbon technologies and emissions reduction strategies
- Potential use of low emissions coal technology as a stopgap measure
- Monitoring and transparency in emissions data
- Stimulation of local-to-local collaboration
  - Facilitation of communication both within China and on an international scale
  - Emphasis on co-development and cooperation among corporations, in lieu of government mandates

### **Cultural Understanding**

It is critical to acknowledge the different political and cultural ideologies that Chinese and U.S. interests hold.

- Introduce climate change within the context of development and avoid putting it in a political framework
- Actively acknowledge the sources of historical emissions (i.e., developed nations; Figure 1)
- Emphasize equality in collaboration
  - Avoid “lead” and “follow” dichotomy

- Recognize China's heterogeneity and allow for flexibility in communication strategies
- Avoid generalizations and philosophical debate; instead keep focus on concrete issues and practical applications
- Recognize disconnect(s) between national, provincial, municipal, county and township governments

### **Thinking forward**

- What proportion of China's energy portfolio could realistically be met by renewable resources?
- Can we make goals for mitigating climate change seem more feasible by taking a long-term outlook and working backwards? For example, what can be accomplished in 100 years? 50 years? 25 years?
  - Chinese and U.S. interests will always converge on posterity
- Is the developed/developing dichotomy valid?
  - Solutions to environmental and developmental problems can be found and implemented in both China and the U.S. How should the U.S. integrate lessons from China's experience and culture?
- How do we address coal?
  - Both the U.S. and China rely heavily on coal for energy consumption, and thus there is an inclination to use each other as an excuse for lack of action. Successful moderation of climate change will hinge on both countries confronting and mitigating the issues directly.
- How do we avoid a G-2 dominated political climate?
  - China and the U.S. are not the only stake holders in climate change talks. Working within a multi-lateral communication framework may ensure that the U.S. and China pursue adequate measures to address climate change.

## Literature Cited

Asia Society Center on U.S.-China Relations and Pew Center on Global Climate Change. A Roadmap for U.S.-China Cooperation on Energy and Climate Change. 2009. <<http://www.pewclimate.org/US-China>>

Leonard, Mark. What does China think? New York, NY: PublicAffairs, 2008.

Lieberthal, Kenneth, Sandalow, David. Overcoming Obstacles to U.S.-China Cooperation on Climate Change. The John L. Thornton China Center at Brookings: Washington, D.C., 2008. <[http://www.brookings.edu/reports/2009/01\\_climate\\_change\\_lieberthal\\_sandalow.aspx](http://www.brookings.edu/reports/2009/01_climate_change_lieberthal_sandalow.aspx) >

Natural Resource Defense Council. Strengthening US-China Climate Change and Energy Engagement: Recommendations for Leaders and Policymakers in the US and China. 2009. < [http://docs.nrdc.org/international/int\\_09021801.asp](http://docs.nrdc.org/international/int_09021801.asp).

Paloni, Anastassia. Assessing the Environmental Guidelines of China's Eleventh Five Year Plan. Mimeograph: Middlebury College. 2008.

People's Republic of China. Executive Summary. The People's Republic of China Initial National Communication on Climate Change. Beijing, 2004.

People's Republic of China. National Development and Reform Commission. China's National Climate Change Programme. 2007.

Talbott, Strobe. "Introduction" in Beyond Tiananmen by Robert Suettinger. Washington D.C.: Brookings Institution Press, 2003.

The Energy Information Administration. "World Coal Consumption by Region." International Energy Outlook. 2006. ,[http://www.eia.doe.gov/oiaf/ieo/pdf/ieoreftab\\_6.pdf](http://www.eia.doe.gov/oiaf/ieo/pdf/ieoreftab_6.pdf).

United States. U.S. Chamber of Commerce. 2008 Report to Congress of the U.S.-China Economic and Security Review Commission. Hearings 110<sup>th</sup> Cong., 2<sup>nd</sup> sess. Washington, 2008. <<http://www.uscc.gov>>

## **Other Useful Resources**

Toward a Post-Kyoto Climate Change Architecture: A Political Analysis

<http://belfercenter.ksg.harvard.edu/files/Keohane%20and%20Raustiala%20HPICA1.pdf>

China's Participation in Global Environmental Negotiations

<http://en.iwep.org.cn/info/content.asp?infoId=1370>

A Changing Climate: The Road Ahead for the United States

[http://www.twq.com/08winter/docs/08winter\\_stern.pdf](http://www.twq.com/08winter/docs/08winter_stern.pdf)

Climate change not merely an environmental issue: expert

[http://www.china.org.cn/environment/opinions/2008-10/16/content\\_16621584.htm](http://www.china.org.cn/environment/opinions/2008-10/16/content_16621584.htm)

White paper: China's policies and actions on climate change

[http://www.china.org.cn/government/news/2008-10/29/content\\_16681689.htm](http://www.china.org.cn/government/news/2008-10/29/content_16681689.htm)

Measuring climate change progress in China

<http://www.wri.org/stories/2009/02/measuring-climate-change-progress-china>

China's Climate Change Policy: Domestic and International Developments

<http://www.asianperspective.org/articles/v31n2-g.pdf>

Breaking the Suicide Pact: U.S.-China Cooperation on Climate Change

<http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=19991&prog=zch>

China's View on Future Climate Negotiation and Measures to Address Climate Change

[http://unfccc.int/files/meetings/seminar/application/pdf/sem\\_pre\\_china.pdf](http://unfccc.int/files/meetings/seminar/application/pdf/sem_pre_china.pdf)

China Watch (World Watch Institute)

<http://www.worldwatch.org/taxonomy/term/53>

Li Gao ([ligao@nrdc.gov.cn](mailto:ligao@nrdc.gov.cn)) Presentation to Pew

<http://www.pewclimate.org/docUploads/Mitigation-China-March09.pdf>

Clean Development Mechanism

<http://www.pewclimate.org/intl/cdm>

China Wants Importers to Cover Some Emission Costs

<http://www.reuters.com/article/environmentNews/idUSTRE52F5X620090316>