

**Official Merit Promotion System and Its Impact on Climate Change Mitigation
Policy in China:
Will Chinese Central Government's "Iron Hand" Work?
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Introduction

On September 16, 2013, leaders from National development and Reform Commission of China (NDRC) and California signed a Memorandum of Understanding (MOU) to work together to cut carbon emission.¹ In the MOU, NDRC and California would focus on mitigating carbon emission, strengthening performance standards to control carbon standards and implementing carbon emissions trading systems.²

The two parties have different purpose to enter the MOU. Their purposes indicate problems that they face in their own countries. For California, cooperation with NDRC can be "a lever to change policies in the US and ultimately change policies throughout the world". In the U.S., the states race to top on climate change policy,³ while the federal government has been anything "between passive about to hostile climate change issues".⁴For NDRC, working with California shows Chinese central government's positive attitude towards climate change challenges. For the

¹ GOVERNOR BROWN EXPANDS PARTNERSHIP WITH CHINA TO COMBAT CLIMATE CHANGE, available at <http://gov.ca.gov/news.php?id=18205>. (2013.10.15)

² MEMORANDUM OF UNDERSTANDING TO ENHANCE COOPERATION ON LOW CARBON DEVELOPMENT BETWEEN THE NATIONAL DEVELOPMENT AND REFORM COMMISSION OF THE PEOPLE'S REPUBLIC OF CHINA AND THE STATE OF CALIFORNIA OF THE UNITED STATES OF AMERICA, available at <http://gov.ca.gov/news.php?id=18205> (2013.10.15)

³ The state-level efforts includes actions, such as making climate action plan, setting GHG emissions targets, making climate adaptation plans and setting standards & Caps for electricity GHG Emissions. There have been 39 states making Climate Action Plan, 21 states having their own GHG Emissions Targets, 39 states having renewable and alternative portfolio standards, 46 states have net metering, 27 states making Climate Adaptation Plans and 46 states establishing Net Metering, 34 states setting their energy efficiency standards and targets, and 42 states setting residential building energy codes. Available at http://www.c2es.org/docUploads/All%20State%20Initiatives%20July%202013_0.pdf.

⁴ Lesley K. Mcallister, *Regional Climate Regulation: From State Competition to State Collaboration*, San Diego Journal of Climate & Environmental Law 1,81 (2009)

central government, this MOU can help Chinese central government to promote climate change policy on the provincial level.⁵ As Xie Zhenhua, Vice Chairman of NDRC pointed out, “NRDC will help to promote and strengthen the partnership between provinces in China, and the state of California.” In China, central government gives increasing attention on climate change, but the local governments respond to the central government with little effective action. They take measures to avoid their responsibilities on climate change mitigation.

Facing the problems, states of the U.S. have done efforts to compel the federal government to act. They brought lawsuits to force federal agencies to address climate change under the existing environmental law.⁶ Chinese central government takes measures to enhance subnational governments’ climate change mitigation practice. However, one of the effective measure the central govern has been taking and will take in a long term in carbon dioxides reduction is to use its “iron hand”. “Iron hand” came from Premier Wen Jiabao’s address in a nationwide teleconference about energy conserving. In the conference, Wen urged subnational governments to work with an “iron hand” to reach energy efficiency targets. He warned, “Local officials and executives of enterprises will be taken to task if their specific energy-efficiency targets are not met by the end of the year”.⁷ In Wen’s address, central government’s “iron hand” is to punish local officials who fail to accomplish energy reserving and

⁵ In the news press meeting, Xie Zhenhua, Vice Chairman of NDRC, said, “both China and US are taking very decisive actions to address climate change.” available at <http://gov.ca.gov/news.php?id=18205>. (2013.10.15)

⁶ Lesley K. Mcallister, Regional Climate Regulation: From State Competition to State Collaboration, San Diego Journal of Climate & Environmental Law 1,81 (2009)

⁷ “‘Iron hand’ to help realize green goals”, available at http://www.china.org.cn/environment/2010-05/06/content_19979632.htm (2013.10.5)

carbon emissions reduction goals.⁸ That means, Chinese central government is using the merit promotion system to push local officials to take actions against climate change challenges.

