

Green from Above: Climate Change, New Developmental Strategy, and Regulatory Choice in China

DONGSHENG ZANG*

SUMMARY

I.	INTRODUCTION	201
II.	CLIMATE CHANGE IN CHINA’S NEW DEVELOPMENTAL STRATEGY.....	205
	A. <i>China’s Interests in the Kyoto Protocol and Beyond</i>	205
	B. <i>China’s New Developmental Strategy</i>	208
	C. <i>Climate Change Policy Formulated</i>	212
III.	CLIMATE CHANGE AND REGULATORY CHOICE.....	214
	A. <i>Policy Instruments: Political Limits on Options</i>	214
	B. <i>Regulatory Choice and Regulatory Agencies</i>	218
	C. <i>Law Enforcement: Campaign Style</i>	221
	D. <i>Regulatory Choice and the Politics of Governance</i>	224
	E. <i>The Regulatory Climate and Its Persistence</i>	228
IV.	CONCLUSION	231

I. INTRODUCTION

In 1992, China joined 154 other countries at the Earth Summit in Rio de Janeiro by signing the primary international agreement on climate change, the

* Assistant Professor of Law, University of Washington School of Law, Seattle, WA. I wish to thank Mitchell Kilby, Kate Doty, Kelly Stephenson, Keneshia Washington, Kristen Williams, and other editors of the Texas International Law Journal for the invitation to the symposium “China’s Emergence—Challenges and Opportunities Related to Trade, Investment, and Regulatory Law,” held at the University of Texas School of Law, Austin, Texas on February 27, 2009, and for their excellent assistance in editing the article. My special thanks to participants of the symposium who shared their insights with me. I am indebted to my colleagues, teachers, and friends Bill Alford, Bill Rogers, Michael Robinson-Dorn, Jane K. Winn, and Veronica Taylor for their help. I am also indebted to Professors Zhou Xueguang and Wanxin Li for sharing their unpublished or recently published works with me.

United Nations Framework Convention on Climate Change (UNFCCC).¹ About six years later, in May 1998, China signed the Kyoto Protocol to the UNFCCC.² At the time, China was a moderate emitter of carbon dioxide (CO₂), the main greenhouse gas covered by the Kyoto Protocol.³

The Kyoto Protocol to the UNFCCC was ratified by China in August 2002⁴ and entered into force on February 16, 2005.⁵ The United States has ratified the UNFCCC⁶ but not the Kyoto Protocol. China's twenty years of market reform resulted in an impressive decline in carbon intensity, which is measured by CO₂ emissions per dollar of gross domestic product (GDP) created.⁷ As its rapid industrialization unfolds, China is emerging as a major contributor to global warming.⁸ The International Energy Agency has noted that primary energy demand between 2000 and 2005 grew by 55 percent while GDP increased by 57 percent.⁹ This increase in energy demand was driven by "surging electricity demand (met largely by increased coal use) and by the manufacture of metals, building materials and chemicals for infrastructure, consumer goods and export markets."¹⁰ As a consequence, emission of CO₂ grew on average by 10.6 percent between 2000 and 2005, which was three times the 3.2 percent growth rate of the 1990s.¹¹ A June 2008 report by the Netherlands Environmental Assessment Agency suggests that China overtook the United States as the highest emitter of CO₂ in 2006.¹² For many environmentalists in the United States and Europe, a major problem with the Kyoto

1. United Nations Framework Convention on Climate Change, *signed by P.R.C.* June 11, 1992, S. TREATY DOC. NO. 102-38 (1992), 1771 U.N.T.S. 107, 31 I.L.M. 849 [hereinafter UNFCCC]; *see also* Daniel Bodansky, *Prologue to the Climate Change Convention*, in *NEGOTIATING CLIMATE CHANGE: THE INSIDE STORY OF THE RIO CONVENTION* 45, 45-74 (Irving M. Mintzer & J.A. Leonard eds., 1994) (describing the events leading up to 1992 UNFCCC convention).

2. Kyoto Protocol to the United Nations Framework Convention on Climate Change, *signed by P.R.C.* May 29, 1998, 2303 U.N.T.S. 162, 37 I.L.M. 32 [hereinafter Kyoto Protocol]. In September 2002, Premier Zhu Rongji announced China's ratification of the Kyoto Protocol at the U.N. World Summit on Sustainable Development in Johannesburg the month before. Shao Zongwei, *Nation Approves Kyoto Protocol*, CHINA DAILY, Sept. 4, 2002, available at http://www.chinadaily.com.cn/en/doc/2002-09/04/content_134822.htm.

3. NETH. ENVTL. ASSESSMENT AGENCY, GLOBAL CO₂ EMISSIONS: INCREASE CONTINUED IN 2007 (2008), available at <http://www.pbl.nl/en/publications/2008/GlobalCO2emissionsthrough2007.html>; Elisabeth Rosenthal, *China Increases Lead as Biggest Carbon Dioxide Emitter*, N.Y. TIMES, June 14, 2008, at A5.

4. Kyoto Protocol, *supra* note 2; *see also* Shao, *supra* note 2.

5. Kyoto Protocol, *supra* note 2, arts. 25(1), 25(3).

6. UNFCCC, *supra* note 1.

7. Ying Fan, Lan-Cui Liu, Gang Wu, Hsien-Tang Tsai & Yi-Ming Wei, *Changes in Carbon Intensity in China: Empirical Findings from 1980-2003*, 62 *ECOLOGICAL ECONOMICS* 683, 683 (2007). An earlier study by a research project at the Massachusetts Institute of Technology concluded that the decrease in energy intensity in the 1980s was the result of changes in China's production technology. For conclusions from the MIT report, see XIANNAN LIN, *CHINA'S ENERGY STRATEGY: ECONOMIC STRUCTURE, TECHNOLOGICAL CHOICES, AND ENERGY CONSUMPTION* (1996).

8. *See* NETH. ENVTL. ASSESSMENT AGENCY, *supra* note 3 (noting that China topped the list of carbon dioxide emitting countries for the first time in 2006).

9. INT'L. ENERGY AGENCY, *WORLD ENERGY OUTLOOK 2007: CHINA AND INDIA INSIGHTS* 263 (2007).

10. *Id.*

11. Ross Garnaut, Frank Jotzo & Stephen Howes, *China's Rapid Emissions Growth and Global Climate Change Policy*, in *CHINA'S DILEMMA* 170, 172 (Ligang Song & Wing Thye Woo eds., 2008).

12. NETH. ENVTL. ASSESSMENT AGENCY, *supra* note 3.

Protocol was that neither the United States nor China was subject to the CO₂ cap that it set for developed countries.¹³

Since taking office in 2009, the new Obama administration has changed the dynamics on climate change both in the United States and in the international arena. Shortly after his inauguration, President Obama instructed the Environmental Protection Agency (EPA) to reconsider California's request for a waiver of Clean Air Act preemption so that the state could enact air pollution standards for motor vehicles that were stricter than the national standards.¹⁴ The EPA under the Obama administration seems to be moving in the direction of regulating CO₂.¹⁵ These moves are welcomed by the international community.¹⁶ In Washington, D.C., there seems to be a growing sense of urgency among President Obama's policy advisors to work with China on climate change. In early February 2009, U.S. Secretary of State Hillary Clinton visited China with climate change at the top of her agenda.¹⁷ From February to June 2009, an impressive list of high officials and political leaders took turns visiting China to discuss climate issues, including U.S. Special Envoy for Climate Change Todd Stern, Secretary of Energy Steven Chu, Secretary of Commerce Gary Locke, Senator John Kerry, and Speaker of the House Nancy Pelosi.¹⁸ The prioritization of climate change during these visits to China by high-level U.S. government officials suggests that climate change, compared with other

13. RICHARD B. STEWART & JONATHAN B. WIENER, *RECONSTRUCTING CLIMATE POLICY: BEYOND KYOTO* 8 (2003). According to Stewart and Wiener, since the Kyoto Protocol leaves China, other developing countries, and the United States out of the regulatory framework, "the Kyoto Protocol now omits more than half of global greenhouse gas emissions, and that omission will worsen over time because it excludes the countries whose emissions are growing fastest." *Id.* at 8.

14. Letter from Mary D. Nichols, Chairman, Air Resources Board, to Lisa P. Jackson, Administrator-Designate, United States Environmental Protection Agency (Jan. 21, 2009), available at <http://www.regulations.gov/search/Regs/contentStreamer?objectId=090000648082aa54&disposition=attachment&contentType=pdf>. State of California Request for Waiver Under 42 U.S.C. 7543(b), the Clean Air Act, 74 Fed. Reg. 4905 (Jan. 28, 2009); see Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's Greenhouse Gas Emission Standards, 74 Fed. Reg. 32,744 (July 8, 2009) (noting the EPA's reconsideration and eventual grant of California's request for waiver).

15. Lisa P. Jackson, the new E.P.A. Administrator, announced on February 17, 2009 that the agency would reconsider a Bush administration decision not to regulate carbon dioxide emissions from new coal-burning power plants. John M. Broder, *E.P.A. Expected to Regulate Carbon Dioxide*, N.Y. TIMES, Feb. 19, 2009, at A1.; Juliet Eilperin, *Winds of Change Evident in U.S. Environmental Policy*, WASH. POST, Mar. 30, 2009, at A3.

16. The United Nations Environment Program (UNEP) welcomed President Obama's action on global warming. See *Obama Administration Starts Defining Climate Policy*, U.N. ENV'T PROGRAMME, Jan. 27, 2009, <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=556&ArticleID=6051&l=en&t=long> (describing President Obama's initial climate-change policy efforts). U.N. Secretary General Ban Ki-moon even appealed to President Obama to attend a hastily planned summit in late March to promote international efforts on climate change. Colum Lynch, *U.N. Chief Wants Obama at Climate-Change Summit*, WASH. POST, Feb. 10, 2009, at A12.

17. Glenn Kessler, *U.S., China to Focus on Slump, Climate: Long-Standing Human Rights Concerns Put on Back Burner During Clinton Trip*, WASH. POST, Feb. 22, 2009, at A14; Mark Landler, *Clinton Paints China Policy with a Green Hue*, N.Y. TIMES, Feb. 22, 2009, at A1.

18. Ariana Eunjung Cha, *At Odds on Emissions, U.S., China Open Talks*, WASH. POST, Jun. 9, 2009, at A06; Wang Linyan, *U.S. Senator Upbeat after "Productive" Green Talks*, CHINA DAILY, May 29, 2009, at 2; Shai Oster, *China Emissions Cleanup Is Urged*, WALL ST. J., July 16, 2009; Michael Wines, *In Beijing, Pelosi Calls for Cooperation on Climate*, N.Y. TIMES, May 28, 2009, at A12.

issues like human rights, is high on the Obama administration's agenda in relations with China.¹⁹

Despite the growing pressures on China regarding climate issues, Premier Wen Jiabao indicated that China is not ready to accept a carbon cap at the United Nation's Climate Change Conference in Copenhagen, to be held in December 2009, stating that "it's difficult for China to take quantified emission reduction quotas at the Copenhagen conference, because this country is still at an early stage of development."²⁰ In July 2009 at the Group of Eight (G8) meeting in L'Aquila, Italy, the United States and European Union, again, failed to convince China or India to commit to a carbon cap.²¹

It is in this context that environmentalists in the West are increasingly intrigued by the normative question: how to make China "Green"?²² There is no doubt that China's position is a crucial factor for the Copenhagen conference. Missing in this discussion, however, is an equally important question: what is the best means to achieve Green? Here, we face two distinct but closely related notions: Green as an ecological goal and Green as a political or policy process. In the United States and Europe today, Green as an ecological goal is often believed to be closely associated with Green as a political process in which environmental groups serve as the agents of democracy.²³ Green as an ecological goal cannot be achieved without regularly revitalized democratic deliberation in politics. These analytically distinct aspects of Green politics are often mixed together, and the connection between the two is taken for granted. As Thomas Heller pointed out, "[t]he fundamental climate analysis remains wholly normative, while the positive politics or organizational behaviors that forestall the desired actions are marginalized."²⁴

In this article, I will use China's climate change policy to show that this distinction has its value in climate discourse. Part II describes China's policy shift towards climate change since December 2004—the new developmental strategy. So far, this new strategy is hardly noticed in the West despite the widespread concerns about China's policy on climate change. Then, in Part III, I will analyze the policy tool implementing this new developmental strategy—the law enforcement

19. Kessler, *supra* note 17, at A14.

20. Interview by Lionel Barber, Editor of the *Financial Times*, with Wen Jiabao, Premier of the P.R.C. (transcript available in FIN. TIMES, Feb. 2, 2009, http://www.ft.com/cms/s/0/795d2bca-f0fe-11dd-8790-0000779fd2ac.html?nclick_check=1); see also Emma Duncan, *Wonderful, Wonderful Copenhagen? Don't Count on a Climate-change Deal*, ECONOMIST, Nov. 19, 2008, at 103.

21. Patrick Wintour & Larry Elliott, *G8 Summit: Barack Obama Says World Can Close the Carbon Emissions Gap*, GUARDIAN, July 9, 2009, available at <http://www.guardian.co.uk/environment/2009/jul/09/barack-obama-g8-climate-change>.

22. Jonathan B. Wiener, *Climate Change Policy and Policy Change in China*, 55 UCLA L. REV. 1805 (2008); Jeffrey Logan, Joanna Lewis & Michael B. Cummings, *For China, the Shift to Climate-Friendly Energy Depends on International Collaboration*, BOSTON REV. (Jan./Feb. 2007), available at <http://bostonreview.net/BR32.1/loglewccummings.php>.

23. See JOHN S. DRYZEK, ET AL., GREEN STATES AND SOCIAL MOVEMENTS: ENVIRONMENTALISM IN THE UNITED STATES, UNITED KINGDOM, GERMANY, AND NORWAY 20–21 (2003) (comparing the degree of the integration of environmental interest groups into the political processes of the United States, United Kingdom, Germany, and Norway); see *infra* text accompanying notes 211–213.

24. Thomas Heller, *Climate Change: Designing an Effective Response*, in GLOBAL WARMING: LOOKING BEYOND KYOTO 115, 124 (Ernesto Zedillo ed., 2008). Similarly, when discussing environmental law in the context of environmental federalism debates in the United States, Professor Daniel C. Esty pointed out, "[s]imply put, how we regulate is more important than where we regulate." Daniel C. Esty, *Toward Optimal Environmental Governance*, 74 N.Y.U. L. REV. 1495, 1495 (1999).

campaigns. The article aims to show a great discrepancy between the new developmental strategy, which clearly recognizes Green as the goal, and the law enforcement campaigns, which are largely a consolidation of the Party/State's power, leaving Green as a democratic process questionable. If there is a "Green Revolution" going on in China, this article argues, it is a Green forced from above.

II. CLIMATE CHANGE IN CHINA'S NEW DEVELOPMENTAL STRATEGY

China negotiated the UNFCCC and the Kyoto Protocol based on a wide range of considerations, both domestic and international.²⁵ Thus, China also has a significant interest in keeping its status as a member of a similar global framework in the near future. Part II of this article illustrates how climate change is understood inside the Chinese policy-making process. Section A starts by discussing China as a beneficiary of the Kyoto Protocol. Section B proceeds to illustrate the decisive change of direction in China's developmental strategy announced at a December 2004 meeting of the Communist Party. Finally, Section C shows how the new developmental strategy is subsequently formulated into a climate change policy.

