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# Dynamics of Policy Change in China: A Case Study of the Renewable Energy Law

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**Abstract:** With its rapid economic development, China plays a key role in the world energy economy. Its future energy path will influence the world's future. On February 28, 2005, China passed a comprehensive Renewable Energy Law, which was a major policy change for the Chinese government. This article investigates the legislative process of the law and uses this as a case to analyze the dynamics of policy change in China. Throughout this article, I try to explain two highlights of the process: that the law was passed quickly and overwhelmingly, and that the process included various actors, including international and domestic environmental NGOs, which is very rare in China. Applying two Western theoretical frameworks—punctuated-equilibrium theory and advocacy coalition framework—to analyze this case, I partly explain the process. However, I also find the inapplicability of these frameworks in China's special political context. I argue that some exogenous pressures influenced both dominant core and advocacy groups. With few retarding forces, these strong driving forces made the law pass quickly and overwhelmingly. Generally speaking, the Chinese government is seeking to utilize these NGOs to achieve its own goals. Common interest is a key factor for the involvement of NGOs.

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**O**n February 28, 2005, the National People's Congress of China (NPC) passed a new law—the Renewable Energy Law. Many observers regard it as a milestone for developing renewable energy in China because this policy will definitely be integrated into China's forthcoming national energy strategy. Considering China's huge and increasing energy appetite and consequent environmental and political outcomes, the passage of this law is no doubt a blessed event for both China and the world at large. If China changes its energy structure successfully, its future energy path will have a major impact on the world's energy system during the 21<sup>st</sup> century; it will contribute considerably to the world's environment, and possibly to world peace.

Drawing from the successful experiences of some industrialized countries, Sawin (2004, p. 52) argues that the key to the development of renewable energy is ambitious, forward-looking, consistent government policies that drive demand for renewable energy, creating a self-reinforcing market. That is to say, government's will in developing renewable energy is the first impetus for this industry. The absence of political support from the government, especially the central government, is one essential reason for the underdevelopment of renewable energy in China. Until recently, renewable energy has never been treated seriously by national government.<sup>1</sup> In fact, China is not a latecomer in the field of renewable energy; its research and application of wind power can be traced back to the late 1950s. The first wind farm connected to a grid was run in Shandong province in 1986 (Jiang, 2004). However, to date, there is no large-scale commercial market for renewable energy. Therefore, the passage of the Renewable Energy Law was a major policy change for the Chinese government because it indicates the

formation of national consciousness of renewable energy. With the passage of the law, the government will strive to speed up the development of renewable energy, making the establishment of a large-scale national market for renewable energy very promising.

How did the Chinese government make such a policy change? What are the underlying dynamics for this change? To answer these questions, we must investigate the legislative process of the law. I focus on two highlights of the process. One is that the law was drafted, reviewed, and passed very quickly. It took only 20 months from its listing on the national legislation plan to its passage by the NPC (June, 2003 to February, 2005). The other is that the legislative process of the Renewable Energy Law started from the bottom and involved various actors including international NGOs and emerging domestic environmental NGOs. In contrast with other legislations in China, which are usually proposed by the central authority, such as the Central Committee of the Chinese Communist Party (CCP), and imposed, more or less, to the vote process of the NPC, the legislative process of the Renewable Energy Law indicates that some political pluralism has appeared in Chinese legislation, at least in some special fields. Why was the law passed so quickly and overwhelmingly? And why was the government willing to include various actors, especially NGOs, in the process? The analysis of these puzzles will help us to understand the dynamics of policy change as well as the change of dynamics in China.

In section two, I will introduce the legislative process of the Renewable Energy Law in detail. Section three is an analysis of this policy change based on two popular Western policy theories. The following sections are explanations of the policy change under special Chinese context; respectively, in section four, I will

answer why the law was passed so quickly and overwhelmingly, and in section five I will answer why the government is willing to involve various actors, especially NGOs, in the policy-making process. Applying Western policy theories to Chinese policy analysis is a challenging task for Chinese scholars in the field of public policy and administration. In conjunction with this case study, I will discuss this problem in the conclusion.

### **The Passage of the Renewable Energy Law**

Although China began the exploration and employment of renewable energy very early, a large-scale commercial market for renewable energy has never been established. The government had always pursued the development of regular energy resources and did not regard renewable resources as reliable energy supply. Before the passage of the Renewable Energy Law, there were no national policies to develop renewable energy and some relevant government agencies and local governments advanced all the projects. In addition, most of the establishments were invested in and run by the state. Although there were a few policies that were enacted by relevant agencies to encourage various investors, these policies were sporadic, inconsistent, and poorly enforced.

According to Sawin (2004, pp. 34-44), government should be responsible for five major categories of relevant policies to support renewable energy. First of all, policy instruments must be implemented to guarantee market access to renewable energy. Two main types of regulatory policies are pricing laws<sup>2</sup> and quota systems.<sup>3</sup> Second, government should provide financial incentives, such as tax credits and low-interest loans to renewable energy producers. Third, governments must assume the responsibility to educate its citizens about the potential of renewable energy, including training and certifying workers, as well as disseminating relevant information. Fourthly, government is responsible for setting industry standards, permitting systems, and building codes to prevent inferior technologies from entering the marketplace. Last but not least, public participation in policymaking, project development, and ownership also increases the chance of success. Therefore, government should recognize the function of civil society and encourage public participation in the development of renewable energy. With the market growth of renewables, the cost will decrease due to economy of scale and learning experience. Eventually, renewable energy will become competitive with or cheaper than conventional energy. It is obvious that the Chinese government did poorly in all of these five areas, which is why renewable energy has been underdeveloped in the fifty years since the establishment of the PRC.