It is often said, especially in the West, that “one of China’s chief advantages in dealing with climate change is that its leaders can impose tough policies”.⁹ Till 2012, central government’s “iron hand” has worked effectively on carbon dioxides reduction. For example, in 2005, provinces in China committed to conserve energy to accomplish their 11th Five-Year Plan goals. In 2009, according to China’s Policies and Actions for Addressing Climate Change, most provinces accomplish less than 70% of their energy reserving goals.¹⁰ (See Chart 1) However, in 2010, according to report, all provinces accomplish their goals, most of them even reserve energy more than what their goals required.¹¹ (See Chart 2) The main reason behind the great achievements was that Premier Wen Jiabao warned the provincial officials “will be taken to task if their specific energy-efficiency targets are not met by the end of the year”.¹² During 2009~2010, many province officials, fearing about losing their position, take measures such as cutting off factories’ electricity power supply to achieve the goals.

However, when examining the merit promotion system of Chinese

⁸ In China, the central government uses its “iron hand” to push the subnational governments to achieve the carbon dioxide reduction binding target. One provincial official said, “Binding targets mean that if we cannot achieve them, we cannot keep our position.”

⁹ *China and the Environment: The East is grey*. Available at <http://www.economist.com/news/briefing/21583245-china-worlds-worst-polluter-largest-investor-green-energy-its-rise-will-have> (2013.10.6)

¹⁰ *China’s Policies and Actions for Addressing Climate Change* (2009), available at <http://www.ccchina.gov.cn/WebSite/CCChina/UpFile/File571.pdf> (2013.10.9)

¹¹ *China’s Policies and Actions for Addressing Climate Change* (2011), available at http://news.xinhuanet.com/english2010/china/2011-11/22/c_131262368.htm (2013.10.10)

¹² “‘Iron hand’ to help realize green goals”, available at http://www.china.org.cn/environment/2010-05/06/content_19979632.htm (2013.10.5)

government, I cannot get the conclusion that the “iron hand” can work well on climate change mitigation. The remainder of this paper is organized as follows. Part II discusses the merit promotion system which Chinese central government uses to incentive subnational officials to develop economic and achieve other political goals. Part III gives the overview of climate change mitigation policy on the central government level during 2007-2012. Part IV discusses how the local governments’ implementations of climate change mitigation policies under the impact of merit promotion system in China.

II. Official Merit Promotion System and Its Impact in China

A. Official Merit Promotion System in China

China is a unitary state and its political system is broadly composed of five layers of state administration: the center, provinces, prefectures, counties and townships. The Central Committee of the Chinese Communist Party (CCP) acts as the headquarters of this “multidivisional” system¹³, which ultimately controls the mobility of government officials within the system. Local officials are reassigned to a new position every three or more years.¹⁴In 1978, China began its far-reaching economic reforms. Reforms have empowered provincial leaders with the ultimate authority in allocating resources in their provinces. However, the personnel control is still

¹³ “In China’s official language, regions at each level are called ‘blocks’ (kuaikuai), as opposed to ‘branches’ (tiaotiao), the bureaucratic supervision along the lines of function and specialization. Chinese economy is organized into a multi-layer-multi-regional form mainly according to territorial principle, in which each region at each layer can be regarded as an operating unit.” Y. Qian and C. Xu, *Why China’s Economic Reforms Differ: The M-form Hierarchy and Entry/Expansion of the Non-state Sector*,

¹⁴ Jing Wu, Yongheng Deng, Jun Hunag, Randall Morck, Bernard Yeung, *Incentives and Outcomes: China’s Environmental Policy*, IRES Working Paper (IRES2013-004), available at <http://www.ires.nus.edu.sg/workingpapers/IRES2013-004.pdf> (2013.10.7)

centralized in the hands of the central government.

