

# FEATURED MEETING SUMMARY

## Cooperation or Competition for Energy: China and the North American Response

By Jennifer L. Turner

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On 29 March 2006, the Wilson Center's CHINA ENVIRONMENT FORUM and CANADA INSTITUTE cosponsored a panel discussion on the growing tensions in North America regarding China's expanding search for oil resources. In his discussion of China's growing energy security concerns, **Xavier Chen** (BP China) explained that paralleling China's sustained 57 percent GDP growth since 2000 has been an almost 100 percent

increase in energy consumption. This booming demand has produced growing energy shortages throughout the country, which has led the government to focus on energy diversification and development. Besides investments in new infrastructure and a renewed focus on nuclear, renewables, and natural gas, the Chinese government has increased oil imports and encouraged its national oil companies to expand exploration around the globe. **Wenran Jiang** (University of Alberta) discussed Canada's openness to Chinese energy investment and its potential as a source of oil exports to Asian markets in the long run, but remarked that Canada's energy industry remains geared to the U.S. market given the proximity, cost, and current refining capacity. **Jeff Logan** (World Resources Institute) explained the dynamics underpinning U.S. concerns over China's impact on the global oil markets. Logan stressed, however, that both the U.S. and Chinese



Xavier Chen

economies are intertwined to such an extent that their respective dependence on oil—the two countries account for one-third of global oil consumption—requires collaboration on the part of both governments to assuage each country's concerns over energy security.

### CHANGING CONTEXT OF SINO-U.S. ENERGY RELATIONS

To highlight the considerable energy hunger by the United States and China, Logan began his talk noting that during the two hours we would be in the meeting, the United States would consume 1.275 million barrels of oil and China would consume 1.5 million tons of coal.

Global oil markets have been extremely insecure for the last three years due to tremendous demand growth and supply instability; the result has been much higher prices. Logan stated that these tight markets are likely the beginning of a more permanent cycle. The United States and other countries have become increasingly dependent on the Middle East for oil, particularly Saudi Arabia, which is not a solid base for economic security. The United States is hoping production in Saudi Arabia will double in the next 25 years, but it is not clear if this is feasible. Thus, disruptions and general insecurity over supply are likely to increase in the future. It is this insecure



Wenran Jiang

context that has made policy-makers in the United States and other countries even more concerned about China's impact on global oil markets. Chinese oil demand growth has averaged over 7 percent annually since 2000, yet U.S. consumption is still three times as much as China. Global oil demand is projected to grow from 84 million barrels a day (mb/day) to 115 mb/d in 2030,

which is unsustainable in terms of supply and impact on the global climate.

Over the past few years the world has seen a rise in hurricane intensity and other weather catastrophes, which many scientists attribute to global warming. To mitigate these changes, one target is to limit the rise of the global mean temperature to two degrees Celsius (35.6 degrees Fahrenheit). To reach this stabilization, global CO<sub>2</sub> emissions must start declining over the next 15 years, demanding major changes from China and the United States, the two leading CO<sub>2</sub> emitters in the world. China, like the United States, would need to make dramatic changes to its energy policies and infrastructure to decrease its CO<sub>2</sub> emissions. There are estimates that 7 percent of China's CO<sub>2</sub> emissions are due to production of U.S. imports, which highlights how the "problem" is not simply China's energy hunger, but the hunger of U.S. consumers for cheap products from China.

When China's oil demand rose by 25 percent in the second quarter of 2004, some China watchers pondered whether this was a sign of a coming war. Logan noted that while China's oil consumption will be increasing over time, it appears that 2004 was just a temporary peak to provide oil for backup power generation during an electricity shortage. Despite a fairly significant decline in oil consumption since 2004, Chinese national oil companies continue to increase investments overseas and their dealings with states such as Iran and Sudan have raised concerns in Washington. Because Chinese oil companies have entered the market late, some of the few areas in which they can invest are what the United States perceives as "unstable" regimes. China's oil hunger and overseas acquisition binge also are seen as sources of high global oil prices and destabilization of oil markets. However, China's overseas oil investment could be viewed as part of its integration into the world economy and not

necessarily a threat. For example, 90 percent of Chinese oil is currently sold in international markets and is not being shipped back to China.