For years, some Chinese energy experts and international institutions, such as the World Bank and some NGOs, have suggested the Chinese government enact systematic policies to enhance renewable energy.

In 2003, Chinese policymakers started to integrate renewable energy into their energy strategy planning. The Environmental Protection & Resources Conservation Committee of National People's Congress (EPRCC) capitalized on this opportunity and took charge of the legislative process as general coordinator. Of the nine committees of the NPC, the EPRCC is not the most noticeable committee; therefore, to enact a far-reaching new law would definitely enhance its status and popularity.

In June 2003, as a response to the EPRCC's overture, the Standing Committee of the NPC listed the Renewable Energy Law into its legislative plan and decided that the EPRCC should act as the coordinator and organizer for drafting this law. In August, the EPRCC consigned the National Development and Reform Commission (NDRC) and Tsinghua University to draft the prepositional version of the law. In fact, the Energy Research Institute (ERI), an institute affiliated with the NDRC and composed of a group of the country's best energy specialists, played a major role in drafting the document. In addition, its official background makes it easier to incorporate opinions from researchers, officials, enterprises and other stakeholders. Ten months later, the two drafts were completed and presented to the EPRCC, and in August 2004, the EPRCC combined the two drafts together and designed a formal draft. This draft was sent to 130 institutions and individuals to obtain their reactions and suggestions. According to the feedback received, the EPRCC organized a meeting to investigate the viability of the draft. At this meeting, only two major revisions were made. One was the deletion of targeting total volume of renewable energy and the other was the final rejection of a quota system.

In December 2004, the EPRCC presented the revised draft to the 13<sup>th</sup> session of the Standing Committee of the NPC, and the latter reviewed it for the first time. Two months later, in 14<sup>th</sup> session, the Standing Committee of the NPC reviewed the draft for the second time and eventually passed the law on February 28, 2005. The law was passed overwhelmingly; except for one abstention vote, all congressmen approved the draft. In China, legislation usually faces three reviews before going up for a vote, but widespread support for this law resulted in acceptance after only two reviews. From its listing on the national legislation plan to its passage by the NPC (June, 2003 to February, 2005), it took only 20 months to form a law, a record in the legislative history of China.

This is a comprehensive law that includes nearly all aspects of developing renewable energy rather than just regulating one field or setting up one specific mechanism. The basic principle of this law is to establish a market-based system for the development of renewable energy. The highlight is that grid enterprises are required to purchase electricity from renewable sources at classified prices set by government. The

prices are usually higher than those of conventional energy resources. But the excess cost will be shared in the selling price throughout the grid. Everyone who is going to buy electric power from the grid will share the excess cost of renewable energy, keeping the average price of power from increasing too much. In addition, the central government will establish special funds for research of renewable energy, as well as work out a catalog of renewable energy industries and give them favorable tax rates and subsidies. Moreover, according to Article 11, standardization authorities of the State Council should set and publicize technical standards for renewable energy electric power and relevant renewable technology and products. Therefore, the law has included nearly all policy measures mentioned by Sawin (2004).

The Energy Foundation (EF), located in San Francisco, is one of the international non-governmental organizations which have participated in Chinese energy and environment development. It has announced that its geographic focus is on the United States and China<sup>4</sup> and has set up the China Sustainable Energy Program to help the development of renewable energy in China. It has conducted many research projects about the potential and viability of renewable energy in China, which became some of the direct resources for preparatory reports for the Renewable Energy Law, and even for the draft of the law. In cooperation with the National Development and Reform Commission (NDRC), which is the leading institution of China's energy policy, the EF funded the Wind Power Authorization Program in 2000. This program was successfully implemented in October, 2003 with two 100MW wind farms being constructed in Guangdong and Jiangsu provinces. As an experiment, this program has provided empirical reference for the implementation of the Renewable Energy Law.

The World Wide Fund for Nature (WWF) is another active international environmental NGO in China. It carried out a global program called Power Switch in 2003, aimed at pushing power industries to shift from fossil fuels to clean energy. In China, the WWF intends to establish the Green Power System<sup>5</sup> in big cities such as Beijing and Shanghai. With the cooperation of former Beijing Economic Commission, the WWF and EF funded a research program to investigate the viability of carrying out the Green Power System in Beijing. A research report was compiled in November, 2003, and also became one of the references for the draft of the law.

Emerging Chinese environmental NGOs also played important roles in putting the policy onto the agenda. The Global Village of Beijing and Friends of Nature are two main environmental NGOs in Beijing. The former always keeps in contact with the media and has developed good relationships with many reporters. Since September 2003, it has held 15 forums with reporters who are interested in renewable energy and issues awards to outstanding reporters every year. These

forums are partially funded by the EF and WWF. The Global Village usually invites some relevant government officials, energy specialists, and managers of enterprises whose products are related to renewable energy to the forums as well. These forums provide a good chance for these groups to communicate with each other and establish relationships, which is important in Chinese social context.

The Global Village of Beijing and Friends of Nature are also partners of the WWF's Power Switch Program in China. They helped the WWF train volunteers and organize propagandistic activities. In fact, main domestic environmental NGOs maintain good relationships with international environmental NGOs, resulting in good cooperation. In doing so, they have successfully promulgated environmental consciousness to the masses as well as to the policymakers. These NGOs also had formal access to the formation of the law.

After finishing the first draft of the law in August 2004, the EPRCC sent the draft to 130 institutions and individuals, including some environmental NGOs, to solicit feedback. The feedback received helped the EPRCC revise the draft. Moreover, the EPRCC held a symposium on the draft of the Renewable Energy Law on from October 27 to 28, 2004. It invited some NGOs, including the Global Village of Beijing and Friends of Nature, to attend the symposium. These NGOs contributed their ideas to the draft, which had some influence on the formation of the law.