A. *China's Interests in the Kyoto Protocol and Beyond*

A key benefit that China enjoys under the Kyoto Protocol is the market operation called the Clean Development Mechanism (CDM).²⁶ Article 12 of the Kyoto Protocol permits Annex I countries (developed countries) to invest in emission control facilities in non-Annex I countries.²⁷ Emission reduction, once certified by a special procedure, will be counted as a contribution toward compliance with the investing country's overall commitments under Article 3.²⁸ China's ratification of the Kyoto Protocol was partially motivated by the promises of financial assistance and technology transfer under schemes such as CDM.²⁹ As a

25. Elizabeth Economy, *Chinese Policy-making and Global Climate Change: Two Front Diplomacy and the International Community*, in *THE INTERNATIONALIZATION OF ENVIRONMENTAL PROTECTION* 19, 19–41 (Miranda A. Schreurs & Elizabeth Economy eds., 1997) [hereinafter *Elizabeth Economy, Two Front Diplomacy*]; Michael T. Hatch, *Chinese Politics, Energy Policy, and the International Climate Change Negotiations*, in *GLOBAL WARMING AND EAST ASIA: THE DOMESTIC AND INTERNATIONAL POLITICS OF CLIMATE CHANGE* 43, 43–65 (Paul G. Harris ed., 2003); see generally Lester Ross, *China: Environmental Protection, Domestic Policy Trends, Patterns of Participation in Regimes and Compliance with International Norms*, 156 *CHINA Q.* 809 (1998).

26. Kyoto Protocol, *supra* note 2, art. 12; United Nations Framework Convention on Climate Change (Website), Clean Development Mechanism (CDM), http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php (last visited Oct. 3, 2009).

27. Kyoto Protocol, *supra* note 2, art. 12.

28. *Id.* Emission trading brings benefits to the parties in the transaction and global society. Richard Stewart and Jonathan Wiener estimated that emission trading limited to the industrialized Annex B countries would reduce total costs of the Kyoto Protocol compliance by over 50% relative to a regime with no international trading at all; but full global trading including all the developing countries would reduce total costs by over 75% relative to a regime with no trading at all. STEWART & WIENER, *supra* note 13, at 40.

29. Early in the 2000s, Zhihong Zhang, then Chief Technical Advisor for a Global Environment Facility (GEF) Energy Efficiency Project in China under the United Nations Industrial Development Organization, observed that, "[s]pecific to the climate change regime, China's involvement has been motivated by the availability of funding from such sources as the [GEF] and the prospect of technology

signatory to the Kyoto Protocol, China was eligible for the CDM schemes. Initially, China was slow in jumping into the CDM market. When the United States decided to back out of the Kyoto Protocol in early 2001,³⁰ China realized that the CDM market was much smaller than it had expected. So it took action quickly to attract CDM projects.³¹ Late in 2001, a joint study on CDM was launched by a partnership between China, Germany, Switzerland, and the World Bank and was published in July 2004.³² The study projected that China had the potential to take around fifty percent of the global CDM market and sent an encouraging signal to the policymakers in China.³³

In response, the National Development and Reform Commission (NDRC), the designated authority to approve CDM projects, quickly released rules and streamlined approval processes for CDM projects in 2004.³⁴ In February 2005, the Renewable Energy Act was passed by the Chinese legislature.³⁵ Starting with the fourth quarter of 2005, CDM projects in China began to pick up, and China quickly became a major beneficiary of worldwide CDM schemes.³⁶ In 2006, China captured \$3.2 billion in subsidies out of the \$4.8 billion that were available for dozens of projects, accounting for two-thirds of carbon-credit trading under CDM.³⁷

transfer and provision of financial assistance promised by the CDM under the Kyoto Protocol.” Zhihong Zhang, *The Forces Behind China's Climate Change Policy: Interests, Sovereignty, and Prestige*, in GLOBAL WARMING AND EAST ASIA: THE DOMESTIC AND INTERNATIONAL POLITICS OF CLIMATE CHANGE 66, 73 (Paul G. Harris ed., 2003); see Global Environment Facility (GEF), <http://www.gefweb.org/interior.aspx?id=23052> (last visited Oct. 3, 2009) (stating that Zhihong Zhang served as Chief Technical Advisor for the GEF prior to joining the GEF Secretariat in 2004).

30. On March 28, 2001, President George W. Bush announced that the United States would not implement the Kyoto Protocol on global warming. Julian Borger, *Bush Kills Global Warming Treaty*, GUARDIAN, Mar. 29, 2001, <http://www.guardian.co.uk/environment/2001/mar/29/globalwarming.usnews>; Douglas Jehl, *U.S. Going Empty-Handed to Meeting on Global Warming*, N.Y. TIMES, Mar. 29, 2001, at A22.

31. Zhongxiang Zhang, *Toward an Effective Implementation of Clean Development Mechanism Projects in China*, 34 ENERGY POL'Y 3691, 3699 (2006).

32. WORLD BANK, CLEAN DEVELOPMENT MECHANISM IN CHINA: TAKING A PROACTIVE AND SUSTAINABLE APPROACH (2d ed. 2004).

33. *Id.* at 114.

34. See *China Passes Renewable Energy Law*, RENEWABLEENERGYWORLD.COM, Mar. 9, 2005, <http://www.renewableenergyworld.com/rea/news/article/2005/03/china-passes-renewable-energy-law-23531> (providing examples of how NDRC passed specific renewable energy targets and regulated the purchase and use of solar photovoltaics (PV), solar water heating, and renewable energy fuels, as well as stating that the law includes specific penalties for non-compliance).

35. Ke zai sheng neng yuan fa [Renewable Energy Act] (promulgated by the Standing Comm. Nat'l. People's Cong., Feb. 28, 2005, effective Jan. 1, 2006) 2005 STANDING COMM. NAT'L. PEOPLE'S CONG. GAZ. 33 (P.R.C.).

36. See U.N. ENV'T PROGRAM [UNEP], UNEP 2007 ANNUAL REPORT 13 (2008), available at http://www.unep.org/PDF/AnnualReport2007/AnnualReport2007_en_web.pdf (“Lack of equitable regional distribution is currently a major drawback of the CDM. A few countries have captured the largest share of the global CDM project portfolio while sub-Saharan Africa has been largely bypassed by the CDM market. Of the total 2,647 projects currently in the global pipeline, only 33 projects are in sub-Saharan Africa, with 21 of these in South Africa.”); U.N. Env't Program [UNEP] Riseo Centre on Energy, Climate, and Sustainable Development [URC], CDM Projects by Host Region, <http://www.cdmpipeline.org/cdm-projects-region.htm> (last visited Oct. 30, 2009) (showing CDM projects hosted in four countries (Mexico, Brazil, China, and India) from the first quarter of 2004 to the fourth quarter of 2008).

37. Keith Bradsher, *Clean Power That Reaps a Whirlwind*, N.Y. TIMES, May 9, 2007, http://www.nytimes.com/2007/05/09/business/09carbon.html?pagewanted=1&_r=1; Keith Bradsher, *Knowing Which Way Wind Blows: Handful of Nations Get Most Subsidies*, INT'L HERALD TRIB., May 10, 2007.

UNFCCC's statistics (as of September 11, 2009) suggest that, in terms of average annual certified emission reductions (CERs), China's CER is 184,759,660 tons carbon dioxide equivalent (CO₂e), accounting for 58.99 percent of the world's total CDM projects.³⁸

Most CDM projects in China are concentrated in the renewable energy sectors, especially hydro and wind power.³⁹ By March 2008, NDRC had approved 854 CDM projects in the renewable energy sector, accounting for 71.35 percent of all projects.⁴⁰ In addition to the financial benefit, a recent study suggests that Brazil, China, India, and Mexico, the major beneficiaries of CDM projects, also benefit from technology transfer as a consequence of those projects.⁴¹ According to this study, technology transfer occurs in the following types of projects: wind power, hydrofluorocarbons (HFC) decomposition, methane destruction, landfill gas recovery, and nitrous oxide (N₂O) destruction.⁴² These researchers noted that China's economic growth rate enables technology transfers, which in turn, is correlated with technological capabilities.⁴³ Thus, the State Council has made clear that it wants the CDM to continue in the post-Kyoto era. Its 2008 policy statement indicated that, "China holds that CDM, as a comparatively effective and successful cooperation mechanism, should continue to be implemented after 2012."⁴⁴

As a consequence of climate change concerns, China also has growing interests in broader trade and economic issues. In the past, China embraced globalization by attracting foreign direct investment (FDI), making it the preferred destination of Western polluting industries.⁴⁵ Increasingly, climate change is providing trade and investment opportunities. For example, in the solar energy sector, China is the largest manufacturer and market for solar water heaters, accounting for sixty percent of the world's total production.⁴⁶ China is also a leading manufacturer of solar

38. United Nations Framework Convention on Climate Change (Website), Expected Average Annual CERs from Registered Projects by Host Party, <http://cdm.unfccc.int/Statistics/Registration/AmountOfReductRegisteredProjPieChart.html> (last visited Oct. 30, 2009).

39. *China Passes Renewable Energy Law*, *supra* note 34.

40. Gao Hairan, *Wo guo qing jie fa zhan ji zhi xiang mu shi shi xian zhuang he zheng ce jian yi [CDM Implementation in China and Related Policy Suggestions]*, 30 NENG YUAN YU HUAN JING [ENERGY AND ENVIRONMENT] 33, 34 (2008) (P.R.C.).

41. Antoine Dechezlepretre, Matthieu Glachant & Yann Meniere, *Technology Transfer by CDM Projects: A Comparison of Brazil, China, India and Mexico*, 37 ENERGY POL'Y 703, 703-04 (2009).

42. *Id.* at 706-07.

43. *Id.* at 709-10.

44. Bai pi shu you guan yu zhong guo ying dui qi hou bian hua de zheng ce yu shi shi [White Paper on China's Policies and Actions for Addressing Climate Change] pt. VII (issued by Info. Off. State Council, Oct. 29, 2008) (P.R.C.), available at http://www.china.org.cn/government/whitepaper/node_7055612.htm; see also Li Jing, *Nation Issues Post-Kyoto Plans*, CHINA DAILY, Oct. 30, 2008, at 2, available at http://www.chinadaily.com.cn/cndy/2008-10/30/content_7156323.htm ("The clean development mechanism (CDM) should continue to be implemented even after 2012, when the Kyoto Protocol expires . . .").

45. In 2007, Handan Iron and Steel Corporation, a steel conglomerate headquartered in Handan City, Hebei Province in northern China, decided to buy the hulking blast furnace from ThyssenKrupp's former steel mill in the Ruhr Valley of Germany. The furnace was dismantled and shipped piece by piece from Germany's old industrial heartland to Hebei Province, China's new Ruhr Valley. Joseph Kahn & Mark Landler, *China Grabs West's Smoke-Spewing Factories*, N.Y. TIMES, Dec. 21, 2007, available at <http://www.nytimes.com/2007/12/21/world/asia/21transfer.html>.

46. THE CLIMATE GROUP, CHINA'S CLEAN REVOLUTION II: OPPORTUNITIES FOR A LOW CARBON FUTURE 5 (2009) [hereinafter CHINA'S CLEAN REVOLUTION II].

photovoltaic cells, second only to Japan.⁴⁷ In fact, China's solar growth has largely been fueled by growing international demand from countries like Germany, Spain, and Japan, rather than by domestic policies.⁴⁸

B. *China's New Developmental Strategy*

China's decision to open to CDM projects under the Kyoto Protocol in mid-2004 was not incidental. Hu Jintao took office in September 2004, marking China's "Hu-Wen era."⁴⁹ One of the differences between the Hu-Wen Administration and the Jiang Zemin and Zhu Rongji Administration (1993–2003) was the basic strategy for economic growth, which guides environmental policy.⁵⁰

China declared a strategic change of policy in late 2004 at the Central Economic Work Conference.⁵¹ The Conference noted that there were some "unhealthy and unstable factors" in the previous year, though the Party managed them well.⁵² It acknowledged that the relationship between challenges stemming from the quickly-growing economy, such as increasing conflicts between urban and rural areas, the protection of resources and the environment, and responses to economic and social growth, in turn restricts "economic development and social harmony."⁵³ In more theoretical terms, this is a question of development: "With more population and less per capita natural resources China is situated in the new development stage of industrialization, urbanization, marketization and internationalization."⁵⁴ Thus, a new organizing principle, the "scientific viewpoint of development," served as the main point of departure for the new administration. The new principle required five balances:

[T]he "five balances"—balancing urban and rural development, balancing regional development, balancing the economic and social development, balancing the harmonious development of human and nature, and balancing domestic development and opening up to the outside world; accelerate the building of a conservation-minded society in an effort to solve the contradictions of energy resources; get hold of favorable opportunities to push on reforms; protect and achieve the interests of the masses by adhering to putting people first.⁵⁵

47. *Id.*

48. *Id.* at 28. It is reported that Suntech Power Holdings, China's biggest solar panel manufacturer, is preparing to build plants to assemble their products in the United States in order to bypass protectionist legislation. Keith Bradsher, *China Racing Ahead of U.S. in the Drive to Go Solar*, N.Y. TIMES, Aug. 25, 2009, at A1.

49. John Wong & Lai Hongyi, *The Hu-Wen New Deal*, in CHINA INTO THE HU-WEN ERA: POLICY INITIATIVES AND CHALLENGES 3, 9 (John Wong & Lai Hongyi eds., 2006).

50. Maria Heimer, *The Cadre Responsibility System and the Changing Needs of the Party*, in THE CHINESE COMMUNIST PARTY IN REFORM 122, 122 (Kjeld Erik Brødsgaard & Yongnian Zheng eds., 2009).

51. *China Sets Energy, Resources Saving As One Of Key Economic Targets*, PEOPLE'S DAILY, Dec. 6, 2004, http://english.peopledaily.com.cn/200412/06/eng20041206_166239.html.

52. *Put into Effect Scientific Viewpoint of Development in an All-round Way*, PEOPLE'S DAILY ONLINE, Dec. 15, 2004, available at http://english.peopledaily.com.cn/200412/14/eng20041214_167332.html.

53. *Id.*

54. *Id.*

55. *Id.*

These five balances were meant to point to a scientific approach to development, which means a different mode of economic growth. In the past, economic growth was based on high-volume consumption of energy and raw materials, causing heavy pollution, low output, and low efficiency. This new growth mode would be based on conservation, science, and technology. For that purpose, there was a need for structural change in the economy. An editorial in the *People's Daily*, published on the same day, commented that the development strategy meant that China must “overcome the tendency of one-sidedly pursuing quantity and speed, and genuinely shift the focus of economic work to improving the quality and efficiency of economic growth.”⁵⁶ In December 2005, the State Council issued a formal regulation on economic restructuring.⁵⁷ In 2004, concerns about environment or climate change became linked with three other strategic issues that provided the political context for a new developmental strategy.

First, food security and energy security were major issues. With the world's biggest population, food security has always been a concern in China's long history. However, this issue gained a heightened awareness in China after the publication of Lester R. Brown's article, *Who Will Feed China? Wake-up Call for a Small Planet*, which was later expanded into a book-length report and circulated widely throughout China.⁵⁸ Brown's work alarmed policymakers in the top leadership positions and prompted meteorologists in China to pay attention to climate change in response to concerns of food security.⁵⁹ “Prolonged periods of drought resulting from China's . . . consecutive ‘warm winters’ will pose a serious threat to the country's crop yields,” China Meteorological Administration (CMA) said in a 2008 report.⁶⁰

Another security issue in the 2000s has been energy security. China became a net importer of petroleum products in 1993 and is now the world's second-largest consumer of oil behind the United States.⁶¹ Given its experience in the 1950s (a de facto embargo from the West)⁶² and the early 1960s (withdrawal of Soviet aid),⁶³

56. Editorial, *Command Whole Situation of Eco-social Development with Scientific Development Concept*, PEOPLE'S DAILY, Dec. 6, 2004, at 1, available at http://english.peopledaily.com.cn/200412/06/eng20041206_166301.html.

57. Cu Jin Chan Ye Jie Gou Tiao Zheng Zan Xing Gui Ding [Decision of the State Council on Promulgating the “Interim Provisions on Promoting Industrial Structure Adjustment” for Implementation] (promulgated by St. Council, Dec. 2, 2005, effective Dec. 2, 2005) ST. COUNCIL (P.R.C.).

58. LESTER R. BROWN, *WHO WILL FEED CHINA: WAKE-UP CALL FOR A SMALL PLANET* (1995). Brown's articles appeared in Chinese journals in 1995, for example, *Shui Lai Yang Huo Zhong Guo?* [*Who Will Feed China?*], 4 ZHONGGUO NONGCUN JINGJI [CHINESE RURAL ECONOMY] 42 (1995).