Besides investing in oil developments in Africa, Latin America, and the Middle East, China has joined with India in bidding for oil concessions. Moreover, the Chinese government is building strategic relations with Kazakhstan to obtain more natural gas pipelines, as well as competing with Japan for Russian gas and oil.

### Internal Challenges Driving China's Energy Hunger

China's growing energy hunger—particularly illustrated by international oil investments—has sparked considerable rhetoric and antagonism between China and the United States. The current tension surrounding China's oil hunger is driven in part by a lack of understanding of what shapes China's energy security. Specifically, China is the: (1) third largest energy importer; (2) second largest CO<sub>2</sub> and largest SO<sub>2</sub> emitter; (3) fourth largest economy; and (4) fourth largest FDI stock. These statistics reveal how China's emergence as the world's factory has produced a rapid and high-energy consuming growth, which is also damaging the environment. Notably, international investment has pushed energy consumption in China in that it has been one of the largest drivers of economic growth (accounting for 35 percent of growth between 1983 and 2003).

China has sufficient capital and labor to continue its rapid growth, but natural resources—water, energy, minerals, and arable land are in limited supply—lack of energy and mineral resources are considered major bottlenecks for economic growth in China. One worrisome trend for the Chinese leadership is that energy consumption has grown nearly twice as fast as GDP since 2000. Continued high growth is needed to help reduce the large income gap between rural and urban citizens, which is catalyzing increasing social unrest. The pressure for cleaner growth is increasing as well.

Much of China's air pollution stems from the country's heavy dependence on coal, which contributes to about 70 percent of its energy mix. Besides coal, China's exploding car population is a major source of local air pollution and CO<sub>2</sub> emissions. To diversify its energy sources, the Chinese government has been investing more in natural gas, renewable, and energy efficiency projects. For example, as a means to attain the goals in the Eleventh Five-Year Plan to reduce energy consumption by 20 percent, major



Jeff Logan

cities like Beijing are undertaking extensive programs to retrofit their buildings to make them energy efficient. Currently it is political willingness, rather than the market that is creating demand for more efficient buildings and the potential benefits are great, seeing that 99 percent of existing and 95 percent of new buildings in China are not energy efficient.

To help address energy security challenges, the Chinese government also has pushed some very progressive policies: (1) a 20 percent reduction in energy use per GDP by 2010 as a compulsory target for all levels of government; (2) resource saving as a basic national policy—one notable target is to reduce water use by 30 percent by 2010 (water conservation also promotes considerable energy savings); (3) industries are supposed to reduce pollution discharge by 10 percent by 2010; and (4) renewable energy use requirements are increasing for all industries and government entities. These policies open up numerous opportunities for international collaboration that could promote energy security in China and globally.

Another part of the Chinese government's energy diversification strategy is to build 32 nuclear reactors by 2020. This goal would entail installing two nuclear reactors each year, which is currently beyond the country's financial capability. Even if China reaches its 2020 goal, nuclear power would just be 4 percent of the total energy mix. Despite measures to increase energy efficiency and develop renewable and nuclear energy sources, China will remain dependent upon coal and growing oil imports for the foreseeable future.

### Canada-China Energy Relations

CNNOC's 2005 bid for Unocal sparked vocal opposition in Congress, however, in contrast Wenran Jiang noted Canada's relative openness to Chinese investments in its energy sector. China and other Asian countries are particularly interested in Alberta, which is ranked as having the second largest crude oil reserve in the world

next to Saudi Arabia. A report issued in early 2006 in Beijing made an estimate that by 2015, nearly 2.1 million barrels a day could be exported from Canada to Asia, significantly reducing the volume going through the Strait of Malacca and lowering Asia's dependency on Middle Eastern oil. Over the past few years, Chinese companies and officials have undertaken many oil investment discussions with their Canadian counterparts. Despite extensive talks and some bilateral agreements, China has yet to strike a major deal in Canada. Moreover, while the potential of exporting oil to Asian markets is attractive, Canada's energy industry remains geared towards the U.S. market.