In addition, other institutions and individuals also exerted some influence on the law. The Chinese Renewable Energy Industries Association (CREIA), which was initially funded by the United Nations Development Program (UNDP) and the Global Environment Facility (GEF), represents the voice of enterprises related to renewable energy. Out of the aim of making profits for the member companies, it also lobbied for the passage of the Renewable Energy Law in the name of energy structure change and environmental protection. Huang Ming, the owner of Huang Ming Group of Shandong province, was elected as a national congressman in 2003. His group is the largest producer of solar water heaters and photovoltaic cells in China. It is not surprising that he has become an activist in calling for the passage of such a law. As a congressman and a rich entrepreneur, his influence cannot be underestimated. He was one of the main proponents of the law. It was he who allied with the other 56 congressmen to bring forward the motion and traveled all over the country to promote the benefits of green energy. In addition, energy specialists continue to appeal for this type of legislation through various venues, such as publications and conferences. Furthermore, experts from the Energy Research Institute (ERI) of the NDRC, Tsinghua University, and China's Energy Research Association have had substantial influence on the decision-making process.

The law is a result of a combination of these forces. These actors not only created a very positive atmosphere for renewable energy, but also exerted their influence directly on the process of agenda setting, formation, and adoption of the law. As mentioned above, the passage of the law was a big policy change for the Chinese government. Since then, the government has changed its half-hearted measures on the development of renewable energy and created an opportunity for a promising future for a large-scale market. How did this change come into being? What are the dynamics for this policy change? I begin with two Western theoretical frameworks as tools to analyze the case.

### **Analysis Based on Two Western Theoretical Frameworks**

The two frameworks I use are the punctuated-equilibrium theory and advocacy coalition framework. Both were created by American scholars and based on policy practice in the U.S. These two frameworks are widely cited or applied to analyze policy change over fairly long periods. However, most studies were conducted in the context of Western policy areas, especially the U.S. Few studies use these two frameworks to analyze Chinese policies. As a developing country and as a transition economy, China is a new policy area to test the generalizability of these frameworks. On the one hand, the application of Western theoretical frameworks may explain Chinese policy practice. On the other hand, it allows us to test the generalizability of these frameworks.

#### **Punctuated-Equilibrium Theory**

Since Charles Lindblom published his article "The Science of 'Muddling Through'" in 1959, incrementalism has become the dominant perspective on policy change. However, Baumgartner and Jones (1993) found incrementalism is an incomplete or even misleading explanation of policymaking when it is tested empirically. After analyzing a number of policymaking cases, they found that although political processes are often driven by logic of stability and incrementalism, occasionally they also produce large-scale departures from the past. Policymaking both makes leaps and undergoes periods of near stasis. In order to explain these observations of both policy stasis and dramatic change, they created punctuated-equilibrium theory. This theory accentuates the interaction of subsystem politics and behavioral decision-making.

Institutional structures and the agenda setting process serve as a basis for the punctuated-equilibrium idea. American political institutions can be basically divided into two parts—political subsystems and macropolitical institutions. Political subsystems can be understood as various bureaucracies, congressional subgroups, interested parties, and other institutions,

while macropolitical institutions are mainly composed of Congress and the public presidency.

Political systems cannot simultaneously consider all the issues at hand, so decision-making includes both parallel processing and serial processing (Simon, 1957). Parallel processing means some decision structures are able to handle many issues simultaneously, while serial processing means issues can only be handled serially, one or a few at a time. So the policy subsystems can be viewed as a mechanism that allows the political system to engage in parallel processing (Jones, 1994). Most of the time, the majority of the issues are treated within political subsystems of experts. Within these subsystems, policy can only change incrementally due to bargaining among interests. The other reason for these marginal moves is that these issues are not in the public's attention. Parallel processing does operate against larger policy changes, because it tends to be insulated from the glare of publicity associated with high-agenda politics (True, Jones, and Baumgartner, 1999). These subsystems may be called iron triangles, issue niches, policy subsystems, or issue networks (Baumgartner and Jones 1993, p. 6). When dominated by a single interest, the subsystem is best thought of as a policy monopoly, which is supported by some powerful idea or policy image. This policy monopoly contains a negative feedback process so that it usually dampens pressures for change (True, Jones, and Baumgartner, 1999).

However, issues are not locked in political subsystems forever. Sometimes the parallel processing of issues breaks down and they must be handled serially. The macropolitical institutions constitute governmental serial processing where high-profile issues are considered, contended over, and decided one at a time or a few at a time. Within the spotlight of macropolitics, some issues catch fire, dominate the agenda, and result in changes in one or more subsystems (True, Jones, and Baumgartner, 1999). The question is how an issue moves higher on the political agenda. Baumgartner and Jones (1991, 1993) explain this by pointing out relatively open access to mobilizations in the United States. Some newcomers appear and become proponents of change in the status quo, often overwhelming the previously controlling powers. Once these mobilizations are under way and pressures are sufficient, they may lead to a massive intervention by previously uninvolved political actors and governmental institutions. This is a positive feedback process and may make policy monopolies collapse. As a result, dramatic policy changes occur; one or more policy subsystems may be disrupted, and a new agency or program may be created. These changes may have long-term effects. The new institutions remain in place after public and political involvements recede, often establishing a new equilibrium that lasts well after the issue recedes back off the agenda and into the parallel processing of a policy community that may be newly altered (True, Jones, and Baumgartner, 1999).