59. See Pan Yunzhao, Zhuan fang Lai Site Bu Lang: Wo cong mei you yao mo hua Zhongguo, [Interview with Lester R. Brown: I Have Not Demonized China], INT. HERALD TRIB. (P.R.C.), Apr. 22, 2005, available at <http://news.sohu.com/20050422/n225297275.shtml>.

60. Li Jing, *Warm Winter “Major Threat” to Crops*, CHINA DAILY, Nov. 26, 2008, available at http://www.chinadaily.com.cn/china/2008-11/26/content_7239388.htm.

61. INFO. OFF. OF THE STATE COUNCIL (P.R.C.), *CHINA'S ENERGY CONDITIONS AND POLICIES* (2007), available at <http://www.china.org.cn/english/environment/236955.htm>. For a more detailed analysis of energy production and consumption in China, see TATSU KAMBARA & CHRISTOPHER HOWE, *CHINA AND THE GLOBAL ENERGY CRISIS: DEVELOPMENT AND PROSPECTS FOR CHINA'S OIL AND NATURAL GAS* (2007).

62. See generally SHU GUANG ZHANG, *ECONOMIC COLD WAR: AMERICA'S EMBARGO AGAINST CHINA AND THE SINO-SOVIET ALLIANCE, 1949–1963* (2001) (describing the history and consequences surrounding the U.S. trade embargo against China during the 1950s).

China has long standing concerns about dependence on foreign oil. Internal debate on energy security intensified during the early 2000s.⁶⁴ A study of the internal debate on energy security during the early 2000s suggests that “Chinese analysts consider oil price volatility and physical supply disruptions to be the main threats to energy security.”⁶⁵ “They are especially concerned about the negative impact of oil price fluctuations on China’s economy and social stability.”⁶⁶ Power outages in 2004 were also assessed through the lens of political stability and security. Energy policy formation in China during the 1970s and 1980s was characterized by the fragmentation of authority, according to Kenneth G. Lieberthal and Michel Oksenberg.⁶⁷ In the last two decades, however, growing dependence on the international market has brought the political and strategic considerations back into the policymaking process, which helps reinforce control by the Party and the State Council.⁶⁸ One consequence of such change is the potential for the environmental community to influence the top policy makers.

Second, during the 2000s there was widespread discontent as a consequence of the market reform that brought China further into the global market.⁶⁹ Some of China’s influential policy advisors, such as Justin Yifu Lin, Hu Angang, and Wang Shaoguang, recognized China’s uneven income and wealth distribution problem and recommended policies to balance distribution.⁷⁰ In an article published in the influential journal, *The Chinese Economy*, in 2003, Wang and Hu warned, “[i]n our opinion, the problems that beset China’s current social conditions as a whole are extremely severe, and China is on the brink of once again entering a period of social

63. *Zhong Su guan xi da shi ji (1949–1991)* [*Sino-Soviet Relations Events (1949–1991)*], <http://news.163.com/09/0811/20/5GFBBK0B00013KCL.html> (last visited Sept. 18, 2009) (P.R.C.).

64. Erica S. Downs, *The Chinese Energy Security Debate*, 177 CHINA Q. 21, 34 (2004). Internal debates on energy security started as soon as China became a net oil importer in 1993. *Id.* at 21.

65. *Id.* at 31.

66. *Id.* (citing Lin Yu and Chen Xiaobin, *Nengyuan zhuanjia tan Zhongguo yingdui shiyou anquan de jinmouyuanlue* [*Energy experts discuss short and long-range strategies for China’s oil security*], ZHONGGUO KUANGYE BAO [CHINA MINING NEWS], June 10, 2003, CI; Jiu guoji youjia baozhang yiji guojia shiyou anquan wenti fang Zhongguo shichang jingji yanjiusuo suozhang Chen Huai boshi [Interview with Dr. Chen Huai, Deputy Director of the Market Economy Research Institute about the sharp increase in international oil prices and national oil security], ZHONGGUO JINGJI SHIBAO [CHINA ECONOMIC TIMES], Sept. 20, 2000, CI) (P.R.C.).

67. KENNETH G. LIEBERTHAL & MICHEL OKSENBERG, BUREAUCRATIC POLITICS AND CHINESE ENERGY DEVELOPMENT 17–19 (1987); KENNETH G. LIEBERTHAL & MICHEL OKSENBERG, POLICY MAKING IN CHINA: LEADERS, STRUCTURES, AND PROCESSES 3 (1988). Themes developed in these books were applied to other areas and to the 1980s reform in China. See BUREAUCRACY, POLITICS, AND DECISION MAKING IN POST MAO CHINA 1 (Kenneth G. Lieberthal & David M. Lampton eds., 1992) (discussing fragmentation of authority in the context of 1980s reforms).

68. Philip Andrews-Speed, who worked in the Chinese energy sector during the 1990’s, describes the changes in China since the 1980s. See, e.g., PHILIP ANDREWS-SPEED, ENERGY POLICY AND REGULATION IN THE PEOPLE’S REPUBLIC OF CHINA 51–53 (2004) (discussing “unifying forces” such as the Communist Party and the growing need for consensus among governmental departments).

69. Dali Yang, *Economic Transformation and Its Political Discontents in China: Authoritarianism, Unequal Growth, and the Dilemmas of Political Development*, 9 ANN. REV. OF POL. SCI. 143, 152–53 (2006). Broad social resistance became more visible during this period of time. See, e.g., KEVIN J. O’BRIEN & LIANJIANG LI, RIGHTFUL RESISTANCE IN RURAL CHINA (2006); POPULAR PROTEST IN CHINA 12 (Kevin J. O’Brien ed., 2008).

70. Justin Yifu Lin, *Rebalancing Equity and Efficiency for Sustained Growth, in CHINA’S DILEMMA: ECONOMIC GROWTH, THE ENVIRONMENT AND CLIMATE CHANGE* 90–93 (Ligang Song & Wing Thyee Woo eds. 2008); Angang Hu, *How Will China Build a Well-off Society for All of Its Citizens?*, 30 CHINA BUS. REV. 50, 50–55 (2003); Shaoguang Wang, Angang Hu & Yuanzhu Ding, *The Social Instability Behind the Economic Prosperity*, 36 CHINESE ECON. 5, 5–10 (2003).

instability.⁷¹ They actively engaged in advocacy of a new mode of development, which was in favor of building up China's basic social welfare, more consumption-driven economic growth, and better protection of the environment.⁷² Environmental issues and sustainable development were components of this new developmental strategy. This vision was shared by policy advisors who were even closer to the power center in Beijing. The best example would be that of Yu Keping, Deputy Director of the Central Compilation and Translation Bureau under the Central Committee of the Chinese Communist Party (CCP), an influential theoretician within the establishment, who addressed the question of sustainable development in China.⁷³

Third, since the 1990s there were growing efforts to redefine China's position or identity in global politics. The notion of China's emergence as a responsible big country and its stated ambition to develop its "comprehensive national power" were key sources of national strength.⁷⁴ In connection with these notions, there was increasing unease within China concerning its image as a producer of low-tech products flooding the world markets and China's identification as "the world's workshop."⁷⁵ There was a call for a transition from "made in China" to "designed in China."⁷⁶ There were ambitious plans for the high-tech sectors: the high-speed train, a regional jet program, and 3-G wireless standards, among others.⁷⁷ In these policy discussions, NDRC became an advocate for investing in energy and Green technology. This is a crucial factor because NDRC, since 2003, has become the main

71. Shaogang Wang, et al., *supra* note 70, at 6.

72. See, e.g., Nicholas R. Lardy, *China: Toward a Consumption-Driven Growth Plan*, POL'Y BRIEFS IN INT'L ECON., Oct. 2006, at 1, 4.

73. YU KEPING, *DEMOCRACY IS A GOOD THING: ESSAYS ON POLITICS, SOCIETY AND CULTURE IN CONTEMPORARY CHINA* (2009). Two of the essays in this collection addressed the environment: Chapter 9 ("China's Economic Modernization and Sustainability") and Chapter 10 ("Harmony between Man and Nature: China's Environmental Practice and Challenges").

74. Yongnian Zheng, *Comprehensive National Power: An Expression of China's New Nationalism*, in *CHINA'S POLITICAL ECONOMY* 191, 192-93 (John Wong & Gungwu Wang eds., 1998).

75. *China Bids to Shake Off Image of "World's Workshop"*, DAILY STAR, Feb. 19, 2006, available at <http://www.thedailystar.net/2006/02/19/d60219051154.htm>.

76. See *Innovate or Wait to Perish*, CHINA DAILY, July 11, 2008, available at http://www.chinadaily.com.cn/opinion/2008-07/11/content_6836816.htm (suggesting that China is losing its competitive edge in production, and it needs to expand into innovation as well); Alice Rawsthorn, *China's New Designers: Building On A Rich Heritage Of Innovation*, N.Y. TIMES, Mar. 7, 2008, available at http://www.nytimes.com/2008/03/07/arts/07iht-DESIGN10.html?_r=1&scp=1&sq=china%27s%20new%20designers&st=cse (discussing the transition to "Designed In China").

77. For plans for high-speed trains, see Shirong Chen, *China Unveils High-Speed Railways*, BBC NEWS, Sept. 9, 2009, <http://news.bbc.co.uk/2/hi/8246600.stm>. For plans for the regional jet program, see Xin Dingding, *Homegrown Regional Jet Unveiled*, CHINA DAILY, Dec. 22, 2007, http://www.chinadaily.com.cn/china/2007-12/22/content_6340750.htm. For plans for the 3-G standard, see David Barboza, *China Plans to License 3 Wireless Standards*, N.Y. TIMES, Jan. 1, 2009, at B9, available at <http://www.nytimes.com/2009/01/01/technology/01wireless.html?scp=1&sq=china%20plans%20to%20license%20wireless%20standard&st=cse>; *3G Is Here, Finally*, CHINA DAILY, Jan. 8, 2009, at 1, available at http://www.chinadaily.com.cn/opinion/2009-01/08/content_7377968.htm. Technical standards have become a focal issue in China's recent policy making. E.g., RICHARD P. SUTTMEIER, XIANGKUI YAO & ALEX ZIXIANG TAN, *STANDARDS OF POWER? TECHNOLOGY, INSTITUTIONS, AND POLITICS IN THE DEVELOPMENT OF CHINA'S NATIONAL STANDARDS STRATEGY 1* (2006).

regulatory agency on climate change. Thus, China's official perception on climate change in 2004 had a quiet but decisive shift: from environment to energy policy.⁷⁸

C. *Climate Change Policy Formulated*

Principles of the Central Economic Work Conference were further elaborated in October 2005 at the Party's fifth plenary session of the Sixteenth Central Committee. A plenum is the highest forum within the Party for deliberation and cultivating consensus before a major policy shift is declared to the whole body of the Party. This major policy shift toward social development was embodied in two new slogans: "building a harmonious society" and the "scientific approach to development."⁷⁹ The meeting adopted a detailed proposal as a foundation for the "11th Five-Year Plan" (2006–2010).⁸⁰ The general goal set by the proposal for 2010 was to double the GDP from its 2000 level.⁸¹ In order to achieve this goal, China must improve energy efficiency and reduce energy consumption; for this purpose, China would reduce energy consumption by twenty percent in 2010 from its 2005 level and bring ecological deterioration under control.⁸² In March 2006, the Party submitted the proposal to the legislature, the National People's Congress, which approved it as the "11th Five-Year Plan."⁸³ The Plan also added a target of reducing major pollutants by ten percent from their 2005 levels by the end of 2010.⁸⁴ It further included a general goal that by 2010, "progress be made in greenhouse gas emissions."⁸⁵ The ten percent target was not new as it was also in the earlier 10th Five-Year Plan (2001–2005).⁸⁶ What was new, however, was that the 11th Five-Year Plan explicitly indicated that these targets were binding (*yue shu xing*).

Once the new developmental strategy was formulated by the Party and put into the Five-Year Plan, the cabinet—the State Council headed by Premier Wen Jiabao—was tasked with its implementation. Following the Party's meeting in

78. See Dongsheng Zang, *From Environment to Energy: China's Re-conceptualization of Climate Change*, 27 WIS. INT'L L.J. (forthcoming 2009).

79. POL. BUREAU CENT. COMM., ZHONGGUO GONG CHAN DANG SHI LIU JIE WU ZHONG QUAN HUI GONG BAO [COMMUNIQUÉ OF THE FIFTH PLENARY SESSION OF THE 16TH CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF CHINA] (2005) (P.R.C.), available at http://news.xinhuanet.com/politics/2005-10/11/content_3606215.htm.

80. *New Five-Year Plan to See Revolutionary Changes*, XINHUA, available at http://news.xinhuanet.com/english/2005-10/11/content_3606172.htm.

81. C. Cindy Fan, *China's Eleventh Five-Year Plan (2006–2010): From "Getting Rich First" to "Common Prosperity"*, 47 EURASIAN GEOGRAPHY & ECON. 708, 710 (2006).

82. *Id.* at 710–11.

83. Guo min jing ji he she hui fa zhan de shi yi ge wu nian gui hua gang yao [The Eleventh Five-Year Plan for the Development of National Economy and Society] (promulgated by the Tenth Nat'l. People's Cong. Fourth Session, Mar. 14, 2006) (P.R.C.), <http://www.cctv.com/news/china/20060316/102285.shtml> [hereinafter, The 11th Five-Year Plan] (providing detailed provisions of the Eleventh Five-Year Plan); Fan, *supra* note 81, 710–11.

84. Guan yu "Shi Yi Wu" qi jian quan guo zhu yao wu ran wu pai fang zong liang kong zhi ji hua de pi fu [Approval of the Major Pollutants Emission Control Plan During the "Eleventh Five-Year" Period] (issued by the St. Council, Aug. 5, 2006, effective Aug. 5, 2006) 2006 ST. COUNCIL 70 (P.R.C.), available at http://www.gov.cn/gongbao/content/2006/content_394866.htm; Fan, *supra* note 81, at 711.

85. The 11th Five-Year Plan, *supra* note 83, ch. 3.

86. Guo min jing ji he she hui fa zhan de di shi ge wu nian ji hua (2001–2005) [The Tenth Five-Year Plan for the Development of National Economy and Society (2001–2005)] (promulgated by the Ninth National People's Cong. Fourth Session, Mar. 15, 2001) (P.R.C.).

October 2005, the State Council issued a circular in December entitled “Decision to Carry Out Scientific Approach to Development in Environmental Protection.”⁸⁷ It took up the “scientific approach to development” and “harmonious society” as new guidelines, pushing for structural reform in the economy and shifting the economic growth model. In the meantime, relevant departments and agencies under the State Council began working on the indicators of the targets set in the 11th Five-Year Plan. These departments included the National Development and Reform Commission (NDRC), the State Environment Protection Administration (SEPA), and the State Statistic Bureau. In August 2006, two indicators were chosen to measure the “major pollutants”: sulfur dioxide (SO₂) and chemical oxygen demand (COD).⁸⁸ The goal of a ten percent reduction was interpreted to mean a reduction of sulfur dioxide from 25.49 to 22.94 million tons and a reduction of COD from 14.14 to 12.73 million tons.⁸⁹ Having decided the total target reductions, the State Council allocated quotas to each of the provinces, autonomous regions, and municipalities directly under the Central Government.