To motivate subnational government officials to accomplish political, economic or social goals, the central government uses a criterion system to evaluate the officials' performance. Before China started its economic reform, political conformity was the only important criterion for promotion. After 1978, although political loyalty remains important, other elements were introduced into the evaluation process.¹⁵ Officials had to be of a young age, have good education and demonstrate expertise in administrative management.¹⁶ To evaluate expertise in administrative management, local economic performance became the most important criterion. In 1995, Central Committee of the Chinese Communist Party (CCP) issued a document named Performance Evaluation Method for City-level Government Officials. In this document, higher-level officials assesses lower-level officials from three aspects—local economic development, local cultural development and political construction.¹⁷ Even though this performance evaluation system mentioned cultural development and political construction, it actually put economic development in the primary place. 180 criteria of this system were about economic development.

The performance evaluation system itself cannot work well. This promotion system needs a competition environment among local officials. In China, the stable and continue offering of promotion opportunities stimulates local government officials to compete. In 1980, the CCP proposed the abolition of the lifetime

¹⁵ Hehui Jin, Yingyi Qian, Barry R. Weingast, *Regional Decentralization and Fiscal Incentives: Federalism, Chinese Style*, *Journal of Public Economics*, 89, 1719-1742 (2005)

¹⁶ Li Hongbin, Zhou Li-An, *Political Turnover and Economic Performance: the Incentive Role of Personnel Control in China*, *Journal of Public Economics*, 89, 1734-1762 (2005)

¹⁷ *Id.*

appointment of party and government officials and set a mandatory retirement system.

¹⁸ Many senior leaders were urged to leave office to make way for younger people.¹⁹

In this way, the central government can offer enough promotion opportunities. On the other hand, there is a lock-in effect inside the government hierarchy.²⁰ If a government official is separated from the government hierarchy, he/she has little chance to find a job elsewhere. At the same time, the huge difference in terms of personal benefits between staying in power and relinquishing power makes government officials prefer to hold onto their power.²¹

To sum up, there are three elements to make Chinese government merit-based promotion system work well: (1) the personnel control is centralized in the hands of the central government; (2) an effective performance evaluation system; (3) a competition environment among local officials.

B. Merit Promotion System and Chinese Economic Development

In China, merit in this local official promotion system is tangible economic development.²² Chinese central government rewards and punishes local officials on the basis of their economic performance.²³ This motivates them to be market preserve

¹⁸ Fan, Gang, *New Norms in Public Revenue and Expenditure*, In Zhang Jr., *Case Studies in China's Institutional Change*. Shanghai People's House, 1996

¹⁹ *Id.*

²⁰ Jing Wu, Yongheng Deng, Jun Hunag, Randall Morck, Bernard Yeung, *Incentives and Outcomes: China's Environmental Policy*, IRES Working Paper (IRES2013-004), available at <http://www.ires.nus.edu.sg/workingpapers/IRES2013-004.pdf> (2013.10.7)

²¹ Li Hongbin, Zhou Li-An, *Political Turnover and Economic Performance: the Incentive Role of Personnel Control in China*, *Journal of Public Economics*, 89, 1734-1762 (2005)

²² Jing Wu, Yongheng Deng, Jun Hunag, Randall Morck, Bernard Yeung, *Incentives and Outcomes: China's Environmental Policy*, IRES Working Paper (IRES2013-004), available at <http://www.ires.nus.edu.sg/workingpapers/IRES2013-004.pdf> (2013.10.7)

²³ Allen, Frank, Jun Qian, and Meijun Qian, *Law, Finance, and Economic Growth in China*, *Journal of Financial Economics* 77, 57-116 (2005)

and to promote the local economy.²⁴ Empirical study has shown that the tangible economic development outcomes affect the local officials' odds of promotion.²⁵ The merit promotion system is thought to induce a competition between sub-national governments to produce tangible evidence of economic development at all levels of the management hierarchy. In this way, Chinese central government uses personnel control to motivate local officials to promote local economic growth.