During this process, new participants may apply the strategy of issue definition, venue shopping, or apply a combination of the two. Defining or redefining an issue allows them to change the policy image (i.e., the public perceptions toward the issue), so that the issue may become “hot” and move upward on the macropolitical agenda. The media is often involved in this process. “When a policy shifts to the macropolitical institutions for serial processing, it generally does so in an environment of changing issue definitions and heightened attentiveness by the media and broader publics” (Jones 1994, p. 185). The other strategy is venue shopping. Venue shopping is the process of “finding a decision setting that offers the best prospects for reaching one’s policy goals” (Pralle, 2003, p. 255). Congress, the executive branch, the courts, and local government are all different venues where new participants can choose to advance their cases. Multiple venues in the American political system provide policy entrepreneurs multiple opportunities to disrupt policy monopolies and push dramatic policy changes (True, Jones, and Baumgartner, 1999).

As we have mentioned previously, the passage of the Renewable Energy Law is a major policy change for Chinese government. It is a leap rather than a cumulative result of incremental policy changes. Before the passage of the law, policies underwent a long period of stasis. Although there were more and more state-run or state-led projects, they were specific programs rather than systematic, consistent government policies. Therefore, the whole process is a punctuated-equilibrium process. We can use this theory to analyze the case.

Before the passage of the law, several national agencies and local governments controlled existent policies relevant to renewable energy. According to the concepts of Baumgartner and Jones, these are political subsystems. For many years, this issue was locked in these subsystems with an image that renewable energy could only be used as a solution for providing power to isolated communities and as scientific experiments. No one believed that it was a reliable supply that could be used to meet the country’s huge energy demand. There was an obvious negative feedback process that precluded a major policy change; therefore, those who wanted to promote it hesitated to bring forward their ideas. As a result, although China began to explore and employ renewable energy very early, it failed to develop any large-scale commercial market and effective enforcing policies.

During the past two years, things have changed dramatically. A group of newcomers, including research institutions and energy experts, industrial associations and influential entrepreneurs, international NGOs, and domestic environmental NGOs, has come to this policy area and tried to exert its influence on public policies. These newcomers successfully moved this issue out of the control of subsystems and put it on the agenda of a macropolitical institution—the National People’s

Congress—for serial processing. During this process, they employed the strategy of issue definition.

Energy specialists proved that renewable energy would meet a large part of the future energy demand if effective enforcing policies were enacted and implemented.<sup>6</sup> Their research reports had crucial effects on changing the attitude of policymakers. Businessmen argued that this promising industry would enhance the economic growth rate and create many employment opportunities. International and domestic NGOs claimed that it was a good means to avoid environmental deterioration and emission of more greenhouse gases. Moreover, they often borrowed arguments from each other and accentuated all the benefits as a whole. Thanks to the efforts of these actors, the policy image of renewable energy has been dramatically changed. It has become a hot issue related to several big problems of the country and has received attention from the macropolitical institutions. Media also played a role in the issue definition process. The reporter forums held by the Global Village of Beijing helped to heat up the issue in recent years. The involvement of the media promoted public attention on this issue. Furthermore, they also chose the right venue—the NPC—to address the problem. The NPC itself is a macropolitical institution and is able to move the issue out of the control of various subsystems. When all of these mobilizations were under way, a positive feedback process appeared and led to a major policy change.

As a result, a new national law came into being and some relevant institutional changes, such as a cost-share mechanism and a special fund from the annual budget, were confirmed. These institutions will have long-term effects. Even after the public attention and enthusiasm recede, these institutions will remain and will guarantee the continuous development of renewable energy.

So far, we have explained this case successfully using punctuated-equilibrium theory. However, this theory does not tell us where these new participants came from and why they tried to push the policy change. Another theoretical framework—the Advocacy Coalition Framework (ACF)—provides us with clues to answer these questions. Sabatier developed this framework in the 1980s. I will introduce the main points of this theory and then use it to analyze the case of the Renewable Energy Law in China.

### **The Advocacy Coalition Framework (ACF)**

The ACF also relies on a structural basis. It assumes that the most useful unit of analysis for understanding policy change in modern industrial societies is not any specific governmental organization or program, but a policy subsystem (or domain). A subsystem consists of those actors from a variety of public and private organizations that are actively concerned with a policy problem or issue and regularly seek to influence public policy in the domain (Sabatier and Jenkins-Smith, 1999). Although the term “subsystem” is also used in this framework, the

meaning of it is different from that of the punctuated-equilibrium theory. The subsystem in the ACF is a much broader conception that includes not only administrative agencies, legislative committees, and interest groups,<sup>7</sup> but also journalists, researchers, policy analysts, and actors at all levels of government. Within the subsystem, the ACF assumes that actors can be aggregated into a number of “advocacy coalitions.” Advocacy coalitions are defined as “people from a variety of positions (elected and agency officials, interest group leaders, researchers) who (1) share a particular belief system (i.e., a set of basic values, causal assumptions, and problem perceptions) and who (2) show a non-trivial degree of coordinated activity over time” (Sabatier, 1988, p. 139; Sabatier and Jenkins-Smith, 1993, p. 25). One of the characteristics of the ACF is that it accentuates the importance of technical information in the process of policy change. Another characteristic of the ACF is the understanding that the process of policy change requires a time perspective of a decade or more (Sabatier and Jenkins-Smith, 1999, p. 118).

The belief systems of each coalition are organized into a hierarchical tripartite structure. The highest level is deep core, which includes basic ontological and normative beliefs. The second level is policy core beliefs, which represent a coalition’s basic normative commitments and causal perceptions across an entire policy domain or subsystem. The policy core is the fundamental glue of a coalition. The third level is called the secondary aspects of belief system, which is composed of a large set of narrower beliefs. Deep core beliefs are very resistant to change; policy core beliefs are somewhat less rigidly held; and beliefs in the secondary aspects are assumed to be more readily adjusted (Sabatier and Jenkins-Smith, 1999, p. 118).