In the State Council the most powerful agency is NDRC, which plays a key role in China’s domestic and international climate policy. Within its broad jurisdictions, NDRC is in charge of central economic planning, macro-economic policy, and policies regarding the nation’s energy and natural resources. In June 2007, NDRC issued China’s first policy statement on climate, the “National Climate Change Program.”⁹⁰ As the first official statement, it covered a broad range of issues: endeavors China had taken, the challenges it was still facing, its policy principles and objectives, measures and policies it was prepared to apply, and its basic positions on climate change in the international arena. Despite its breadth, the Program largely defined China’s climate policy through the lens of energy—energy efficiency, conservation, technology, and renewables. It reiterated the target of reducing energy consumption per unit of output value in GDP by twenty percent and set a new target of raising the proportion of renewable energy to ten percent of the primary energy supply by 2010.⁹¹ The biggest institutional innovation in the Program was that the National Leading Group to Address Climate Change was formed, and its office was to be set within NDRC.⁹² The Leading Group is a high-level policy

87. Guan yu luo shi Kexue Fazhan Guan jia qiang huan jing bao hu de jue ding [Decision to Carry out Scientific Approach to Development in Environmental Protection] (promulgated by the St. Council, Dec. 3, 2005, effective Dec. 3, 2005) (P.R.C.), http://202.123.110.3/zwgk/2005-12/13/content_125680.htm.

88. Sulfur dioxide, found in its highest concentration around industrial facilities, is commonly used as an indicator of air quality due to its negative health and environmental effects. Guan yu “Shi Yi Wu” qi jian quan guo zhu yao wu ran wu pai fang zong liang kong zhi ji hua de pi fu [Approval of the Major Pollutants Emission Control Plan During the “Eleventh Five-Year” period] (issued by the St. Council, Aug. 5, 2006, effective Aug. 5, 2006) 2006 ST. COUNCIL 70 (P.R.C.), available at http://www.gov.cn/gongbao/content/2006/content_394866.htm; see, e.g., U.S. Environmental Protection Agency, Report on the Environment, Sulfur Dioxide Emissions, <http://cfpub.epa.gov/eroe/index.cfm?fuseaction=detail.view&ch=46&subtop=341&lv=list.listByChapter&r=188208> (last visited Oct. 31, 2009). Chemical Oxygen Demand (COD) measures the amount of organic matter in water samples and is used to determine the quality of local water sources. See, e.g., Food and Agriculture Organization of the United Nations, http://www.fao.org/gtos/tems/variable_show.jsp?VARIABLE_ID=123 (last visited Oct. 31, 2009).

89. The 11th Five-Year Plan, *supra* note 83.

90. NAT’L. DEV. AND REFORM COMM’N. [NDRC], CHINA’S NATIONAL CLIMATE CHANGE PROGRAM (2007), available at <http://www.china.org.cn/english/environment/213624.htm>.

91. *Id.* pt. 3, § 3.

92. *Id.* pt. 4, § 5.

deliberation and decision-making body chaired by Premier Wen Jiabao and composed mostly of ministers from different departments.⁹³ The choice of NDRC as the Leadership Group's office location suggested NDRC's lead role in shaping climate policy, which in part explains why the National Climate Change Program was so centered on energy.

III. CLIMATE CHANGE AND REGULATORY CHOICE

This part discusses the subsequent choice of regulatory policy in implementing the new developmental strategy decided at the December 2004 Central Economic Work Conference. At the core of the regulatory policy is the closure campaign. However, law enforcement campaigns are not new to the 2000s. In fact, one of the first environmental measures in post-Mao China was the obligatory tree planting campaign.⁹⁴ Are there any alternatives to a closure campaign? Were alternative policy instruments considered and discussed? Section A discusses the political limits on the options in choosing the regulatory tool; it then proceeds, in Section B, to explain the rationales of the key policy-makers for why a closure campaign is attractive. Section C explains how closure campaigns were launched and how they worked in 2007. Section D further explains the internal mechanism of closure campaigns. Finally, Section E looks at the top-down nature of the closure campaigns.

A. *Policy Instruments: Political Limits on Options*

In climate change literature, the two most commonly discussed policy tools to control carbon dioxide are the so-called "cap and trade" and the carbon tax. "Cap-and-trade" is adopted in the American Clean Energy and Security Act (ACES Act)—which passed in the House of Representatives on June 26, 2009, and has yet to be voted upon in the Senate⁹⁵—and the European Union Emission Trading System, which entered into force in 2003.⁹⁶ In China, pilot projects on emission trading of sulfur dioxide, COD, and carbon dioxide had started in the late 1990s.⁹⁷ Environmental exchanges were set up in Beijing and Shanghai in August 2008. However, as China is unwilling to impose a carbon cap on itself, only voluntary trading occurs. Although voluntary trading does happen,⁹⁸ the power of the market

93. *Id.*

94. Lester Ross, *Obligatory Tree Planting: The Role of Campaigns in Policy Implementation in Post-Mao China*, in POLICY IMPLEMENTATION IN POST-MAO CHINA 225, 225–52 (David M. Lampton ed., 1987).

95. American Clean Energy and Security Act, H.R. 2454, 111th Cong. (2009), available at http://energycommerce.house.gov/Press_111/20090515/hr2454.pdf; see also, Steven Mufson, David A. Fahrenthold & Paul Kane, *In Close Vote, House Passes Climate Bill*, WASH. POST, June 27, 2009, at A1; John M. Broder, *House Passes Bill to Address Threat of Climate Change*, N.Y. TIMES, June 27, 2009, at A1.

96. 2003 O.J. (L 275) 32 (establishing a scheme for greenhouse gas emission allowance trading within the community).

97. Richard D. Morgenstern, et al., *Emissions Trading to Improve Air Quality in an Industrial City in the People's Republic of China*, in CHINA'S ENVIRONMENT AND THE CHALLENGE OF SUSTAINABLE DEVELOPMENT 150, 150–79 (Kristen A. Day ed., 2005) (discussing the pilot project at Taiyuan, capital city of Shanxi province, central China).

98. In August 2009, an automobile insurer from Shanghai purchased carbon credits for an amount of Rmb 277,699 (\$40,627) on the Beijing Environment Exchange. Kathrin Hille, *Chinese Group Buys*

force is limited. Since it is not an Annex I country under the Kyoto Protocol, China is not obliged to set a target level for carbon dioxide. It takes full advantage of this status. Despite their ambitious tones and strictly domestic contexts, all the policy statements discussed above deliberately avoided setting specific CO₂ targets. The National Climate Change Program, for example, was largely silent on carbon dioxide, except for the claim that measures taken would reduce CO₂ emission.⁹⁹

For many others, the carbon tax is considered the most effective option for curbing consumption of fossil fuels.¹⁰⁰ Professor Richard N. Cooper suggested in 2004 that China may consider a carbon tax.¹⁰¹ In 2005, the State Council's Development Research Center, joined by NDRC's Energy Institute and the Ministry of Finance's Fiscal Policy Institute, led a carbon tax study.¹⁰² Pan Yue, the Deputy Minister of SEPA, wrote an article for a national newspaper in 2007, suggesting a "green taxation" regimen be introduced in China.¹⁰³ Early in 2009, the Ministry of Finance initiated some studies on the taxation scheme together with the Ministry of Environment Protection (MEP).¹⁰⁴ But the issue became a political one when the United States contemplated imposing a carbon tax on imports in its climate change

Voluntary Carbon Credits, FIN. TIMES, Aug. 6, 2009, <http://www.ft.com/cms/s/0/6ee11240-82a0-11de-ab4a-00144feabd0.html>; *Carbon Markets in China: Verdant?*, ECONOMIST, Aug. 22, 2009, at 66.

99. CHINA'S NATIONAL CLIMATE CHANGE PROGRAM, *supra* note 90, pt. 3, § 3.

100. Richard N. Cooper, *Toward a Real Global Warming Treaty*, FOREIGN AFF., Mar.–Apr. 1998, at 66, 74 ("For problems such as reducing emissions, the favorite instrument of economists is to tax the offending activity."); see, e.g., N. Gregory Mankiw, *A Missed Opportunity on Climate Change*, N.Y. TIMES, Aug. 9, 2009, at BU04 (critiquing the cap-and-trade design in President Obama's climate change bill); William D. Nordhaus, *After Kyoto: Alternative Mechanisms to Control Global Warming*, AM. ECON. REV., May 2006, at 31 (advocating tax- or price-based regimes); Richard N. Cooper, *The Case for Charges on Greenhouse Gas Emissions* (Harvard Project on Int'l Climate Agreements, Discussion Paper No. 08-10, 2008), <http://belfercenter.ksg.harvard.edu/files/CooperWeb4.pdf> (last visited Sept. 17, 2009) (advocating a worldwide tax on greenhouse gas emissions); William D. Nordhaus, Sterling Professor of Econ., Yale Univ., Economic Issues in Designing a Global Agreement on Global Warming, Keynote Address at the Climate Change: Global Risks, Challenges, and Decisions Conference at Copenhagen (Mar. 10–12, 2009), available at http://nordhaus.econ.yale.edu/documents/Copenhagen_052909.pdf (arguing for a harmonized global carbon tax). Dr. James Hansen, NASA scientist, has been a longtime advocate of carbon tax. See *Carbon Tax & 100% Dividend vs. Tax & Trade: Hearing on Scientific Objectives for Climate Change Legislation Before H. Comm. on Ways and Means*, 111th Cong. 1 (2009) (testimony of James E. Hansen, Goddard Inst. for Space Studies, NASA), available at <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=7847> (arguing the economic benefit to a tax on carbon emissions).

101. See Richard N. Cooper, *A Carbon Tax in China?* (August 2004) (unpublished paper, available online at http://environment.harvard.edu/docs/faculty_pubs/cooper_carbon.pdf) (evaluating whether China is likely to implement a carbon tax, and discussing the economic impact of such a tax).

102. This study was continued in 2006 and became part of a bigger research project led by the Development Research Center, "A Study on Design and Implementation of Energy Tax in China." ZHONGGUO KE CHI XU NENG YUAN—SHI SHI SHI YI WU 20% JIE NENG MU BIAO DE TU JING YU CUO SHI YAN JIU [A STUDY OF APPROACHES AND METHODS TO MEET CHINA'S 20% ENERGY EFFICIENCY TARGET FOR 2010] 271, 271–352 (2008) (P.R.C.).

103. Pan Yue, *Economic Policies Can Control Polluters*, CHINA DAILY, Sept. 19, 2007, at 10, available at http://www.chinadaily.com.cn/opinion/2007-09/19/content_6117513.htm.

104. One recent such study was led by the Fiscal Policy Institute under the Ministry of Finance, joined by the Ministry of Environment Protection and State Administration of Taxation. See *Dui Zhongguo shi shi tan shui yu neng yuan zheng ce fa gui de tao lun* [Discussions on Policies and Regulations of Imposing Carbon Tax and Energy Tax in China], ZHONGGUO NENG YUAN JIN RONG WANG [WORLD ENERGY FINANCE NETWORK], Apr. 26, 2009 (P.R.C.), http://www.wefweb.com/news/2009426/0853244434_0.shtml.

bill.¹⁰⁵ China regarded this move as trade protectionism.¹⁰⁶ Domestically, the idea of a carbon tax was explicitly rejected in June 2009 by NDRC.¹⁰⁷

Both the cap-and-trade and carbon tax policies are incentive-based instruments.¹⁰⁸ Incentive-based instruments are not a foreign idea in China; for example, they are applied in the Renewable Energy Act of 2005 (REA),¹⁰⁹ but with limited success. Following the example of similar statutes in the West, the REA recognizes a wide range of incentives necessary to encourage investment in renewable energy: (a) guaranteed access to power grids;¹¹⁰ (b) purchase of electricity produced at a price that is conducive to the development of renewable energy;¹¹¹ (c) a renewable energy development fund;¹¹² (d) low-interest loans;¹¹³ and (e) tax benefits.¹¹⁴ The REA acknowledges the importance of incentives; however, it does not bet solely on the market mechanism. Most of its promises are vague and ambiguous at best—for example, it is up to the State Council to decide the exact price that electricity producers can charge.¹¹⁵ In practice, the price is often low and can barely cover the producers' costs.¹¹⁶ Pricing reform has been called for and

105. America's Energy Security Trust Fund Act of 2009, H.R. 1337, 111th Cong. (2009).

106. Alan Beattie & Kathrin Hille, *China Joins Carbon Tax Protest*, FIN. TIMES, July 3, 2009, available at http://www.ft.com/cms/s/0/76f0e4b0-67fc-11de-848a-00144feabdc0.html?nclink_check=1. The signal was sent earlier in March 2009, when U.S. Energy Secretary Steven Chu said during a Congressional hearing that the United States should impose a carbon tax on imported products if other countries do not implement similar policies. See *Emission Tariff Proposal Rapped*, CHINA DAILY, Mar. 20, 2009, at 1 (discussing China's response to Chu's statement that the United States would be at a disadvantage if it limited carbon emissions, while other countries did not follow suit); see also Press Release, Comm. on Science and Technology Republican Caucus, S&T Republicans Question Secretary Chu on Future of U.S. Energy, (Mar. 17, 2009) (describing how, in response to questions from Republican Congressmen, Secretary Chu stated that the United States would consider taxing carbon imports from China if China failed to implement its own emission reduction policy).

107. See Ding Qingfen, *Carbon Tariff "an Excuse" to Protect Trade*, CHINA DAILY, July 4, 2009, at 1 (quoting a Ministry of Commerce statement denouncing the proposed carbon tariff as "trade protectionism in the name of protecting the environment"); Zhang Jianping, *Carbon Tax's Smoke and Mirrors*, CHINA DAILY, Aug. 24, 2009, at 4 (arguing that carbon tax being contemplated by the United States in its Clean Energy and Security Act is an act of provocation that will spur a trade war, and imposes undue onus on developing countries). China was joined by India on the attack on protectionism. See Amy Kazmin, *India Lambasts "Pernicious" U.S. Carbon Tariffs*, FIN. TIMES, June 30, 2009 (discussing India's objection to the import taxes as "trade penalties"); NDRC: *China Will Not Consider a Carbon Tax Currently*, <http://www.quamnet.com/newscontent.action?articleId=1257472>.

108. See Tom Tietenberg, *Economic Instruments for Environmental Regulation*, in ECONOMICS OF THE ENVIRONMENT: SELECTED READINGS 279, 279–80 (Robert N. Stavins ed., 2005) (discussing how an economic incentive approach to environmental regulation allows environmental goals to be accomplished more cheaply and easily than strategies that reject market forces).

109. See generally Ke zai sheng neng yuan fa [Renewable Energy Act] (P.R.C.), *supra* note 35 (according to Article 24 the state will provide funds to support activities related to promoting renewable energy; Article 26 provides tax incentives to programs included in the Guidance Directory for Renewable Energy Industry).

110. *Id.* art. 14.

111. *Id.* art. 19.

112. *Id.* art. 24.

113. *Id.* art. 25.

114. *Id.* art. 26.

115. Qiang Wang, Huan-Ning Qiu, & Yaoqiu Kuang, *Market-Driven Energy Pricing Necessary to Ensure China's Power Supply*, 37 ENERGY POL'Y 2498, 2500–01 (2009).

116. Zhang Peidong, et al., *Opportunities and Challenges for Renewable Energy Policy in China*, 13 RENEWABLE & SUSTAINABLE ENERGY REV. 439, 445 (2009); Judith A. Cherni & Joanna Kentish, *Renewable Energy Policy and Electricity Market Reforms in China*, 35 ENERGY POL'Y 3616, 3620–22 (2007).

promised for many years, but the steps have been slow and limited.¹¹⁷ This is because a change in pricing policy would not only have complicated impacts on energy, but also on the economy as a whole, making it a politically sensitive issue.