Although the Chinese market is attractive for exporting oil, if China does not improve its energy efficiency—for every \$1 of GDP, China uses 4.7 times as much energy as the United States—China's daily supply for oil could reach 80 million barrels, which is not sustainable. Instead of viewing China's energy hunger as a crisis, Canada and the United States should see it as a great opportunity for assisting China in improving its energy efficiency.

### Promoting Energy Collaboration

China's energy security challenges are wider and more profound than is often perceived. China cannot have energy security without world energy security and visa-versa. The consensus among the speakers and the audience at this meeting was that opportunities exist for diffusing tensions over China's energy demands, both through assistance in promoting energy efficiency and in involving China in multilateral institutions. Such collaboration—particularly between the United States and China—could ensure international oil market security and significantly reduce greenhouse gas emissions.

Logan felt the United States should act first to constructively promote such collaboration. For example, the United States could adopt some measures to lessen U.S. dependence on oil (e.g., CAFÉ, fuel tax, or biofuels) and assist China on improving their energy data collection and analysis. Such steps could help open the door for a serious dialogue on shared energy concerns and lay the foundation for more proactive steps, such as getting China on a fast-track International Energy Agency membership and undertaking a dialogue on how China could adopt some kind of carbon commitment. Collaboration between North America and China could help to positively guide China's emergence into the world system.

## Evaluating Three Gorges Dam Resettlement Policies

By Laura A. Safdie

Although the Three Gorges Dam (TGD) is expected to bestow significant benefits in terms of flood control, electricity supply, and navigation improvement, this huge project has been plagued by controversy. The sheer magnitude of necessary funds that will reach an estimated 203.9 billion Yuan (\$24.6 billion) is a central concern. Another controversy is the dam's expected negative impact on the environment, local culture, and scenic beauty. However, as in most large hydropower projects, the most volatile debate revolves around forced resettlement, which in TGD will displace more people than any other development project in history. Such large-scale involuntary resettlement poses significant risks of impoverishment, homelessness, and health threats to both resettled and host communities. To evaluate whether TGD resettlement policies succeed in countering these risks, during a summer research trip to China with Michigan State University, I analyzed resettlement and rehabilitation policies and conducted surveys of displaced families in the urban resettlement area in Wanzhou district of Chongqing municipality. Due to time constraints I only surveyed twelve families, which means this study only offers a glimpse of the multifaceted issues at play in the TGD.

Individuals I surveyed initially were resettled with landholdings of smaller plot size and inferior quality than their previous farms. Crop yield thus generally decreased, indicating that even rural households furnished with land were expected to generate a portion of their income from off-farm jobs. Without any formal training, however, most formerly rural households resorted to temporary service jobs where available. Unless these households were able to take advantage of business opportunities such as selling their small agricultural plots to developers, individuals surveyed indicated uncertainty about current and future ability to generate income.

### Joblessness

In 2004, the National Development and Reform Commission (NDRC) created a strategy for social and economic development for the regions affected by the dam, prioritizing industrial growth as key in reducing poverty. NDRC's Cooperative Partnership program created business relationships between counties affected by the TGD and coastal provinces, which are legally required to transfer industrial factories and capital investments to their inland partner counties. Wanzhou has developed partnerships with Shanghai, Zhejiang, and Fujian, and corporations from these areas are already making substantial investments. This program and other preferential business policies have attracted a total investment of 4 million Yuan into the Wanzhou district between 2002 and 2004. Wanzhou has attempted to prioritize less polluting industries, such as salt production, pharmaceutical and food product manufacturing, and related light industries.