There is a set of factors exogenous to the subsystems, which are a critical prerequisite to major policy change. These factors include: (1) major socioeconomic changes, such as economic dislocations or the rise of social movements (Eisner, 1993); (2) changes in the systemic governing coalition (Burnham, 1970; Brady, 1988); and (3) policy decisions and impacts from other subsystems.

These are the structures and basic elements of the ACF and they help to analyze what causes policy change. In the ACF, policy change results from a change in the belief system of coalition members. Basically, there are three forces that can lead to changes in belief system. The first is policy-oriented learning<sup>8</sup>; the second involves changes in the real world, particularly the three exogenous factors to subsystems; the third is turnover in personnel. The basic argument of the ACF is that policy-oriented learning often alters secondary aspects of a coalition’s belief system and changes in the policy core aspects of a governmental program require a perturbation in non-cognitive factors external to the subsystem. Major policy changes only come from the change of policy core (Sabatier and Jenkins-Smith, 1999). Just like the punctuated-

equilibrium theory, the ACF also takes venue shopping as the main strategy of coalitions to achieve the policy objectives, but it does not include issue definition.

Compared with punctuated-equilibrium theory, the ACF answers who the newcomers are in a policy area—advocacy coalitions—and why they seek to change policies—some forces have changed their belief systems—and ad hoc exogenous factors may change policy core beliefs so that major policy changes may occur.

Using the ACF to analyze the case of the Renewable Energy Law, we should discern whether there exist some advocacy coalitions. From the analysis we conducted for punctuated-equilibrium theory, we know that newcomers, including research institutions and energy experts, industrial associations and influential entrepreneurs, international NGOs and domestic environmental NGOs, have come to the policy area and tried to exert their influence on public policies. Based on the definition of advocacy coalition, these actors do share a particular belief system. They put the environmental value before economic value, or at least believe they are equally important, and they have basic normative commitments to push the policies for the development of renewable energy. Furthermore, according to my record of the policy process, they did have a number of coordinated activities. Government officials seemed to interact closely with energy specialists and some entrepreneurs, while the interactions between domestic NGOs, international NGOs, and the media are more detectable. There were also activities among all the actors, such as the symposium held by the EPRCC and the reporter forums held by the Global Village of Beijing. Therefore, we can find an advocacy coalition before and during the legislative process of the Renewable Energy Law. But the coalition is nascent rather than mature because it cannot meet three of the four criteria sufficient for mature coalitions.<sup>9</sup>

The ACF underlines the role technical information plays in the policy process. This fits this case well. As we analyzed before, energy specialists proved that renewable energy would meet a large part of the future energy demand if effective enforcing policies were enacted and implemented. Their research reports were instrumental in changing the attitude of policymakers and the mass public.

Because this group is a new advocacy coalition, its belief systems were created rather than changed by some forces. Stone (1988) argues that subsystems may also emerge out of a new issue or a new conceptualization of a situation. Therefore, in this case, it was the creation of deep core beliefs and policy core beliefs of the new advocacy coalition that led to a major policy change. Sabatier and Jenkins-Smith (1999) argue that changes in the policy core aspects of a governmental program require a perturbation in non-cognitive factors external to the subsystem. We may infer that creation of policy core and deep core beliefs

also requires exogenous perturbations or shocks. Therefore, the logic becomes clearer: some exogenous shocks led to the creation of belief systems of a new advocacy coalition, then its belief systems guided its advocacy behaviors, which finally achieved a major policy change. However, this leads to the next question: What are those exogenous shocks? I will dissect this in the following section of this article.

### Reflections

So far, it seems that the punctuated-equilibrium theory and advocacy coalition framework explain the case very well and they complement each other in some sense. However, if we go back to the two main questions I posed in the introduction—Why was the law passed so quickly and overwhelmingly? and Why was the government willing to include various actors, especially NGOs into the process?—neither framework can provide persuasive explanations.

The first question is about the speed of the policy change. Punctuated-equilibrium theory does not address this problem, while the advocacy coalition framework says policy change will take a decade or so. More importantly, when we apply these Western theoretical frameworks to the Chinese decision-making process, we must not neglect the special political context of China. The major difference between China's political system and the American political system is that the U.S. has a structure for the separation of the three powers (the legislative, executive, and judicial powers) and a bipartite system, while China has a single party system and its executive institution and judicial institution are de jure subject to the legislature—the NPC (Gao and Tian, 2003). In fact, the Chinese Communist Party serves as the dominant political power in China. It can effectively control the legislature, executive branch, and judiciary. So, the Chinese political system has a dominant core. The existence of this dominant core may paralyze some major mechanisms of the two frameworks. In other words, a dominant core is not a part of the two frameworks, but it is a concrete part of China's policy practice. Excluding this factor, we cannot really understand the dynamics of policy change in China. Furthermore, punctuated-equilibrium theory assumes that open access to mobilizations is a key mechanism for drastic policy change, and advocacy coalition framework also implies a free institutional environment for advocacy coalitions. However, China's interest groups lack free access to mobilizations and the whole institutional environment is not favorable to them. Usually the Chinese government will inhibit any mobilization that is not initiated by itself. Why did the Chinese government support the mobilization of the new coalition for the Renewable Energy Law? In contrast to research institutions and enterprises, NGOs are the weakest members in the coalition. Why was the government willing to include them into the policymaking process? This is very rare in the history of legislation in China and deserves further

study. I will try to answer this question further on in this article, while in the next section I will focus on the question of why the law was passed so quickly and overwhelmingly.