A recent study on local governments' investment on transportation infrastructure shows that "higher city-level GDP growth is statistically and economically significantly positively related to greater odds of the city's top cadres being promoted".²⁶ "To the extent that their careers depend on tangible evidence of having successfully fostered economic growth", the local officials prefer to allocate public resources according to their short-run contributions to tangible economic growth, rather than their long-run tangible and intangible contributions to total growth.²⁷ As spending on transportation infrastructure can promote economic development in a short term, local officials will invest more on transportation infrastructure.

To sum up, in Chinese local official merit-based promotion system, the merit is equal to economic development. This system motivates local officials to preserve market, and to develop local economic and to invest economic sectors, such as

²⁴ Li Hongbin, Zhou Li-An, *Political Turnover and Economic Performance: the Incentive Role of Personnel Control in China*, *Journal of Public Economics*, 89, 1734-1762 (2005)

²⁵ *Id.*

²⁶ Jing Wu, Yongheng Deng, Jun Hunag, Randall Morck, Bernard Yeung, *Incentives and Outcomes: China's Environmental Policy*, IRES Working Paper (IRES2013-004), available at <http://www.ires.nus.edu.sg/workingpapers/IRES2013-004.pdf> (2013.10.7)

²⁷ *Id.*

transportation infrastructure, to promote local economic development. However, their investments focus on economic activities which can bring growth in a short term.

C. Merit-based Promotion System and Environmental Problems in China

Studies have supposed that Chinese merit-based promotion system cannot lead the local officials to take actions against environmental problems.²⁸ A recent study released that local officials “increase city government transportation infrastructure investment in response to their superiors emphasizing such investment, but do not act like wise if their superiors emphasize environmental concerns”.²⁹ There are two main reasons, (1) the impact of a better environment on recorded GDP growth is “slower and spread out across the more distant future”. The current spending on environment is not correlated with next year’s GDP growth³⁰; (2) higher local environmental investment is “statistically and economically significantly negatively related to better odds” of the officials being promoted.³¹

However, local officials do not cut down all the environmental investment. They maintain a minimum level of investment on environmental issues.³² The reasons are: (1) central government may make some environmental issues as political responsibilities. The example is that the central government required Beijing City

²⁸ Blanchard, Oliver, and Andrew Shleifer, *Federalism with and without Political Centralization: China vs. Russia*, IMF Staff Papers, 48, 171-179 (2001)

²⁹ Jing Wu, Yongheng Deng, Jun Hunag, Randall Morck, Bernard Yeung, *Incentives and Outcomes: China’s Environmental Policy*, IRES Working Paper (IRES2013-004), available at <http://www.ires.nus.edu.sg/workingpapers/IRES2013-004.pdf> (2013.10.7)

³⁰ Yingyi Qian, and Chengguang Xu, *Why China’s Economic Reforms Differ: the M-Form Hierarchy and Entry/Expansion of the Non-State Sector*, *Economics of Transition*, 1, 135-170

³¹ *Id.*

³² Jing Wu, Yongheng Deng, Jun Hunag, Randall Morck, Bernard Yeung, *Incentives and Outcomes: China’s Environmental Policy*, IRES Working Paper (IRES2013-004), available at <http://www.ires.nus.edu.sg/workingpapers/IRES2013-004.pdf> (2013.10.7)

officials to treat PM 2.5 management as a political responsibilities. However, such political responsibilities have limited influence on local officials' actions, because they will not get any punishment if they cannot accomplish the responsibilities. (2) Environmental issues are now increasing related with social stability. In China, "keeping social stability" is always a key criterion with decisive and veto power (*yi piao fou jue*) for local officers;³³ that means all other achievements are equal to nothing if collective petitions or massive protests occur in the officials' jurisdiction. With the increasing environmental-related petitions and protests in China, local officials have to main the minimum investment to reduce the political risk.³⁴