The second national measure to combat joblessness in the TGD area is an exchange of trained, temporary service labor from the region to cities in the east. Wanzhou currently has an employment contract with Shanghai, which provided service jobs for 10,000 of Wanzhou's unemployed from 2003 to 2005. County government agencies train displaced urban workers according to the needs of Shanghai's labor market, with all expenses covered by the central government. While the central government has initiated numerous policies promoting development and implemented regulations to improve the business environment in areas affected by the dams, these are all macro-scale risk mitigation strategies that actually have not reached most resettled citizens. Of the twelve surveyed resettled households, only one had been given access to basic occupational training at any point in the resettlement process.



### Homelessness

Despite economic development policies targeting resettled peoples, problems of unemployment and homelessness still exist in the dam region. Often families are provided with vacant land plots in a resettlement village, or “new town,” with limited infrastructure and civic amenities. In this scenario, more common in earlier phases of resettlement, new residents are responsible for constructing their own housing with variable access to loans and financial resources. Later in resettlement, however, land became increasingly scarce and larger groups of people had to be relocated quickly as the reservoir level rose. These individuals were given opportunities to buy apartments in specially built government subsidized high rises or forego housing replacement entirely.

### Rebuilding Living Communities

While economic development is correctly considered the primary strategy for post-resettlement household rehabilitation, the impacts of losing social networks cannot be underestimated. Large-scale resettlement breaks apart community and family networks, removing support systems and even resources to maintain livelihoods. Social reintegration depends both on the relationships between resettled and host communities and the evolving dynamics within the resettled communities. Resettled individuals in my survey cited feelings of alienation; yet those who took the initiative to join social organizations admitted that they were helpful in integrating them into the new community.

### Improving Healthcare

Wanzhou, like most urban resettlement centers in the TGD area, has invested heavily in healthcare infrastructure. Access to healthcare is an important indicator of poverty levels, and therefore was a major component of my survey interviews. Notably, even low-income families surveyed experienced better healthcare services after resettlement than before. The large number of resettled rural citizens into urban areas like Wanzhou appears to have given more households access to healthcare, as well as educational opportunities. Ability to take advantage of this access, however, depends largely on the community's economic rehabilitation capacity. Resettlement policies, then, must include sufficient assurances for the secure, long-term employment of those people unable to take advantage of their agricultural skill base. In the case of healthcare, for example, resettlement packages do not include an allocation for health insurance and those who fall

into impoverishment cannot take advantage of their improved proximity to medical care.

### Policy Recommendations

While Wanzhou is a relatively well-off district, many resettled individuals still struggle to find jobs, which means the fundamental criteria for successful resettlement has not been achieved. Fundamental to successful resettlement is the ability for people to generate income, which could be assured by providing access to low interest loans for small-scale entrepreneurship. With the opportunities that arise from such financing, households can develop a secure source of income separate from government training programs, which sometimes fall short. For example, some households that were provided with a vacant land plot on which to construct housing were able to borrow money to construct multiple-family dwellings, thereby enabling them to rent inexpensive housing to other residents and ensuring a supplementary source of income.

China's political system is not known for involvement of the public in the creation or execution of policies, and accordingly, plans for resettlement are formulated with minimal input from the people who are most affected by their outcomes. In resettlement projects for dams, consultation with the public about the execution of involuntary resettlement is vital. Active participation at all stages of resettlement would serve more than a symbolic function; by involving displaced people in resettlement decisions, communities would begin to feel personally invested in their success. There are over 200 new dams being planned in southwest China, thus it is vital that dam builders and local governments solicit input from communities on dam site decision-making, rehabilitation programs, resource allocation, and resettlement sites. This community empowerment, not heavy-handed top-down relocation, will prevent conflicts before they arise, making implementation and enforcement of resettlement policies successful and less expensive. Alternately such consultation could halt some dams, which will be seen as too expensive if the true costs of resettlement are incorporated into the final price tag.

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