### The Dynamics of Policy Change: Pressures and Retarding Forces

#### *Exogenous<sup>10</sup> Pressures*

In Chinese political context, there exists a dominant core that de facto controls other political institutions. As a result, it has final determination over the direction and speed of policy changes. In other words, the core's direct or indirect support is the prerequisite for any major policy change. According to this logic, the passage of the Renewable Energy Law must have been supported by the dominant core. I interviewed Fengchun Wang, Deputy Director General of the EPRCC and the main coordinator of the legislative process of the law. According to Wang, there were no top leaders of the CCP involved in the process. However, that does not mean they were kept uninformed about the process and the law, only that they supported the law indirectly and left the institutions with relevant jurisdiction to deal with the problem. At last, it was Hu Jintao, president of the state and the General Secretary of the CCP, who signed the law.

During the long period of policy stasis of renewable energy, the core did not attach much importance to its development. Now it supports renewable energy wholeheartedly. How did it change its attitude? We know that exogenous shocks, including dramatic changes of socioeconomic conditions, can change the policy core of advocacy coalitions, and in China, some exogenous shocks did create policy core or even deep core for the new coalition, which contributed to the big change of policy. We may infer reasonably that the same exogenous shocks pressed the core to change its attitude toward renewable energy. I argue that these exogenous factors do exist and exert great influence on both the dominant core and the advocacy coalition (i.e., the whole system). As a result, these groups achieved consensus on changing the status quo due to common interests, which provided strong dynamics for the policy change. That is the main reason why the law was passed so quickly and overwhelmingly. These exogenous factors are not hard to detect.

The first factor is the problem of energy security that has emerged in recent years. With the rapid growth of China's economy, the country is consuming more and more energy, most of which comes from combustion of fossil fuels, directly or indirectly. China's 30 years of energy self-sufficiency prior to 1995 has drawn to a close, and the country has become a net importer of oil. Due to the rapidly increasing demand for oil and nearly stagnant domestic production, China will import about 150 million tonnes of oil by the year 2010 (i.e., China would be importing some 50% of its

oil requirements). This number will go up to 250 million tonnes by 2020.<sup>11</sup> Since the mid-1990s, energy security has become a popular topic in academic, business, and governmental colloquia because of China's rapidly increasing oil dependence in the world market. However, this problem did not become very serious until the worldwide oil price surge that began in early 2004, and continues. China's economic expansion is suffering more and more pressure from oil price fluctuations. This has rung an alarm bell for Chinese policymakers and Chinese energy consumers, both individuals and companies. There is little doubt that the oil price rise accelerated the legislative process of the Renewable Energy Law. Out of consideration for energy security and relief from the pressure of oil dependence, Chinese policymakers have begun to integrate renewable energy into their planning energy strategy.

The second factor is the countrywide shortage of electricity. Economic renaissance after the East Asian Financial Crisis has led to a dramatic rise in electricity demand. Since 1999, the supply of electric power has hardly kept pace with demand. This has led to interruptions in the power supply from time to time, especially during the summer. In 2002, 11 provinces temporarily stopped power supply, and this number went up to 19 in 2003 and more than 20 in 2004.<sup>12</sup> Although emergent measures have been taken from time to time to guarantee the power supply in big cities such as Beijing and Shanghai, the problem remains.

Beijing has suffered much from energy shortage. In the summer of 2004, continuous hot weather made the demand for electricity increase sharply, and several provinces, such as Inner Mongolia and Shanxi, were forced to stop part of their own power supply to guarantee Beijing's supply. Shortage of electricity has become a very serious problem for Shanghai in recent years as well. In 2004, Shanghai created a discriminating power price system, charging higher prices for electricity use during rush hours. In 2005 Shanghai carried out more radical measures to balance power demand and supply. Some factories were required to stop working on some weekdays and to run on the weekends, while others were required to run at night. Additionally, all recreation centers had to stop using air conditioning before 6:00 p.m. This countrywide electricity shortage emergency prompted various actors to come to the consensus that renewable energy was a viable solution to the problem, and it hastened the ongoing legislative process of the Renewable Energy Law.

Environmental deterioration is the third catalyst of the law. Although Chinese governments have done a great deal to address this problem, China's environment remains undesirable. Energy consumption is one of the main causes of air pollution in China. In fact, the only abundant fossil fuel in China is coal.<sup>13</sup> This coal-based energy structure has led to serious air pollution, from agents such as sulphur dioxide, nitrogen dioxide, and suspended particulates, in addition to the

emission of greenhouse gases. According to the statistics of the State Environmental Protection Administration of China (SEPA), in 2004, only 132 cities, or 38.6% of the total cities under monitoring, met the second level of the national standard. The population exposed to polluted air (i.e., which fails to meet the national standard) is 66.9% of the total city population under monitoring. Acid rain appeared in 298 cities.<sup>14</sup> In Beijing, a coal-based energy structure<sup>15</sup> and dramatically increasing numbers of automobiles<sup>16</sup> have led to serious air pollution. Although the city's annual environmental investment exceeded 10 billion RMB Yuan in 2001, air pollution in this urban area is still serious, especially for particle concentration.<sup>17</sup> In China, the damage caused by this serious and lasting environmental deterioration has outweighed the relevant economic profit. Policymakers in China have realized that changing the energy consumption structure is the only way to eliminate this dilemma; a shift to renewable energy would result in a clean and safe energy structure. Although there has been no popular environmental movement in China, people, from ordinary citizens to top political leaders, have become more and more concerned about environmental issues. Emerging Chinese environmental NGOs and the increasing involvement of the media mirror this trend.