Incentivizing technological upgrades in the vast energy, steel, cement, and other industries in China would be difficult without a functional market mechanism. But it is also questionable whether technology upgrades could be a workable solution even with market incentives in place. A study conducted by the State Council's Development Research Center, with assistance from NDRC's Energy Institute, explored the ways to achieve energy efficiency in great detail.¹¹⁸ It noted that while technology offers great potential in the long term, its short term contribution to energy efficiency—for the purpose of meeting the targets of 2010—would be limited.¹¹⁹ In general, technology could contribute 30 percent of energy savings by the end of 2010, which is about 520 million tons of coal equivalence (tce).¹²⁰ To facilitate technological improvement, the study recommended, it would be necessary to use the government's administrative power to shut down the obsolete production capacity in some key sectors, such as steel and thermal power.¹²¹ This type of government action seems more in line with the sense of great urgency displayed in the socio-political sphere. In March 2007, Premier Wen Jiabao admitted in his annual report to the legislature that the emission reduction plan for the year 2006 (the first year of the 11th Five-Year Plan) did not succeed: energy intensity only decreased 1.2 percent, COD increased 1.2 percent, and SO₂ increased 1.8 percent.¹²² The Premier highlighted that various levels of government must strictly implement environmental standards. In order to reduce energy consumption, the Premier announced, the government must accelerate the elimination of the so-called “backward production capacity” (*luo hou chan neng*), i.e., small-scale and low-tech

117. Cherni & Kentish, *supra* note 116, at 3617. See ANDREWS-SPEED, *supra* note 68, chs. 12, 14 (describing the government's efforts to reform and restructure the state electrical power sector, and discussing whether those efforts have been enough to protect consumers); Julie Walton, *Power Politics: China Must Push Through Reforms in Its Energy Sector, Especially Price Reform*, CHINA BUS. REV., Sept.–Oct. 2005, at 8–14, available at <http://www.chinabusinessreview.com/public/0509/walton.html>.

118. ZHONGGUO KE CHI XU NENG YUAN—SHI SHI SHI YI WU 20% JIE NENG MU BIAO DE TU JING YU CUO SHI YAN JIU [A STUDY OF APPROACHES AND METHODS TO MEET CHINA'S 20% ENERGY EFFICIENCY TARGET FOR 2010] (2008) (P.R.C.).

119. See Zhang Xiliang, Li Zheng & He Jiankun, *An Analysis of the Functions of Sustainable Energy Technology*, in ZHONGGUO KE CHI XU NENG YUAN—SHI SHI SHI YI WU 20% JIE NENG MU BIAO DE TU JING YU CUO SHI YAN JIU [A STUDY OF APPROACHES AND METHODS TO MEET CHINA'S 20% ENERGY EFFICIENCY TARGET FOR 2010], 185, 266–68 (2008) (P.R.C.) (describing how technology will be beneficial in the long term, but to a lesser extent in the short term, to improve energy efficiency).

120. *Id.* at 268.

121. See Feng Fei, *General Report on Approaches and Methods to Meet the Target of 20% Energy Saving during the 11th Five-Year Plan Period in Sustainable Energy*, in ZHONGGUO KE CHI XU NENG YUAN—SHI SHI SHI YI WU 20% JIE NENG MU BIAO DE TU JING YU CUO SHI YAN JIU [A STUDY OF APPROACHES AND METHODS TO MEET CHINA'S 20% ENERGY EFFICIENCY TARGET FOR 2010] 1, 16–17 (2008) (suggesting that policies on shutting down the obsolete production capacity in sectors such as steel, thermal, etc. are “necessary and correct” but need improvement).

122. Premier Wen Jiabao, Report on the Work of the Government, Address at the Tenth National People's Congress (Mar. 5, 2007), printed in PEOPLE'S DAILY, Mar. 6, 2007, available at http://www.chinadaily.net/china/2007-03/17/content_830171.htm; see Jim Yardley, *Chinese Premier Focuses on Pollution and the Poor*, N.Y. TIMES, Mar. 5, 2007, at A1 (observing how Premier Wen's address included China's “plans to shut down ‘backward’ steel and iron foundries and inefficient, polluting power plants”).

steel and iron foundries and inefficient, polluting power plants.¹²³ Specifically, Premier Wen indicated a total of 50 megawatts worth of that capacity from small-scale thermal power generators must be closed down during the 11th Five-Year Plan period; in 2007 alone, 10 megawatts of generating capacity worth of thermal power generators must be shut down.¹²⁴ In the steel sector, 100 million tons of such capacity must be eliminated, including 55 million tons for the year 2007.¹²⁵ The Premier also listed other sectors, including cement, electrolytic aluminum, ferrous alloy, coke, and calcium carbide.¹²⁶

B. *Regulatory Choice and Regulatory Agencies*

Using law enforcement campaigns was also in the interests of key players in the bureaucratic and economic structure. The two regulatory agencies most involved in the campaigns were the National Development and Reform Commission (NDRC) and the Ministry of Environmental Protection (MEP). Despite their differences on other issues, both NDRC and MEP had vested interests in law enforcement campaigns.

NDRC was a regulatory agency in charge of energy policy through its subordinate, the National Energy Administration. Given its deeply embedded interests in the energy sector, NDRC's predecessor, the State Planning Commission, was not enthusiastic about climate change negotiations in the 1980s and early 1990s.¹²⁷ However, under the new development strategy, NDRC saw opportunities in the prospect of huge investment and subsidies to the new energy sector, i.e., wind, solar, and nuclear power. There would also be opportunities to restructure and upgrade the existing coal and coal-burn power sector. NDRC also has an Energy Research Institute, one of the most influential think tanks on energy and climate issues.¹²⁸

Under NDRC, China's electric power industry was dominated by five power corporations and two power grid corporations (State Grid Corporation of China and China South Power Grid Co.), which are all state-owned.¹²⁹ The five power

123. Premier Wen Jiabao, *supra* note 122 ("Industrial restructuring proceeded slowly, while growth in heavy industry, especially in sectors that are high in energy consumption or are highly polluting, was still overheated. Many backward production facilities that should have been closed down are still in operation.").

124. *Id.* pt. 3 ("We plan to close down small thermal power plants with total power generating capacity of 50 million kilowatts during the Eleventh Five-Year Plan period. The target for this year is to close down small plants with a total capacity of 10 million kilowatts.").

125. *Id.* ("In addition, we plan to close down backward iron foundries with total production capacity of 100 million tons and backward steel mills with total production capacity of 55 million tons during the same five-year period . . .").

126. *Id.*

127. See Elizabeth Economy, *Two Front Diplomacy*, *supra* note 25, at 27–28 (discussing the positions of the Ministry of Energy and the State Planning Commission); Lester Ross, *The Politics of Environmental Policy in the People's Republic of China*, 20 POL'Y STUD. J. 628, 637 (1992) (noting the positions of the State Planning Commission and the Ministry of Finance in the debate on global warming).

128. The Energy Research Institute of National Development and Reform Commission, http://www.eri.org.cn/e_index1.asp?columnid=41&title=What's%20New (last visited Oct. 25, 2009). See also, Elizabeth Economy, *Two Front Diplomacy*, *supra* note 25, at 28 (referencing the Energy Institute as a part of NDRC).

129. Chunbo Ma & Lining He, *From State Monopoly to Renewable Portfolio: Restructuring China's Electric Utility*, 36 ENERGY POL'Y 1697, 1703 (2008).

conglomerates (the “Big Five”) include: Huaneng Group, Datang Group, Huadian Corporation, Guodian Group, and China Power Investment Corporation, each serving a distinct geographical area of the country. In terms of accumulated installation capacity, the Big Five accounted for 38.8 percent in 2006,¹³⁰ and up to 44.9 percent by the end of 2008.¹³¹ The Big Five have their competitors below the national level: power plants which are State-owned but operated by provincial or county-level governments (45.0% in 2006; 39.5% in 2008), as well as private power plants and foreign invested power plants (6.2% in 2006; 5.1% in 2008).¹³² They also compete with the Big Five for coal. This competition is a big factor in an economy that is overwhelmingly dependent on coal as the primary source of energy—in 2008, 80.9 percent of the electricity was produced by coal-burning power plants.¹³³

In 1998, in the wake of the worldwide economic slowdown, an electricity oversupply prompted a campaign to shut down small-sized thermal power units: all power generators below 25 megawatts by the end of 1999 and all those below 50 megawatt by 2003.¹³⁴ In April 2002, when the Big Five was just formed, the State Council announced that China’s electric power industry had entered into an era of “big generators and big grid,” and thus decided to launch another campaign targeting 135 megawatt power generators.¹³⁵ In July 2004, the Big Five complained about competition for coal and asked the State Council to take action.¹³⁶ In November 2004, when NDRC was troubled by the “disorderly” power plant projects, it proposed to the State Council closing down small and unauthorized power plants.¹³⁷ Similarly, in the coal sector, the state’s “macro policy” to close down the local and small coal mines during the 2000s was at least partially motivated by an attempt to protect large state-owned mines from competition from the local and private mines.¹³⁸

130. STATE ELECTRICITY REGULATORY COMM’N [SERC], ANNUAL REPORT ON ELECTRICITY REGULATION (2006) 3 (2007), [hereinafter SERC Report 2006]

131. STATE ELECTRICITY REGULATORY COMM’N [SERC], ANNUAL REPORT ON ELECTRICITY REGULATION (2008) 6 (2009) [hereinafter SERC Report 2008].

132. *Id.*

133. Calculated based on figures provided in SERC Report 2008, *supra* note 131, at 12 (hydraulic power, 16.41%; wind power, 0.37%; nuclear power, 2.00%). In 2006, those figures were thermal power, 83.17%, hydraulic power, 14.70%, nuclear power, 1.92%. SERC Report 2006 *supra* note 130, at 10.

134. Zhuan fa Guojia Jing Mao Wei guan yu ting xiao huo dian ji zu you guan wen ti yi jian de tong zhi [Circular on State Economic and Trade Commission’s Opinions on Shutting Down Small Thermal Power Units] (promulgated by the Gen. Off. St. Council, May 15, 1999, effective May 15, 1999) 1999 GEN. OFFICE STATE COUNCIL 44 (P.R.C.); Barbara A. Finamore & Tauna M. Szymanski, *Taming the Dragon Heads: Controlling Air Emissions from Power Plants in China—An Analysis of China’s Air Pollution Policy and Regulatory Framework*, 32 ENVTL. L. REP. 11,439, 11,441 (2002). The State Economic and Trade Commission (SETC) was abolished in March 2003, and NDRC was created around the same time. WTO Secretariat, *Trade Policy Review: People’s Republic of China*, 58, WT/TPR/S/161 (Feb. 28, 2006), available at www.wto.org/english/tratop_e/tpr_e/s161-2_e.doc - 2006-04-19.

135. Guan wu yan ge jin zhi wei gui jian she 13.5 wan qian wa ji yi xia huo dian ji zu de tong zhi [Department of State Notice Concerning Ban on Construction of Power Generators Under 135 Megawatts], Apr. 15, 2002 (P.R.C.).

136. Wu da dian li ji tuan lian ming shang shu guo wu yuan pi shi ping yi mei dian mao dun [Five Major Electric Companies Petition Department of State Concerning Coal Price Raise], CHINA INT’L BUS. TIMES (P.R.C.), July 26, 2004.

137. Guo wu yuan pi zhuan fa zhan gai ge wei guan wu jian jue zhi zhi dian zhan xiang mu wu xu jian she yi jian de jin ji tong [Department of State’s Notice of Approval of NDRC’s Stopping of Unruly Proliferation of Power Plants], Nov. 24, 2004 (P.R.C.).

138. Fubing Su, *The Political Economy of Industrial Restructuring in China’s Coal Industry, 1992–*

The other regulatory agency interested in law enforcement campaigns is the Ministry of Environmental Protection (MEP).¹³⁹ As the national regulatory agency in charge of environment protection, the MEP has overwhelming responsibility but not the corresponding personnel, financial resources, or political influence.¹⁴⁰ The MEP is a result of efforts taken to strengthen the environmental regulatory structure as a whole. MEP was set up in March 2008 and enjoys a higher status compared with its predecessor, the State Environment Protection Administration (SEPA).¹⁴¹ Because of its limits, MEP can hardly regulate big players like the Big Five, who are the biggest polluters. A July 2009 Greenpeace study found that in 2008 the top three Chinese power corporations together emitted more than the total greenhouse gas emissions of Great Britain in the same year.¹⁴² On the local level, the situation is no better. The local environmental protection bureaus (EPBs) are often underfunded and poorly equipped and are ineffective in implementing national environmental laws.¹⁴³ Largely controlled by local governments who are driven by economic growth, the local EPB officials only pay lip-service to the environment.¹⁴⁴

1999, in *HOLDING CHINA TOGETHER: DIVERSITY AND NATIONAL INTEGRATION IN THE POST-DENG ERA* 226, 227 (Barry Naughton & Dali Yang eds., 2004).

139. Press Release, Ministry of Environmental Protection, The 11th Five-Year Plan for the Building of National Capacity in Environmental Supervision Approved, (Apr. 15, 2008), http://english.mep.gov.cn/News_service/news_release/200804/t20080421_121447.htm. (last visited Nov. 3, 2009).

140. Gang He, *China's New Ministry of Environmental Protection Begins to Bark, but Still Lacks in Bite*, *EARTHTRENDS*, July 17, 2008, <http://earthtrends.wri.org/updates/node/321>. (last visited Nov. 3, 2009).

141. China.org.cn, Ministry of Environmental Protection Launched, http://www.china.org.cn/2008-03/28/content_13743766.htm (last visited Nov. 3, 2009).

142. GREENPEACE CHINA, *POLLUTING POWER: RANKING CHINA'S POWER COMPANIES 4* (2009), available at <http://www.greenpeace.org/raw/content/china/en/press/reports/power-ranking-report.pdf>; see also Tania Branigan, *China's Three Biggest Power Firms Emit more Carbon than Britain, Says Report*, *GUARDIAN*, July 29, 2009, at 16.

143. Barbara J. Sinkule and Leonard Ortolano have conducted detailed studies of environmental law enforcement in Pearl River Delta areas in southern China in the early 1990s. They found that local environmental protection bureaus (EPBs) were dependent on revenues collected from local firms (such as those of the pollutant discharge fees) to finance their own activities and bureaucratic expansion. Thus, the EPBs developed a close and symbiotic relationship with the local firms, and the EPBs' interest in "law enforcement" was largely to keep the local firms paying the fees, rather than providing economic incentives for industry to adopt better practice. In other words, the local EPBs played a "double agent" role in the implementation game just as bureaucrats in other countries. See BARBARA J. SINKULE & LEONARD ORTOLANO, *IMPLEMENTING ENVIRONMENTAL POLICY IN CHINA* 9–10, 158–59 (1995). Barbara J. Sinkule and Leonard Ortolano suggested what they observed in China resembled that observed by other scholars, such as Eugene Bardach. See generally EUGENE BARDACH, *THE IMPLEMENTATION GAME* (1977) (tables and ideas throughout are referenced by Sinkule and Ortolano throughout their book mentioned above). See also, Wanxin Li, *Environmental Governance: Issues and Challenges*, 36 *ENV'T L. REP.* 10,505, 10,521–22 (2006) (discussing environmental problems, policy responses, and the work that remains); ORG. FOR ECON. COOPERATION & DEVELOPMENT [OECD], *ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT IN CHINA: AN ASSESSMENT OF CURRENT PRACTICES AND WAYS FORWARD* (2006) (OECD survey of the environmental regulatory framework and enforcement in China); Elizabeth C. Economy, *The Great Leap Backward? The Costs of China's Environmental Crisis*, 86 *FOREIGN AFF.* 38, 50–53 (Sept.–Oct. 2007) (discussing lack of effective law enforcement on local levels). In March 2005, SEPA and Environmental Defense Fund conducted a survey on the effectiveness of environment law enforcement in China. LU XIN-YUAN, DANIEL J. DUDEK, ET AL., *CHINA ENVIRONMENTAL GOVERNANCE ANALYSIS FROM THE PERSPECTIVE OF CAPACITY OF ADMINISTRATIVE ENFORCEMENT IN CHINA*, CHINA COUNCIL OF INTERNATIONAL COOPERATION AND ENVIRONMENTAL DEVELOPMENT, ENVIRONMENTAL GOVERNANCE TASK FORCE, available at <http://www.cet.net.cn/new/english/EG-case%20study-enforcement-en.pdf>.