III. Chinese Climate Change Mitigation Policies on Central Government Level

China's main climate change policies came after 2007. Before 2007, Chinese central government viewed climate change policy as a scientific issue related to foreign affairs. Chinese central government had the idea that the climate change was mainly developed-country issue, and it was inferior to China's economic development. In 2007, China started to develop a national policy framework to address climate change challenges. In 2009, China's State Council adopted its first carbon-specific goal. The State Council decided that China would lower its carbon intensity by 40-45% by 2020 compared to 2005 level. In 2011, the carbon reduction aim, which planned to reduce carbon intensity by 17% by 2015, was put in the 12th Five-Year Plan. It is the first time a Five-Year plan included a carbon-specific target.

³³ *Id.*

³⁴ *Id.*

Climate change policies on national level after 2007 include the mitigation policies and adaptation policies. In mitigation policies, Chinese national government focuses on four areas. They are industrial structure adjustment, energy conservation and energy efficiency improvement, energy structure optimization, and carbon sinks increasing. Concerning climate change adaptation, Chinese national government takes measures on key sectors, including agriculture, forestry, water resources, marine resources, public health and meteorology. I will mainly discuss Chinese climate change mitigation policies, which are industrial structure adjustment policies, energy conservation and energy efficiency improvement policies, energy structure optimization policies, and carbon sinks increasing policies. In this section, I divide these policies into two catalogues: policies designed for industrial improvement, which are properly related to local economic development; and policies designed to push local governments to take actions against climate change challenge.

A. Industrial Structure Adjustment Policies

Policies in this area are mainly designed for industrial improvement. Central government takes two main measures, making guidelines and plans and establishing funds, to achieve the goals. Concerning plans and guidelines in this area, State Council departments, including the National Development and Reform Commission (NDRC) and Ministry of Industry and Information Technology, made guidelines and plans to limit the development of traditional industries (iron and steel, non-ferrous metals, and building materials, etc.). They also released Guideline Catalogue for

Industrial Restructuring, the Plan for Industrial Transformation and Updating (2011-2015) and specific development plans to promote industrial transformation in key industries, including iron and steel, non-ferrous metals and building materials.

There are several funds established to adjust industrial structure. National government also invests 13.5 billion yuan as technological upgrading funds to stimulate the transformation of traditional industries. To support newly emerging industries, Chinese central government establishes a fund of major special fund to boost the development of newly emerging industries. According to the Statistic of NDRC, till 2012, there have been 24 venture capital funds which are amount to 7 billion yuan designed to stimulate the development of the “energy-saving, environmental protection and new energy sectors”.

B. Energy Conserving and Energy Efficiency Improving Policies

Energy conserving and energy efficiency improving policies include policies designed to improve industries and policies designed to push local governments to take action.

Central government’s plans which are designed for industries in this area include improving standards of energy efficiency, promoting energy conservation in key fields and developing low-carbon economy. Most of the measures are mainly to release plans and standards and to establish funds. For example, the General Administration of Quality Supervision, Inspection and Quarantine and the National Development and Reform Commission set 28 mandatory national standards on energy

consumption quotas for high-energy-consuming products. The standards will direct the industries to improve their technology and producing process to reserve energy. Relevant departments, including the Ministry of Industry and Information Technology and the Ministry of Transport formulated and revised mandatory standards on energy consumption quotas for key industries and products.

There are measures to push local governments to take actions. From 2009 to 2011, Chinese central government assigned responsibilities to fulfill targets in energy conservation. It means, every province have to reserve energy and reduce carbon dioxide to accomplish their responsibilities. To monitor the provinces' accomplishment in energy conservation, national government establishes a statistical monitoring and evaluation system to "evaluate the completion of energy conservation and emission reduction".³⁵ If local governments cannot achieve the energy reserving goals, the officials will receive central government's punishment.