Last but not least, international norms of environmental protection also exert influence on the shift of Chinese policymakers' attitudes and the creation of new values and beliefs for emerging advocates. Since the birth of the Kyoto Protocol<sup>18</sup> at a 1997 U.N. Conference on Climate Change, the prevention of global warming has become an international norm. China signed the document in 1998 and ratified it in 2002. Although the agreement exempted developing countries' responsibilities for reducing greenhouse gas emissions, some of them, especially China, India, and Brazil, may become the focus of debate in the second round negotiations. The first stage of implementation will end in 2012. After that, it is very possible that China will be required to assume responsibilities for reducing emissions of greenhouse gases. With about one-eighth of the global total, China is currently the world's second largest producer of green house gases.<sup>19</sup> This is related directly to its increasing energy consumption. Although it is hard to measure the pressures felt by China's top policymakers, some government officials announced that China would take concrete measures to reduce the emission of greenhouse gases. On February, 16, 2005, Liu Jiang, Deputy Chief Director of the NDRC, announced seven measures that China had taken to prevent climate change. Supporting the development of renewable energy was one of the seven measures.<sup>20</sup>

Beijing serves as another example. Considering the global trend of environmental consciousness, conflict existed between the city's bidding for the Olympics and its seriously polluted air. In 2000, the Beijing 2008 Olympic Games Bid Committee (BOGBC), Beijing municipal government, and some environmental NGOs

developed a document called the Green Olympics Action Plan. Since then, Green Olympics has become a guiding principle for the 2008 Olympic Games in China. According to the promises of the BOGBC, during the Olympic period in 2008, concentration of SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub> in an urban area should reach the WHO guidelines and the particles should be comparable to that in the major cities in the developed countries.<sup>21</sup> In addition, Beijing would use a large amount of green power in the Olympic Village and complexes, 20% of which would come from wind power. In July 2001, Beijing became the home city to hold the 2008 Olympics. Since then, the Beijing municipal government has made every effort to fulfill its promises during the bidding process. The government has put a great deal of energy into replacing coal and coke with natural gas and electricity. Some heavily polluted factories have been shut down; quite a number of heavy industries will move out the city; and a number of heating boilers have been reconstructed. Several wind farms and a photovoltaic system is being built, and solar water heaters will be installed in the Olympic Village and complexes.

These exogenous shocks come from different sources—the rapidly growing economy at the expense of energy waste and environmental detriment, the shortage of electricity supply, the fluctuation of the international oil market, and the constraints coming from international norms—and exert great pressures on the dominant core of China. In June 2005, Hu Jintao himself presided over the collective study of the Political Bureau of the Communist Party, which is composed of the top leaders of the party. The topic of the study was the status of international energy and resources and Chinese energy strategy. Hu accentuated that energy is a momentous strategic problem that connects to the whole Chinese economy.<sup>22</sup> Moreover, the International Renewable Energy Conference was held in Beijing on November 7 to 8, 2005. Hu Jintao sent a written address to the conference and reiterated the decision of the Chinese government to develop renewable energy. These actions indicate that pressures from exogenous shocks have changed the attitudes of major policymakers in China toward renewable energy.

As we have previously analyzed, exogenous shocks also created the policy core of the new advocacy coalition in China. The policy image of renewable energy has been changed considerably. As a result, the major policymakers of China and the new advocacy coalition achieved consensus on developing renewable energy based on their common interests. This consensus provided strong dynamics for the dramatic policy change. Considering China's special political context, the support of the dominant core can easily break down the previous policy stasis and push the issue onto macropolitical agenda. With the help of the members of the coalition, the EPRCC drafted the law quickly and because of the dominant force of the party in the legislature, the law was passed very quickly and overwhelmingly.

### *Retarding Forces*

Generally speaking, reform measures that do little harm to most groups will go ahead smoothly. The Renewable Energy Law is just such a policy. We cannot find major interest groups who acted as retarding forces. The underdevelopment of renewable energy has made it a marginal industry in China so that few powerful groups have been involved in this field. Green power only provides an additional part of the total electricity supply. On the one hand, it will not exclude the use of conventional energy for a long time; on the other hand, traditional energy companies can also invest in this new industry. Under the protective measures of the government, the market for this new industry is stable and profitable. Therefore, there was no drastic objection to this law in the legislative process.

The main principle of the law is that government determines the prices of renewables and forces grid operators to buy green power at such prices. However, grid operators will not object to the law, although prices are usually higher than those of conventional energy resources. According to the law, the excess cost will be shared in the selling price throughout the grid. Everyone who is going to buy the electric power from the grid will share the excess cost of renewable energy. So, the extra cost of the grid enterprises can be covered by the higher selling prices so that they do not suffer a loss. Under this arrangement, consumers of green power will not spend much more money because the average price of power has been shared among all electricity consumers. Moreover, the proportion of green power will be relatively small at the beginning stage. As a result, the average price of electricity will only increase a little. In the long run, the price will drop down due to the economy of scale and learning experience.

Therefore, no major retarding forces of renewable energy can be found in the whole process. This policy change is a Pareto improvement. That means, given a set of alternative allocations and a set of individuals, a movement from one alternative allocation to another that can make at least one individual better off, without making any other individual worse off.<sup>23</sup> No actors will be worse off from renewable energy. Although consumers of electricity should pay a little bit more for the power they purchase, they get compensation from positive externality of renewable energy, such as cleaner air, less greenhouse gas emissions, economic growth, and more job opportunities.

Now the dynamics of the policy change are clear. The exogenous pressures led to the attitude change of policymakers and the mobilization of a new advocacy coalition. The common interests made them cooperate for the change of status quo. These served as driving forces. Because of the dominant status of the political core, the support for change was very strong. At the same time, no major interest groups objected to

the development of renewable energy. This policy change is a Pareto improvement. The combination of strong driving forces and few retarding forces made the law passed quickly and overwhelmingly.