144. Yanqi Tong, *Bureaucracy Meets the Environment: Elite Perceptions in Six Chinese Cities*, 189

Thus, national campaigns are also a policy tool for the MEP to mobilize political resources in order to overcome resistance from big players or bureaucratic inertia on local levels.¹⁴⁵ From 1996 to 2001, SEPA undertook a so-called “fifteen smalls” campaigns which targeted fifteen small-scale firms such as paper mills (annual output 5000 tons or below), tanneries (30,000 hides or below), dye works (annual output 500 tons or below), small coal mines, thermal power plants, cement factories, etc.¹⁴⁶ SEPA reported that during 1996–2000 (the Ninth Five-Year Plan), about 84,000 such small firms were shut down as a result of this campaign, which “effectively reduced the total amount of pollutants.”¹⁴⁷ From 2001 to 2004, more than 30,000 heavy-polluting or resource-wasting firms were declared obsolete.¹⁴⁸ More than 1,900 projects in polluting sectors such as steel and iron, cement, chemical, etc. were stopped or postponed.¹⁴⁹

C. Law Enforcement: Campaign Style

In 2005, closure campaigns resulted in the shutdown of more than 2,600 plants in the cement, textile, paper-making, steel, and iron sectors.¹⁵⁰ In December 2005, the State Council issued “Provisional Regulations on Facilitating Industrial Restructuring” (Regulations).¹⁵¹ In the Chinese legal system a regulation issued by the State Council has the binding force of law.¹⁵² The Regulations reiterated that a

CHINA Q. 100, 114 (2007); Gabriella Montinola, Yingyi Qian & Barry R. Weingast, *Federalism, Chinese Style: The Political Basis for Economic Success in China*, 48 *WORLD POL.* 50 (1995).

145. Benjamin van Rooij witnessed the law enforcement campaigns between 2001 and 2004 in the city of Kunming, Yunnan Province and observed that national campaigns provided local EPB officials the opportunity to bargain with local governments as well as polluters. Benjamin van Rooij, *Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns*, 37 *DEV. & CHANGE* 57, 65–66 (2006).

146. Guo wu yuan guan yu huan jing bao hu ruo gan wen ti de jue ding [Decision on Several Issues on Environmental Protection], Aug 3, 1996 (P.R.C.), available at http://news.xinhuanet.com/ziliao/2005-03/14/content_2696239.htm. In January 1999, the SETC published a list of the “obsolete production capacity.” See State Economic & Trade Commission (SETC), *Guo shi sheng chang liang de mu lu, gong ye guo cheng he chan pin* [Catalogue of Obsolete Production Capacity, Industrial Processes and Products], Jan. 22, 1999 (P.R.C.), available at <http://beian.hndrc.gov.cn/1%5B1%5D.htm>; SETC published a second list in December 1999, available at <http://beian.hndrc.gov.cn/2%5B1%5D.htm>; and a third one in June 2002, available at <http://beian.hndrc.gov.cn/3%5B1%5D.htm>.

147. Miao Hong, *China Battles Pollution Amid Full-speed Economic Growth*, Embassy of the People's Republic of China in the Czech Republic, Nov. 20, 2006, <http://www.mfa.gov.cn/ce/cecz/cze/rdzt/srocps/t276973.htm>. See also Bai pi shu you guan yu zhong guo de huan jing bao hu 1996–2005 [White Paper on China's Environmental Protection 1996–2005] pt. II (issued by the Info. Off. State Council June 5, 2006) (P.R.C.), available at <http://daxinganling.china.com.cn/english/MATERIAL/170403.htm> (explaining Chinese strategies for the prevention and control of industrial pollution).

148. INFO. OFF. OF THE STATE COUNCIL (P.R.C.), ENVIRONMENTAL PROTECTION IN CHINA (2006) (P.R.C.), available at <http://daxinganling.china.com.cn/english/MATERIAL/170403.htm>.

149. *Id.*

150. *Id.*

151. Cu jin chan ye jie gou tiao zheng zan xing gui ding [Provisional Regulations on Facilitating Industrial Restructuring] (promulgated by State Council, Dec. 2, 2005, effective on Dec. 2, 2005) 2005 STATE COUNCIL 40 (P.R.C.), available at http://www.sdpc.gov.cn/zcfb/zcfbqt/zcfb2005/t20051222_54302.htm.

152. Li fa fa [Legislation Law] (promulgated by the Nat'l. People's Cong., Mar. 15, 2000, effective July 1, 2000) 2000 NAT'L PEOPLE'S CONG. 31 arts. 9, 11 (P.R.C.) (giving authority to the National People's

compulsory closure policy would be enforced against those low-tech, energy-consuming, and heavily-polluting firms, industrial processes, or products.¹⁵³

NDRC was actively engaged in closure campaigns in 2007.¹⁵⁴ Pressure was mounting inside NDRC: in March 2007, the Premier was forced to acknowledge that the goal for 2006 was not achieved, and in July, NDRC publicized the nation's first national program on climate change. On January 20, 2007, this policy of compulsory closure became more formalized as "promoting the big and quashing the small" (*shang da ya xiao*) when the State Council endorsed another of NDRC's closure proposals.¹⁵⁵ "Promoting the big" refers to bigger (typically with capacity of 600 megawatts) and more efficient power plants employing supercritical (SC) or ultra-supercritical (USC) technology.¹⁵⁶ An April 2009 joint report by the International Energy Agency (IEA) and the Organization for Economic Cooperation and Development (OECD) suggests that about ninety-five SC or USC units with a capacity of 600 megawatts or more had been put into operation by mid-2007, with another seventy units due for commissioning before 2010.¹⁵⁷ However, the IEA/OECD report notes that the share in total coal-fired generation capacity of all types of SC plants is about twelve percent, significantly smaller than the United States' thirty percent.¹⁵⁸ Thus, it appeared to NDRC officials that "quashing the small" was still necessary to achieve the restructuring goal. A national conference was quickly convened on the issue of "promoting the big and quashing the small" in the electricity sector.¹⁵⁹ Chen Deming, then Deputy Minister of NDRC, pressed the provincial electric utility officials and executives from the Big Five and the two

Congress (NPC) and its Standing Committee to authorize the State Council to formulate administrative regulations; Article 11 provides that the NPC or its Standing Committee can make a law replacing the regulation); see also Laura Paler, *China's Legislation Law and the Making of a More Orderly and Representative Legislative System*, 182 CHINA Q. 301 (June 2005) (describing and commenting on the background of the Law on Legislation); see generally Li Yahong, *The Law-making Law: A Solution to the Problems in the Chinese Legislative System?*, 30 HONG KONG L.J. 120 (2000) (discussing the symbolic, rather than practical, role of the Law on Legislation).

153. Provisional Regulations on Facilitating Industrial Restructuring, *supra* note 151, art. 9.

154. Estelí Reyes, *Challenges for Effective Policy Implementation Toward a Sustainable Coal Sector in China* 27 (China Environmental Science & Sustainability (CESS): UBC-Research Group, Working Paper No. 1, 2007), <http://www.iar.ubc.ca/centres/ccr/ccresearchandpublications/researchprojects/cess/cessworkingpapers/tabid/248/itemid/43/default.aspx>.

155. Guo wu yuan pi zhuan fa zhan gai ge wei neng yuan ban guan yu jia kuai guan ting xiao huo dian ji zu ruo gan yi jian de tong zhi [Circular on Approval of National Development and Reform Commission and Energy Office's Opinions on Shutting Down Small-Scale Thermal Power Plants] (issued by the St. Council, Jan. 20, 2007, effective Jan. 20, 2007) ST. COUNCIL 2 (P.R.C.), available at http://www.gov.cn/zwgk/2007-01/26/content_509911.htm.

156. See INT'L ENERGY AGENCY [IEA] & ORG. FOR ECON. COOPERATION & DEV. [OECD], CLEANER COAL IN CHINA 101 (2009) [hereinafter CLEANER COAL IN CHINA] ("[A]mong new power generation projects, 600 megawatt units now dominate," and "about 60% of the new-builds in China are supercritical units"); see also Keith Bradsher, *China Outpaces U.S. in Cleaner Coal-Fired Plants*, N.Y. TIMES, May 11, 2009, at A1, available at <http://www.nytimes.com/2009/05/11/world/asia/11coac.html> (suggesting that some of the new thermal power plants built in China can achieve an efficiency of 44%, while the most efficient plants in the United States achieve around 40% efficiency).

157. CLEANER COAL IN CHINA, *supra* note 156, at 101.

158. In comparison, the IEA/OECD report notes that the share of supercritical units in coal-fired generation capacity is about 70% in Japan and 30% in the United States. *Id.*

159. See *China to Close Small Power Generating Units in Four Years*, PEOPLE'S DAILY, Jan. 30, 2007, http://english.people.com.cn/200701/30/print20070130_345910.html (recounting that representatives from the power industry and over 30 provinces attended a meeting in which they signed documents confirming their intent to close small power-generating plants).

power grids to sign individual undertakings that they would close down small power plants under their control.¹⁶⁰

During the law enforcement campaign period, NDRC most actively deployed the narrative that new generators (mostly owned by the “Big Five”) represent efficiency and environmental responsibility, while small and locally-controlled generators were identified with pollution, the wasting of natural resources, and disruption of the State’s plans. NDRC senior officials repeatedly justified campaigns in environmental terms. If all the electricity generators with small capacity were to be replaced by the higher capacity generators, 90 million tons of coal could be saved, and 1.8 million tons of SO₂ and 220 million tons of CO₂ could be reduced every year.¹⁶¹

In November 2007, the “11th Five-Year Plan on Environmental Protection,”¹⁶² jointly prepared by NDRC and SEPA, was approved by the State Council. SEPA is also engaged in its own environmental law enforcement campaigns.¹⁶³ In June 2008, the Ministry of Environmental Protection, which succeeded SEPA in March, announced that total emissions of SO₂ in 2007 had been brought under control.¹⁶⁴ Zhou Shengxian, Minister of the MEP, attributed the “success” in part to the law enforcement campaigns, stating that the “reductions were achieved by the application of the pollution control measures, as well as the closure of some outdated plants that consumed too much energy.”¹⁶⁵ By July 2008, statistics on this particular campaign on thermal generators were compiled in a “Release on Closing of Small Thermal Generators in the Year 2007.”¹⁶⁶ It showed that a total of 553 generator

160. Zhang Yi, *Jie neng jiang hao 20% mu biao you ci tu po* [Conserving Energy and Reducing Consumption Starts from Here], GUANGMING DAILY (P.R.C.), Jan. 30, 2007, at 5, available at http://www.gmw.cn/01gmr/2007-01/30/content_543139.htm.

161. Chen Deming, Vice Minister of the Nat’l. Dev. & Reform Comm’n., Jin yi bu tui jin ‘cu jin da he che xiao xiao’, guan che jiang di neng yuan xiao hao yu pai fang de ren wu [Further Push Forward ‘Promoting the Big and Quashing the Small’, Carry out the Task of Reducing Energy Consumption and Emissions], speech (Mar. 5, 2007), http://zys.ndrc.gov.cn/wldzyjh/t20070305_119751.htm [hereinafter Deming].

162. Guo wu yuan guan yu yin fa guo jia huan jing bao hu “Shi Yi Wu” gui hua de tong zhi [Notice on the Issuance of the Eleventh Five-Year Plan on Environmental Protection] (issued by the St. Council, Nov. 22, 2007, effective Nov. 22, 2007) 2007 ST. COUNCIL 37 (P.R.C.), available at http://www.gov.cn/zw/gk/2007-11/26/content_815498.htm.

163. In September 2007, in order to curb pollution of the Tai Lake, Wuxi city closed down 1,340 polluting factories. See Ariana Eunjung Cha, *In China, a Green Awakening: City Clamps Down on the Polluting Factories That Built Its Economy*, WASH. POST, Oct. 6, 2007, at A1. In northern China’s Liaoning province, the provincial government closed down 225 firms along Liao River in April, and another 42 paper mills in July 2008. *Where to Start to Control Liaohe Basin Pollution? Liaoning further Closes Down Papermills*, CHINA ENV’T NEWS (P.R.C.), July 31, 2008, at 1.

164. Luo Changping, *Beijing Battles for Blue Sky Olympics*, CAIJING MAGAZINE, Oct. 9, 2007, available at <http://english.caijing.com.cn/2007-10-09/100032851.html> (“Beijing decision-makers are most concerned about airborne particulates and ozone, which are among the five, critical ingredients for determining air quality levels. The others — carbon monoxide, sulfur dioxide and nitrogen dioxide — are considered well under control.”); see also Keith Bradsher, *China Reports Declines in 3 Major Pollutants, Reversing Trend*, N.Y. TIMES, June 6, 2008, at A12 (reporting that total emissions of sulfur dioxide declined by 4.66% in 2007, reversing the trend of 2006).

165. *New Green Measures “Reaping Rewards”*, CHINA DAILY, Nov. 19, 2008, available at http://www.chinadaily.com.cn/cndy/2008-11/19/content_7217467.htm.

166. 2007 nian du guan ting xiao huo dian ji zu qing kuang tong bao [Release on Closing of Small Thermal Generators in the Year 2007] (issued by St. Elec. Reg. Comm’n and Nat’l. Dev. & Reform Comm’n, July, 2008) ST. ELEC. REG. COMM’N. AND DEV. & REFORM COMM’N. (P.R.C.) [hereinafter,

units had been shut down in 2007 with a total capacity of 14.38 megawatts, which was more than the plan had provided.¹⁶⁷ Among these generators, seventy-nine percent were coal-fired generators.¹⁶⁸ Most of the generators were aged ones, with forty-seven percent of them (193 units) being more than thirty years old; and the average age of the units was twenty-seven years old.¹⁶⁹ The Release claims the campaign was a great success: the 2007 campaigns reduced an equivalent of 1.88 million tons of standard coal, which resulted in reduction of 290,000 tons of SO₂ and 37.60 million tons of CO₂ emissions.¹⁷⁰ Encouraged by the new development, the MEP, NDRC, and six other regulatory agencies convened a special national conference in July 2008, where it was concluded that law enforcement campaigns would continue for another five years.¹⁷¹

Campaigns in 2007 were not limited to the electricity sector. In 2007, the government announced their plan for phasing out “backward production facilities” in thirteen industries by 2010. The plan included the elimination of “46.59 million tons of obsolete iron-smelting capacity, 37.47 million tons of steelmaking capacity and 52 million tons of cement production capacity.” The government also ordered the shutdown of “[m]ore than 2,000 heavily polluting papermaking plants, chemical plants, and printing and dyeing mills . . . [and] 11,200 small coal mines.”¹⁷²

D. *Regulatory Choice and the Politics of Governance*

What are the regulatory techniques to achieve “success”? As discussed above, political considerations imposed limits on the regulatory instruments that may otherwise be available. Both cap-and-trade and carbon tax are rejected by reason of international politics. Other regulatory instruments were proposed and favorably considered by SEPA before and during the law enforcement campaigns, but they were rejected as well. A key factor in a successful regulatory design is the degree to which different stakeholders are brought into the regulatory or enforcement process.¹⁷³

SERC & NDRC, “Release” (2008)].

167. *Id.*

168. *Id.*

169. *Id.*

170. *Id.*

171. Press Release, Ministry of Environment Protection P.R.C., State Council’s Eight Departments Convened at the National Environment Protection Campaign Tele-conference (July 10, 2008).

172. ST. COUNCIL INFO. OFF., CHINA’S POLICIES AND ACTIONS FOR ADDRESSING CLIMATE CHANGE 21 (2008) (Beijing), available at <http://www.ccchina.gov.cn/WebSite/CCChina/UpFile/File419.pdf>.

173. See generally NEIL GUNNINGHAM & PETER GRABOSKY, SMART REGULATION: DESIGNING ENVIRONMENTAL POLICY 93–134 (1998) (discussing the importance of including various non-governmental parties in the regulatory process). I am grateful to my colleagues Professors Veronica Taylor and Jane Winn for recommending the book and sharing their thoughts with me. See generally DAVID VOGEL, NATIONAL STYLES OF REGULATION: ENVIRONMENTAL POLICY IN GREAT BRITAIN AND THE UNITED STATES (1986) (comparing regulatory styles of the environmental policies of the United States and Great Britain); SUSAN ROSE-ACKERMAN, CONTROLLING ENVIRONMENTAL POLICY: THE LIMITS OF PUBLIC LAW IN GERMANY AND THE UNITED STATES (1995) (comparing the regulatory styles of the environmental policies of the United States and Germany); ROBERT A. KAGAN, ADVERSARIAL LEGALISM: THE AMERICAN WAY OF LAW (2001); Gjalt Huppes & Robert A. Kagan, *Market-Oriented Regulation of Environmental Problems in the Netherlands*, 11 LAW & POL’Y 215 (1989). For a more sociological study of the relationship between environmental regulation and social movement, see generally JOHN S. DRYZEK, ET AL., *supra* note 23.