C. Energy Structure Optimizing Policies

To optimize energy structure, the central government mainly worked on two aspects. One is to accelerate the development of non-fossil fuel; the other is to promote the clean utilization of fossil fuel. Some of the policies are designed for industrial improvement. These policies are mainly action plans and development objections. The central government made specific plans for hydropower, wind power, solar power and biomass energy under 12th Five-Year Plan. The central government

³⁵ *China's Policies and Actions for Addressing Climate Change* (2011), available at http://news.xinhuanet.com/english2010/china/2011-11/22/c_131262368.htm (2013.10.10)

also sets out development objectives and tasks for natural gas industry by making The Natural Gas Development Plan During the 12th Five-Year Plan Period, and the Guidelines for Developing Distributed Energy Systems for Natural. It also formulated the Development Plan for Shale Gas (2011-2015).

There are also policies to promote local governments to optimize energy structure. The central government launched the green energy demonstration projects in 108 counties and the pilot projects of a “large-scale utility of renewable energy in buildings” in 35 cities and 97 counties.

D. Carbon Sinks Policy

To increase carbon sinks, the national government focus on enhancing forest carbon sinks and grassland carbon sinks. Similarly, the national government makes plans and establishing funds to promote the accomplishment of the goals. The national government issues relevant technical plans including the Regulations on Forest Management Work and Design, Supervision Measures on Policy of Central Financial Subsidies for Forest Management, and the Code of Formulating and Implementing Forest Management Schemes. In 2011, the national government disbursed 13.6 billion yuan to develop a subsidy mechanism for grassland conservation. It also assigns 30 million yuan in special funds to promote conservation farming technology.³⁶

³⁶ *China's Policies and Actions for Addressing Climate Change* (2012), available at http://news.xinhuanet.com/english2010/china/2011-11/22/c_131262368.htm (2013.10.10)

IV. Local Governments' Policies under the Impact of Merit Promotion System

After central government launching its Climate Change Program, provinces issued their own Climate Change Programs in 2009. Studies on Chinese climate change policy viewed it as local governments' positive attitudes toward climate change issues.³⁷ In the same year, Premier Wen Jiabao used "iron hand" to warn local government to accomplish their energy conserving goals. On climate change issues, what local governments commit to do can be different from what they really do.

As discussed before, in China, central government's policies rely on local governments to accomplish its political, economic and social goals. Whatever the policies are, they will be implemented by local governments. However, influenced by performance management system in China, local governments treat the policies in different ways. On the climate change mitigation issues, they have three different kinds of attitudes towards policies: (1) for the policies designed to push local governments to take action, such as energy reserving responsibility, local governments will try to implement them, at least statistically; (2) for the policies designed for industrial improvement but without any potential short-term economic benefit, local governments will follow the policies to make their own action plans, but avoid investing their resources to implement them; (3) for the policies designed for industrial improvement with short-term economic benefit, such as funds and pilot projects, local governments will implement them, but their goals are to get economic resources rather than to mitigate climate change.

³⁷ *Id.*

The good example for the first situation is local governments' reaction to the energy reserving responsibilities. On one hand, reserving energy and cutting down carbon dioxide means that local officials will lose their economic growth from high-energy-consuming and high-polluting industries, which may contribute to the most part of local economic growth. On the other hand, local officials face the possible punishment from central government if they cannot achieve the energy reserving goals. Two strategies that local officials have taken: first, they keep on pursuing economic growth and ignore their energy reserving goals. When central government decides to assess their energy reserving achievement, local governments use their administrative power to interfere with local industries' activities to accomplish their responsibilities in a very short time. The measure they usually take is to cut off the electricity power supply of local factories. Second, they fabricate statistics about local energy reserving, and do nothing to reduce carbon dioxide. This measure gives them a risk that local officials cannot get promotion or even lose their power, if central government realized the inauthentic statistics. However, as there is no local official getting punishment for their behaviors, some local officials still use this method.