The first example of a successful regulatory design was the “Green GDP” experiment between 2004 and 2007. The World Bank and United Nations Environment Program (UNEP) supported the effort. In fact, the World Bank concluded that a conservative estimate of total air and water pollution costs was \$54 billion a year, or roughly eight percent of GDP in its 1997 report *Clear Water, Blue Skies*.¹⁷⁴ Starting in 2004, SEPA worked with the National Bureau of Statistics of China (NBS) on Green National Accounting (also known as “Green GDP”).¹⁷⁵ In September 2006, SEPA and NBS jointly issued China’s first report on the impact of the environment on the economy entitled “China Green National Accounting Study Report 2004.”¹⁷⁶ The report, which involved forty-one areas of investigation, revealed that pollution caused losses of 511.8 billion yuan in 2004, accounting for 3.05 percent of the GDP that year.¹⁷⁷ The report was met with fierce opposition from local officials and, perhaps more fatal, skepticism from NDRC and other agencies on the national level. NDRC expressed explicit skepticism of the practicality of Green GDP by publishing an article in 2004 entitled “The Concept, Methodology and Practice of Green GDP” in *China Economic Trade Herald*, a journal controlled by NDRC itself.¹⁷⁸ By early 2007, some local governments had withdrawn from pilot experiments with Green GDP, and hope for adopting it was fading.¹⁷⁹ Environmentalists at the All-China Environment Federation (a national NGO backed by SEPA) appealed to NDRC for help.¹⁸⁰

Second, SEPA worked on and pushed for a law passed in 2002 called the Environmental Impact Assessment Act (EIAA),¹⁸¹ which explicitly requires that

174. WORLD BANK, *CLEAR WATER, BLUE SKIES: CHINA’S ENVIRONMENT IN THE NEW CENTURY* 23 (1997). The report devoted a whole chapter on the valuation of environmental costs, available at http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1997/09/01/000009265_3980203115520/Rendered/PDF/multi_page.pdf.

175. Chinese Government’s Official Web Portal, Gov.cn, Green GDP Accounting Study Report 2004 Issued, http://www.gov.cn/english/2006-09/11/content_384596.htm.

176. STATE ENV’T. PROT. AGENCY [SEPA] & NAT’L. BUREAU OF STATISTICS [NBS], A STUDY REPORT ON CHINA ENVIRONMENTAL AND ECONOMIC ACCOUNTING IN 2004, <http://www.caep.org.cn/english/paper/China-Environment-and-Economic-Accounting-Study-Report-2004.pdf>.

177. *Id.* at 11.

178. The article was published in the name of NDRC’s subordinate Division of National Economy, which is responsible for monitoring and analyzing domestic macro-economy and macro-economic forecast. Lü Se GDP de gai nian fang fa he shi jian [*The Concept, Methodology and Practice of Green GDP*], 16 ZHONGGUO JIN MAO DAO KAN [CHINA ECONOMIC TRADE HERALD] (2004), available at <http://www.eedu.org.cn/Article/es/envir/edevelopment/200804/24431.html>. Elizabeth Economy, *China From The Inside: Opinion: Green GDP*, transcript available at <http://www.pbs.org/kqed/chinainside/nature/greengdp.html> (last visited Aug. 6, 2009) (discussing oppositions from local governments).

179. Lü se GDP zao yu zu li ru he hua jie [*How to Resolve the Resistance to Green GDP*], BEIJING NEWS, Dec. 11, 2006, available at <http://news.qq.com/a/20061211/000239.htm>.

180. Zhong hua huan bao lian he hui fu mi shu zhang Li Hengyuan: yong lv se GDP lai kao cha zheng ji [China Environment Federation Vice Secretary-General Li Hengyuan: to examine the performance using green GDP], Interview by China.com.cn with Li Hengyuan, Deputy Secretary-General, All-China Environment Federation (ACEF), in Beijing, P.R.C. (June 29, 2007), http://webcast.china.com.cn/webcast/created/1333/91_1_0101_desc.htm.

181. Huan jing ying xiang ping jia fa [Environmental Impact Assessment Act] (promulgated by the Standing Comm. Nat’l. People’s Cong. Oct. 28, 2002, effective Sept. 1, 2003) 2002 STANDING COMM. NAT’L. PEOPLE’S CONG. 77 (P.R.C.); Zhang Yong, *Controls on Construction Pollution to Tighten*, CHINA DAILY, Mar. 2, 2002. The basic statute, the Environmental Protection Act of 1989, does not prescribe any opportunity for the public to be involved in the EIA process; rather, EIA was solely dependent on the local EPB’s review of the EIA report. Huan jing bao hu fa [Environmental Protection Act] (promulgated by the Standing Comm. Nat’l. People’s Cong., Dec. 26, 1989, effective Dec. 26, 1989) 1989 STANDING COMM.

public hearings or other forms of consultation be held to seek comments from the general public and interested parties. In late 2004 SEPA launched high-profile campaigns in order to publicize EIAA. A more high-profile event occurred in January 2005, when SEPA issued an order to halt thirty large-scale hydraulic and thermal power projects for not having met environmental impact assessment requirements. SEPA's actions became known as the "environmental storm."¹⁸² Between 2005 and 2007, SEPA initiated three rounds of "environmental storms."¹⁸³ Despite all the publicity, however, SEPA remains a politically weak government agency with limited resources. An incident in Xiamen City, southern China, occurred in the midst of the "environmental storms."¹⁸⁴ In 2006, NDRC approved a \$1.4 billion dollar chemical factory in Xiamen.¹⁸⁵ When local residents found out, they challenged the project, claiming it violated the EIAA. They even appealed to SEPA for help, but SEPA was able to offer little assistance to the residents.¹⁸⁶ It was only after a surprising collective action—millions of cell phone text messages—that local government started organizing public hearings. In January 2009, the chemical project was relocated.¹⁸⁷

Thus, in the domestic context, SEPA was not able to push through the regulatory instruments it favored.¹⁸⁸ Bureaucratically, this only reveals the fact that

NAT'L. PEOPLE'S CONG. 22 (P.R.C.); *Environmental Protection Law of the People's Republic of China* (1989), 37 CHINESE L. & GOV'T. 58–65 (May/June 2004). In November 2004, SEPA issued a specific regulation on the EIA approval process to implement the EIAA. Gui ding you guan yu huan jing ying xiang ping gu de xing wei shou ze [Provisions on Code of Conduct for Environmental Impact Assessment] (issued by the St. Envtl. Protection Agency Nov. 23, 2005) (P.R.C.).

182. Ching-Ching Ni, *China Environment Agency Takes On Giant Dam Corporation*, L.A. TIMES, Feb. 3, 2005, at A3; CRISIS AND BREAKTHROUGH OF CHINA'S ENVIRONMENT 3–18 (Liang Congjie & Yang Dongping eds. 2007); Jian Yang, *Understanding China's "Environmental Protection Storm,"* 30 N.Z. INT'L REV. 17 (2005).

183. Thomas R. Johnson, *New Opportunities, Same Constraints: Environmental Protection and China's New Development Path*, 28 POLITICS 93, 97 (2008).

184. Edward Cody, *Text Messages Giving Voice to Chinese: Opponents of Chemical Factory Found Way around Censors*, WASH. POST, June 28, 2007, at A1. Inside China, the incident was widely reported by mainstream media, which played a key role in pressing the local governments. See, for example, *Xiamen PX xiang mu: Xu jian, ting jian hai shi qian jian* [*Xiamen PX Project: Should It be Suspended, Postponed, or Relocated?*], REN MIN RI BAO [PEOPLE'S DAILY] (P.R.C.), Dec. 19, 2007, at 5, available at <http://news.sina.com.cn/c/2007-12-19/044314552686.shtml>.

185. Jianguo Liu & Jared Diamond, *Revolutionizing China's Environmental Protection*, SCIENCE, Jan. 4, 2008, at 38.

186. It is reported that SEPA officials met representatives of the Xiamen residents on March 14, 2007, and indicated that SEPA could not help them because the project had been approved by NDRC. *Xiamen PX Project May Turn Sour, Some Say It Is an Asymmetrical Game*, CHINA ECON. TIMES, June 6, 2007, available at http://gov.ce.cn/china/gy/200706/09/t20070609_11669340.shtml. Earlier, in 2003 and 2004, during the Nu River controversy, SEPA had a brief "alliance" with environmental NGOs. See Yanfei Sun & Dingxin Zhao, *Multifaceted State and Fragmented Society: Dynamics of Environmental Movement in China*, in DISCONTENTED MIRACLE: GROWTH, CONFLICT, AND INSTITUTIONAL ADAPTATIONS IN CHINA 111, 132–44 (Dali L. Yang ed. 2007) (detailing the SEPA-ENGO alliance during the Nu River Controversy).

187. Zhang Xin & Hu Meidong, *PX Plant Cleared, to Shift to Zhangzhou*, CHINA DAILY, Jan. 14, 2009, http://www.chinadaily.com.cn/cndy/2009-01/14/content_7394303.htm; Andrew Jacobs, *Chinese Chemical Plant Site Moves after Outcry*, N.Y. TIMES, Jan. 15, 2009, at A9, available at <http://www.nytimes.com/2009/01/15/world/asia/15fujian.html>.

188. SEPA also worked with China Insurance Regulatory Commission in promoting "environmental liability insurance." Sun Xiaohua, *Polluters Urged to Buy Green Insurance*, CHINA DAILY, Feb. 19, 2008, at 3; Yue, *supra* note 103. In December 2008, *China Environment News*, the newspaper controlled by MEP, reported the first successful settlement in Hunan between victims of pollution (120 villagers) and local

NDRC is playing a more decisive role in shaping China's climate change policy. The regulatory instrument chosen in the campaigns was rather a more direct control mechanism—the cadre system. “Cadre” (*ganbu*), a transplant from the early Soviet bureaucratic system, is broader than civil service. It covers a wide range of personnel with administrative responsibilities in the government, the Communist Party, and state-owned enterprises (SOEs).¹⁸⁹ Cadres are essentially controlled from above. Personnel promotion, dismissal, transfers (between levels of government, such as province to county), etc., are, like the price signal in the market for the merchant, the basic driving force in the bureaucratic structure. During the three decades of reform, the most crucial decision-making criterion used by top leadership to evaluate cadres has been GDP, i.e., economic performance. Thus the cadre evaluation system became the dynamic of China's economic liberalization.¹⁹⁰ One key measure during the law enforcement campaigns, discussed earlier, was to add specific closure targets to the cadres of different levels, and then use those targets to measure the performance of each cadre. Thus, one fundamental method used to measure cadre performance during the law enforcement campaigns, discussed above, was to assign the cadres specific closure targets at different levels, and then use those targets to gauge the performance of each cadre. The Big Five are all state-owned, thus their executives are also cadres who are subject to the disciplines of the cadre evaluation system. In his March 2007 speech, Chen Deming instructed provincial officials to put closure plans on the agenda and use the targets provided in the undertakings as bases for evaluation purposes.¹⁹¹ On a more general level, energy efficiency and emission reduction were also broken down into individual targets for each province, municipality, and SOE under the central government. The State Council in “General Working Program for Energy Conservation and Emission Reduction,” a program drafted by NDRC, made it clear that energy conservation and emission reduction would be integral parts of the evaluation criteria for assessing the performance of cadres.¹⁹² Furthermore, the State Council granted the

chemical and non-ferrous factories that were covered by environment liability insurance in a pilot project. *Quan guo shou li huan jing wu ran ze ren xian huo pei* [Nation's First Environment Pollution Compensation Covered by Insurance], ZHONGGUO HUAN JING BAO [CHINA ENVIRONMENT NEWS] (P.R.C.), Dec. 1, 2008, available at http://www.cenews.com.cn/hbgov/news/200908/t20090819_621747.html. But it is unclear, from the vantage point of mid-2009, whether there is any chance that “environmental liability insurance” will be formally adopted soon.

189. Kjeld Erik Brødsgaard, *China's Cadres and Cadre Management System*, in *DAMAGE CONTROL: THE CHINESE COMMUNIST PARTY IN THE JIANG ZEMIN ERA* 209, 209–31 (Gungwu Wang & Yongnian Zheng eds. 2003); Susan Whiting, *The Cadre Evaluation System at the Grassroots: The Paradox of Party Rule*, in *HOLDING CHINA TOGETHER: DIVERSITY AND NATIONAL INTEGRATION IN THE POST-DENG ERA* 101, 101–19 (Barry Naughton & Dali Yang eds., 2004).

190. Maria Edin, *State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective*, 173 *CHINA Q.* 39 (2003); Maria Heimer, *The Cadre Responsibility System and the Changing Needs of the Party*, in *THE CHINESE COMMUNIST PARTY IN REFORM* 122, 122–38 (Kjeld Erik Brødsgaard & Yongnian Zheng eds., 2006); See Deming, *supra* note 161 (describing how the cadre evaluation system now includes assessing whether government officials have succeeded in promoting the big and squashing the small to improve energy efficiency).

191. Deming, *supra* note 161.

192. Guan yu yin fa jie neng jian pai zong he xing gong zuo fang an de tong zhi [Notice on the General Working Program for Energy Conservation and Emission Reduction] (promulgated by the St. Council, June 3, 2007, effective June 3, 2007) 2007 ST. COUNCIL 15 (P.R.C.).

NRDC “veto power” (*yipiao foujue*), which meant that a cadre would fail his/her job if he/she did not do well on energy conservation and emission reduction.¹⁹³

A law enforcement campaign is chosen as the regulatory instrument because it serves political functions. First, it is a convenient tool that can serve the immediate purpose of lowering energy consumption more quickly than market forces or technological advances. In this aspect, climate change policy is just another example of China’s crisis-driven governance style. Second, it has enormous symbolic value, both domestically and internationally. Third, a campaign is also an opportunity to consolidate power and tighten control. All of these elements were on full display during one event in the campaign: two 100-Megawatt generator units were demolished in January 2007, at Anyang City, Henan province in central China. It was called the “first explosion” in the 2007 campaign.¹⁹⁴ Quickly, newspapers in other provincial capitals across the country started reporting their own first explosions.¹⁹⁵

E. *The Regulatory Climate and Its Persistence*

The law enforcement campaigns under the new developmental strategy are an integral part of China’s general regulatory climate in the 2000s. This is a period of time in which China is experiencing the coming of a “risk society”—food safety crisis, environment pollution, pandemic, poor working conditions, financial frauds in the securities market.¹⁹⁶ Law enforcement campaigns were instituted in response to these crises to crack down on crimes and shut down illegal factories, unsafe coal mines, and outdated electricity generators.¹⁹⁷ The general pattern of crisis-driven governance is a theatrical state, with a great deal of continuity with previous law enforcement campaigns.¹⁹⁸ The Party-State manages to stay in power by performing these political dramas. Often law enforcement campaigns as a regulatory instrument are not one-shot games. They are typically launched in response to an earlier crisis and followed by a declaration of victory. The victory is not the conclusion of the

193. *Id.*

194. SERC & NDRC, “Release” (2008), *supra* note 166, pt II.

195. See Official Website of Anhui, China, First Explosion for Emission Reduction of Anhui, June 25, 2007, <http://apps.ah.gov.cn/govstruct/showcontent.asp?newsid=853> (last visited Nov. 5, 2009) (describing how the demolition of two 50,000 kilowatt thermal power plants on June 22, 2007 signified the implementation of emission reduction plans in the Anhui, China).

196. Austin Ramzy, *Will China’s New Food-Safety Laws Work?* TIME, Mar. 3, 2009; Carin Zissis, *China’s Environmental Crisis*, WASH. POST, Aug. 7, 2008; Jonathan Schwartz & R. Gregory Evans, *Causes of Effective Policy Implementation: China’s Public Health Response to SARS*, 16 J. CONTEMP. CHINA 195, 195–213 (2007); Sean Cooney, *Making Chinese Labor Law Work: The Prospects for Regulatory Innovation in the People’s Republic of China*, 30 FORDHAM INT’L L.J. 1050, 1050–1053 (2007); Yang Zhen, *Audit Uncovers 6b Yuan in Financial Fraud*, CHINA DAILY, Feb. 19, 2009. For an exploration of the “risk society” theory see ULRICH BECK, *RISK SOCIETY: TOWARDS A NEW MODERNITY* (Mark Ritter trans., 1992) (1986).

197. See, e.g., China.org, 213 Factories Shut Down for Heavy Pollutions, Oct. 6, 2006, <http://china.org.cn/English/environment/183013.htm>; *Three Killed, Three Injured in NE China Mine Blast*, XINHUA, May 19, 2007, http://news.xinhuanet.com/English/2007-05/19/content_6122650.htm; *China power coal reserves in major plants hit new high*, XINHUA, Sept. 20, 2008, http://news.xinhuanet.com/English/2008-09/20/content_10083682.htm.

198. Cf. Andrew J. Nathan, *Authoritarian Resilience*, 14 J. DEMOCRACY 6, 7–9 (2003) (comparing China’s history of dramatic power transfers with recent times: “Never before in PRC history has there been a succession whose arrangements were fixed this far in advance, remained so stable to the end, and whose results so unambiguously transferred power from one generation of leaders to another.”).

campaign but merely a break before the next campaign is started. A claim of success anticipates the beginning of a new round of campaigns, perhaps on an even larger scale.

Along with the closure campaigns came an aggressive investment in new technology or new areas such as renewable energy, mostly by state-owned firms such as the Big Five. After the Central Economic Work Conference in 2004 investments and subsidies were poured into hydraulic power, solar, wind, biomass, clean coal technology, etc.¹⁹⁹ In 2007, when it was actively engaged in closure campaigns described above, NDRC issued an ambitious “Mid- and Long-term Development Plan for Renewable Energy” in September,²⁰⁰ specifying targets for each new energy source and investment plan. By the end of the year, total investment in renewable energy reached \$12 billion,²⁰¹ second only to the United States. Among the renewable energy sources, wind power got so much attention that China has doubled its installed capacity every year since 2004. In 2008, China again doubled its installed capacity by adding about 6.3 GW to reach a total of 12.2 GW, making China the fourth highest ranked nation in the world in terms of wind power installed capacity.²⁰² A recent example is that a 10 GW wind farm in Jiuquan, Gansu Province, northwest China, has just started construction.²⁰³ In July 2009, NDRC announced revised and more ambitious targets under which renewable energy is expected to account for ten percent of the country’s energy resources by 2010 and fifteen percent by 2020.²⁰⁴ In August 2009, even in the midst of global economic recession, the government announced that more than 15 percent of the country’s 4 trillion yuan (\$586 billion) stimulus package will be spent on cutting carbon emissions by the end of 2010.²⁰⁵

In an era in which all the attention of climate change diplomacy is focused on targets and timetables, the numbers from China impressed foreign observers. The Climate Group, a London-based NGO, hailed China’s domestic energy policy as a “Clean Revolution.”²⁰⁶ In some of the progressive and climate-conscious newspapers

199. Zhang, et al., *supra* note 116, at 440–44 (discussing financial and tax policy developed in this period to encourage renewable energy).

200. Guan yu yin fa ke zai sheng neng yuan zhong chang qi fa zhan gui hua de tong zhi [Notice on Issuing the Mid- and Long-Term Development Plan for Renewable Energy] (promulgated by the Nat’l. Dev. & Reform Comm’n., Aug. 31, 2007, effective Aug. 31, 2007) 2007 NAT’L. DEV. & REFORM COMM’N. 2174 (P.R.C.).

201. Press Release, The Climate Group, China Unleashes Clean Revolution (July 31, 2008), http://www.theclimategroup.org/news_and_events/china_unleashes_clean_revolution/.

202. GLOBAL WIND ENERGY COUNCIL (GWEC), GLOBAL WIND 2008 REPORT 9 (2009); *see also* Xia Changliang & Song Zhanfeng, *Wind Energy in China: Current Scenario and Future Perspectives*, 13 RENEWABLE & SUSTAINABLE ENERGY REV. 1966, 1967 (2009) (stating that China has made “pronounced leaps” in its wind power capacity, ranking fifth internationally in 2007).

203. Zhang Qi, *China’s First of 7 Mega Wind Farms Ready to Start Rolling*, CHINA DAILY, July 07, 2009, at 13, *available at* http://www.chinadaily.com.cn/cndy/2009-07/07/content_8885497.htm.

204. Fu Jing, *China Considers Higher Renewable Energy Targets*, CHINA DAILY, July 06, 2009, *available at* http://www.chinadaily.com.cn/bizchina/2009-07/06/content_8380826.htm.

205. Fu Jing & Li Xiaokun, *Billions from Stimulus Tagged to Cut Emissions*, CHINA DAILY, Aug. 6, 2009, at 1, *available at* http://www.chinadaily.com.cn/cndy/2009-08/06/content_8530262.htm.

206. Julian Borger & Jonathan Watts, *China Launches Green Power Revolution to Catch up on West*, GUARDIAN, June 10, 2009, *available at* <http://www.guardian.co.uk/world/2009/jun/of/china-green-energy-solar-wind>. From 2008 to 2009, the Climate Group published two reports on China’s developments in energy efficiency and renewable energy. THE CLIMATE GROUP, CHINA’S CLEAN REVOLUTION (2008); CHINA’S CLEAN REVOLUTION II, *supra* note 46. Former British Prime Minister Tony Blair went to China

in the West, sensational headlines appeared, such as “China is catching up!” Tony Blair, former British Prime Minister who leads the Climate Group, visited China and praised China’s energy policy, knowing his comments would be used by the official media in China as a message of assurance to the world.²⁰⁷ Missing in the headlines is the governance component in the discussion of “risk society,” which is a central argument in the “ecological modernization” movement led by Ulrich Beck, Anthony Giddens, Gert Spaargaren, Arthur P.J. Mol, Frederick H. Buttel, and others.²⁰⁸ For Beck, risks in the West become “the motor of . . . self-politicization . . . in industrial society,” organized in the form of the welfare state.²⁰⁹ This “self-politicization” is the ultimate shift towards a “new political culture” where citizens are mobilized in social movements, which is all part of the “unbinding of politics.”²¹⁰ This process is in line with the more sociological theory used by John S. Dryzek and his colleagues in their study of the link between social movements and the “green states” (countries that adopt environment-friendly policies).²¹¹ Dryzek found that social movements are the necessary radical driving force pushing forward Green policy. Dryzek and colleagues compared the United States, Germany, Norway, and Great Britain. They found that, in the United States since the 1980s, major national NGOs have become “professionalized” and too focused on federal policy, thus losing connection with their grassroots social movements.²¹² Germany maintained an active Green public sphere and social movement, which served the necessary pressure and transformative power in its relations with the state.²¹³

At the core of “ecological modernization” theory is neither capital nor technology, but governance. Beck’s genius is that he saw risks, a threat ubiquitous in modern social life, as the ultimate “motor”—a renewable energy—for bringing life to governance in the political process. Thus, Beck’s notion of “risk” is totally in line with the Daoist notion of “*weiji*”— which means danger (*wei*) and opportunity (*ji*).

on behalf of the Climate Group to meet with Premier Wen Jiabao to discuss China’s new target goals. See Mark Hughes, *China, U.S. Committed, Says Blair*, CHINA DAILY, Aug. 21, 2009, at 2, available at http://www.chinadaily.com.cn/cndy/2009-08/21/content_8596971.htm (Blair believes that the Chinese leadership is committed tackling the climate crisis and to reaching an agreement in Copenhagen).

207. See Hughes, *supra* note 206 (quoting Tony Blair’s comments noting China’s commitment to addressing climate change).

208. See BECK, *supra* note 196, at 230–31 (suggesting that with the ecological modernization movement, new intermediate forms of mutual governance are a superior alternative to a “guiding political control center”); ANTHONY GIDDENS, *THE POLITICS OF CLIMATE CHANGE* 211, 226 (2009) (arguing for the return of multilateralism and “coalitions of the willing” in pursuit of climate change adaptation); Gert Spaargaren et al., *Introduction: Globalization, Modernity and the Environment*, in *THE ENVIRONMENT AND GLOBAL MODERNITY* 1 (Gert Spaargaren et al., eds., 2000) (explaining that emerging local-global relationships that are a byproduct of globalization, force the redefining of concepts and prove that the nation-state is no longer the starting point for social systems); Arthur P.J. Mol & Gert Spaargaren, *Environment, Modernity and the Risk-society: The Apocalyptic Horizon of Environmental Reform*, 8 INT’L SOC. 431, 433, 439–56 (1993) (discussing Beck’s “Risk Society” and the modernization of the environment and environmental concerns).

209. BECK, *supra* note 196, at 183–84 (discussing the formation of politics in the West) (emphasis deleted).

210. *Id.* at 185, 195–99.

211. DRYZEK, ET AL., *supra* note 23.

212. DRYZEK, ET AL., *supra* note 23, at 95–96; MARK DOWIE, *LOSING GROUND: AMERICAN ENVIRONMENTALISM AT THE CLOSE OF THE TWENTIETH CENTURY* 4–5 (1995); Frederick H. Buttel, *Globalization, Environmental Reform, and U.S. Hegemony*, in *GOVERNING ENVIRONMENTAL FLOWS: GLOBAL CHALLENGES TO SOCIAL THEORY* 157, 157–84 (Gert Spaargaren, Arthur P. J. Mol & Frederick H. Buttel eds. 2006).

213. DRYZEK, ET AL., *supra* note 23, at 96–99.

But governance is the victim of the authoritarian law enforcement campaigns. Cadre evaluation is a mechanism within the Party's or government's decision-making process. It is neither subject to judicial review,²¹⁴ nor open to the general public. In the process, climate change policy is decided by a government agency that is more interested in energy, and has thus framed the issue from that point of view. The goal of energy conservation and efficiency was further narrowed down to specific targets and numbers; in the campaigns, these numbers were further broken down into quotas for each province, municipality, and SOE. Bureaucratic centralization exerted complete control. In terms of substance, NDRC's climate policy was more centered on capital and technology. But this does not mean that governance can be ignored. Campaigns become a self-fulfilling prophecy; in response to environmental crises, law enforcement campaigns are justified by their short-term "success." But because real problems are not addressed, more crises follow, and more campaigns are launched in response. The logic of law enforcement campaigns not only denies its own failure, but also demands its return, again and again.

IV. CONCLUSION

The new developmental strategy, developed in the Central Economic Work Conference in December 2004, represented a dramatic shift in China's conceptualization of climate change.²¹⁵ Having recognized the challenges to China's key strategic interests—security in energy supply, food production, and domestic stability—China took a decisive step in improving energy efficiency and reducing emissions. The primary policy maker, both in terms of design and implementation, was the powerful NDRC, which is also in charge of the nation's energy policy.²¹⁶ This essay analyzes how the regulatory measures—closure campaigns—were chosen and employed to meet the targets of energy efficiency and emission reductions. In doing so, this essay aims to demonstrate, on a more general level, an internal logic of China's crisis-driven governance: in a crisis situation, the policymaker needs a quick and deliverable solution, which makes top-down closure campaigns the preferred choice. Other regulatory instruments—a carbon tax, cap-and-trade, "Green GDP," and stronger public participation in the environment impact assessment process—are discussed and considered favorably by the Ministry of Environment and other regulatory agencies, and thus are potentially available options. But these alternatives are consistently turned down by NDRC.²¹⁷

The closure campaign in China can be considered a theatrical representation of a mentality that is focused on Green as a goal while ignoring Green as a process. But China is not unique. After all, Green as a process is a threat to vested interests everywhere. In the United States, after the House of Representatives narrowly

214. Xing zheng cheng xu fa [Administrative Procedure Law] (Administrative Litigation Act (ALA)) art. 12 (promulgated by the Nat'l. People's Cong., Apr. 4, 1989, effective Oct. 1, 1990) 1989 NAT'L. PEOPLE'S CONG. 16 (P.R.C). On the limits of ALA in China, see Xixin Wang, *Administrative Procedure Reforms in China's Rule of Law Context*, 12 COLUM. J. ASIAN L. 251 (1998); Randall Peerenboom, *A Government of Laws: Democracy, Rule of Law and Administrative Law Reform in the PRC*, 12 J. CONTEMP. CHINA 45, 54–58 (2003); Minxin Pei, *Citizens v. Mandarins: Administrative Litigation in China*, 152 CHINA Q. 832 (1997).

215. *Supra*, Part II, Section B.

216. *Supra*, Part II, Section C.

217. *Supra*, Part III, Sections A, D.

passed the ACES Act in June 2009,²¹⁸ interest groups representing coal and oil attempted to sabotage the democratic process by faking their own identities.²¹⁹ Nor is Green as a process getting much attention in the international arena where climate diplomacy is exclusively focused on targets and timetables.²²⁰ This is especially true as the Copenhagen Conference is approaching.²²¹ Climate diplomacy, intensive as it is, is all about deals and negotiations based on targets and timetables, while Green as a process is often forgotten.

218. American Clean Energy and Security Act, *supra* note 95; PEW CENTER ON GLOBAL CLIMATE CHANGE, THE AMERICAN CLEAN ENERGY AND SECURITY ACT (WAXMAN-MARKEY BILL), <http://www.pewclimate.org/acesa> (last visited Sept. 19, 2009) (discussing the margin with which the act was passed).

219. Stephanie Strom, *Coal Group is Linked to Fake Letters on Climate Bill*, N.Y. TIMES, Aug. 5, 2009, at A12 (a trade group representing coal producers and power companies indirectly hired a lobbying firm that sent fake letters to lawmakers purporting to be from nonprofit groups opposed to the climate change bill); Stephanie Strom, *More Fake Letters to Congress on Energy Bill*, N.Y. TIMES, Aug. 19, 2009, at A18 (a lobbying firm, claiming to be a charity, sent letters that expressed opposition to climate legislation to members of congress); David A. Fahrenthold, *Oil Group's "Citizen" Rally Memo Stirs Debate*, WASH. POST, Aug. 16, 2009 (a petroleum industry trade group asked oil companies to recruit employees and retirees to attend rallies attacking climate change legislation); Clifford Krauss & Jad Mouawad, *Oil Industry Backs Protests of Emissions Bill*, N.Y. TIMES, Aug. 19, 2009, at B1 (a public relations firm hired by a pro-coal industry group forged letters opposing new climate change laws, purporting the letters to be from such groups as the NAACP and Hispanic organizations).

220. Daniel Bodansky believes that the exclusive focus on targets and timetables in climate change negotiations is based on a view that the stalemates are a collective action problem. Daniel Bodansky, *Targets and Timetables: Good Policy but Bad Politics?* in ARCHITECTURE FOR AGREEMENT: ADDRESSING GLOBAL CLIMATE CHANGE IN THE POST-KYOTO WORLD 57–66 (Joseph E. Aldy & Robert N. Stavins eds., 2007) (commenting on Jeffrey Frankel's article in the same volume, Jeffrey Frankel, *Formulas for Quantitative Emission Targets*, *id.*, at 31–56); *see also*, Daniel Bodansky, *The Legitimacy of International Governance: A Coming Challenge for International Environmental Law?* 93 AM. J. INT'L L. 596 (1999) (discussing the lack of authority of international environmental regimes).

221. *Copenhagen Climate Talks (UNFCCC)*, N.Y. TIMES, Oct. 15, 2009; United Nations Climate Change Conference Website, <http://en.cop15.dk/> (last visited Nov. 3, 2009).