For the policies designed for industrial improvement but without any potential short-term economic benefit, local officials' action is likely to be limited on making action plans. Take Jiangsu Province as an example, it published Shanxi Province Climate Change Program in 2009³⁸, whose framework is similar to the Program on

³⁸陕西省人民政府关于印发《陕西省应对气候变化方案》的通知, available at <http://www.chinalawedu.com/news/1200/22598/22627/23033/2008/10/li6476125711801800221684-0.htm>

the national level. Following this province-level Program, Shanxi Province published specific action plans about industrial structure upgrade. However, a study shows that Shanxi Province has not reduced its annual energy consuming amount since 2009. It means that, this province did not take measures to implement its plans on climate change mitigation.

For the policies designed for industrial improvement with short-term economic benefits, local officials have a positive attitude towards them. For example, till June 2009, there have been 2,174 clean development mechanism (CDM) projects in China.³⁹ But that after getting financial support, most of CDM projects cannot continue well.⁴⁰ As a study shows, “localized policy-making tends to treat central government mandates as guidelines to be manipulated for local interests.”⁴¹

V. Conclusion

Chinese central government uses its official merit promotion system to motivate local officials to achieve political, economic and social goals. After China starts its economic reform, the merit in this local official promotion system becomes local economic development. For a long time, this promotion system helps China keep its high GDP growth. However, the system also leads local officials to ignore environmental protection. On the climate change mitigation issues, Chinese central government takes various measures to enhance local actions. Even though the central

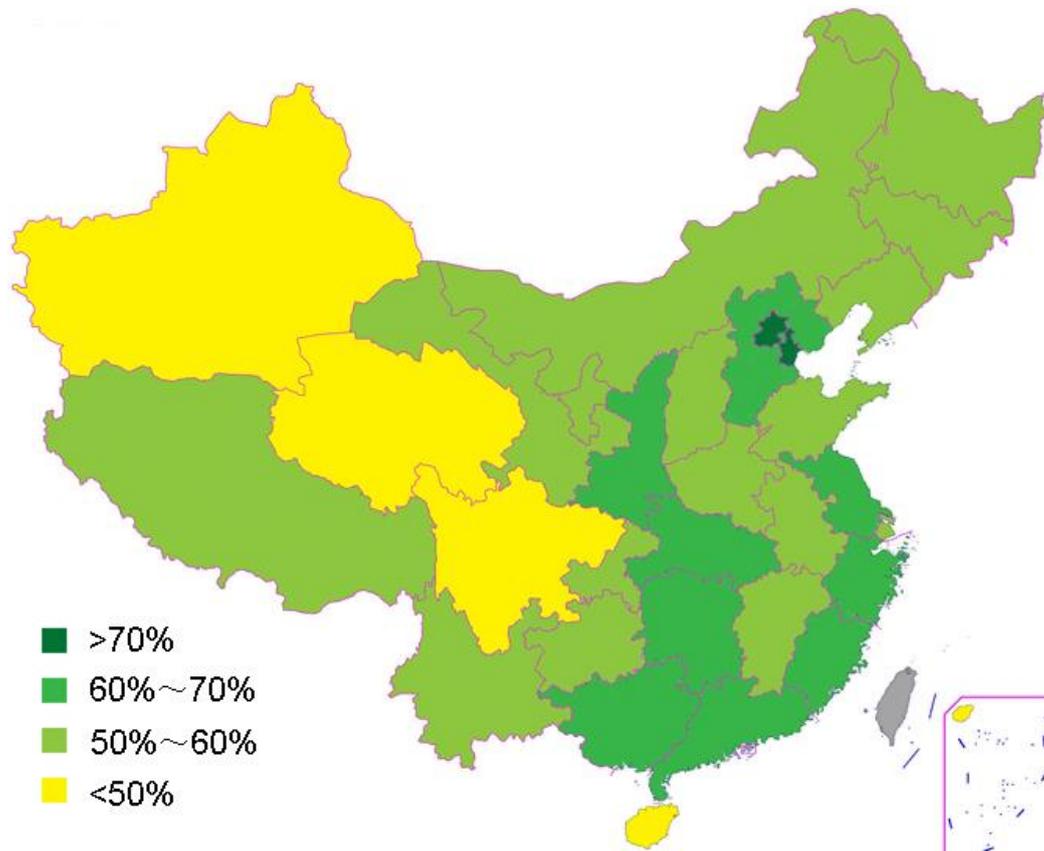
³⁹ Quoted in John Vidal, *Billions wasted on UN climate program*, The Guardian, 26 May 2008.

⁴⁰ Id.

⁴¹ Qi, Y and L Ma, *Translating a global issue into local priority: China's local government response to climate change*, The Journal of Environment and Development 17, 379-400 (2008)

government announces to use “iron hand” (punish local officials failing in carbon emission reduction), local officials will keep on chasing GDP growth if central government does not change its merit promotion system. Local officials will not act positively on climate change mitigation issues, and the attitudes they have towards central government’s climate change policies are: (1) for the policies designed to push local governments to take action, such as energy reserving responsibility, local governments will try to implement them, at least statistically; (2) for the policies designed for industrial improvement but without any potential short-term economic benefit, local governments will follow the policies to make their own action plans, but avoid investing their resources to implement them; (3) for the policies designed for industrial improvement with short-term economic benefit, such as funds and pilot projects, local governments will implement them, but their goals are to get economic resources rather than to mitigate climate change.

Chart 1 Progress of the Energy Saving Target in Chinese provinces in the 11th Five-Year Plan



Source: <http://www.ncsc.org.cn/article/cbw/201308/20130800000163.shtml>

Chart 2 Accomplishment of Energy Saving Target in Chinese Provinces in the 11th Five-Year Plan

Province	2005		2010	
	Energy consumption per unit of GDP (Tonnes of coal equivalent/10,000 Yuan)	Reduction target in the 11th Five-Year plan (%)	Energy consumption per unit of GDP (Tonnes of coal equivalent/10,000 Yuan)	Lower by % compared to 2005
Beijing	0.792	-20.00	0.582	-26.59
Tianjin	1.046	-20.00	0.826	-21.00
Hebei	1.981	-20.00	1.583	-20.11
Shanxi	2.890	-22.00	2.235	-22.66
Inner Mongolia	2.475	-22.00	1.915	-22.62
Liaoning	1.726	-20.00	1.380	-20.01
Jilin	1.468	-22.00	1.145	-22.04
Heilongjiang	1.460	-20.00	1.156	-20.79
Shanghai	0.889	-20.00	0.712	-20.00
Jiangsu	0.920	-20.00	0.734	-20.45
Zhejiang	0.897	-20.00	0.717	-20.01
Anhui	1.216	-20.00	0.969	-20.36
Fujian	0.937	-16.00	0.783	-16.45
Jiangxi	1.057	-20.00	0.845	-20.04
Shandong	1.316	-22.00	1.025	-22.09
Henan	1.396	-20.00	1.115	-20.12
Hubei	1.510	-20.00	1.183	-21.67
Hunan	1.472	-20.00	1.170	-20.43
Guangdong	0.794	-16.00	0.664	-16.42
Guangxi	1.222	-15.00	1.036	-15.22
Hainan	0.920	-12.00	0.808	-12.14
Chongqing	1.425	-20.00	1.127	-20.95
Sichuan	1.600	-20.00	1.275	-20.31
Guizhou	2.813	-20.00	2.248	-20.06
Yunnan	1.740	-17.00	1.438	-17.41
Tibet	1.450	-12.00	1.276	-12.00
Shanxi	1.416	-20.00	1.129	-20.25
Gansu	2.260	-20.00	1.801	-20.26
Qinghai	3.074	-17.00	2.550	-17.04
Ningxia	4.140	-20.00	3.308	-20.09

Source: http://www.sdpc.gov.cn/zcfb/zcfbgg/2011gg/t20110610_417376.htm