However, we have not answered the second question raised in the introduction. Why was the government willing to include various actors, especially NGOs, into the process? As the ACF suggests, technical information is important for policy changes. Because of the importance of the technical dimensions of renewable energy, it was not a surprise that the government needed the advice of energy specialists. Furthermore, this is a market reform and, inevitably, relevant enterprises will be involved. But the involvement of NGOs in the policymaking process is very rare in China, and deserves more investigation.

### **Involvement of Environmental NGOs**

According to Yang (2005, p. 57), it was not until the late 1990s that many INGOs (International NGOs) began to launch projects or offices in China. According to a recent source<sup>24</sup> there are 33 INGOs with 91 environmental projects in China, and there are seven environmental INGOs with offices or branches in Beijing, including the Jane Goodall Institute, the World Wide Fund for Nature, Friends of the Earth (Hong Kong), and Greenpeace. As I have indicated, Chinese environmental NGOs maintain good relationships with international environmental NGOs. They build partnerships to run a number of programs and activities. Domestic NGOs receive funding, prestige, and expertise from INGOs. From 1996 to 1999, 85% of the funding for the Global Village of Beijing (GVB) came from INGOs and foreign governments. In 2000, 52% of the total revenue (RMB 2.5 Million) of Friends of Nature (FON) came from foreign sources (Yang, 2005, p. 57).

On the issue of developing renewable energy, there are no conflicts between international NGOs and the Chinese government. On the one hand, once the government made a decision to develop renewable energy, it found that foreign aid, including investment, expertise, information, institutional designs, management experience, were both valuable and accessible. On the other hand, developing renewable energy has no political dangers, which could collapse the existent authorities. As a result, the Chinese government embraces these international NGOs wholeheartedly and basically sets no limits on their activities in China.

From the perspective of these NGOs, environmental values outweigh political values. They know that if they carried out these programs with political pressures, the Chinese government would refuse their involvement. Their purpose is to help China change its energy structure to save the world's environment. Therefore, they also support China's development of renewable energy wholeheartedly without any political considerations. The common interests of both sides result in genuine double-win

cooperation. Chinese authorities, including both national and local government, need the participation of international environmental NGOs in policy-making processes. By contrast, they are alert to or even disgusted with religious and human rights organizations because they see them as a menace to the political system.

Since the 1990s, some Chinese scholars have organized NGOs to promote environmental awareness. The FON, founded in 1994, and the GVB, founded in 1996, are the most famous ones. The number of ENGOs increased dramatically from 1997 to 1999, when at least 69 environmental NGOs were founded, 43 of which were student organizations. By April 2001, the total number of student environmental organizations had reached 184, and by 2002, non-student ENGOs had grown to 73 (Yang, 2005, pp. 50-51).

In contrast to their counterparts in Western countries and Eastern and Central European countries, Chinese green social organizations do not seek a potentially dangerous confrontation with the national state (Ho, 2001). Yang (2002) also points out that they typically avoid confrontational methods and adopt approaches that encourage learning, cooperation, and participation. The general tendency has been to shy away from radical issues and tactics. Citing the words of Liao Xiaoyi, the founder of the GVB, Ho proves this tendency of aloofness to politically sensitive topics: "We will adhere to our principles: guide the public instead of blaming them and help the government instead of complaining about it...I don't appreciate extremist methods. I'm engaged in environmental protection and don't want to use it for political aims. This is my way, and my principle, too" (Ho, 2001, p. 916).

Because of the political cautiousness of these domestic environmental NGOs, Chinese authorities perceive them to be less threatening. Furthermore, the government recognized gradually that they could work on some issues the government has had difficulty tackling. For example, Chan (2004) points out that these NGOs work more efficiently to motivate individuals to take steps to protect their environmental interests. The government found it was beneficial to include environmental NGOs in some official activities. For instance, during the campaign to compete for the hosting of the 2008 Olympic Games, the Beijing Olympic Organizing Committee for the first time invited environmental NGOs to attend proceedings as advisors, in order to promote the green image of the Beijing Games (Chan, 2004, p. 78).

However, the government always keeps alert for these emerging NGOs. They may raise the level of public awareness over some sensitive social and environmental issues, which is a threat and challenge to the government. Furthermore, the government worries that these groups may eventually lead to the establishment of some political parties, similar to what has happened in many other countries (Chan, 2004, p.

78). In 1998, the central government proclaimed new regulations for the administration and registration of social organizations, which aimed to increase control over social organizations through stringent registration procedures (Ho, 2001, p. 903).

Under this political context, these NGOs must be cautious about their activities and seek to develop relationships, formally or informally, with the government. However, these NGOs also make efforts to enter the decision-making process and influence government policy, though they try to avoid those politically sensitive areas. Zhao (2005) finds that *guanxi*<sup>25</sup> is the most important and popular means for Chinese NGOs to influence government policy. It is a non-institutional way to get things done for the Chinese. However, they also have a few officially formal means to exert influence on policy-making. The NPC and the Chinese People's Political Consultative Conference (CPPCC) are two open and institutional channels of public participation in China. As previously noted, Huang Ming, a national congressman, successfully proposed the enactment of the Renewable Energy Law. Another example is Liang Congjie, the president of Friends of Nature and a standing member of the committee of the CPPCC. Representing FON, he can submit proposals to the CPPCC more easily (Zhao, 2005, p. 62). The government, however, treats these proposals in an ambiguous way; they will adopt some proposals, but may ignore or refuse others.

In short, the interactions between the Chinese government and emerging environmental NGOs are complicated. On the one hand, the government is seeking to utilize these NGOs to achieve its own goals. On the other hand, it excludes these NGOs from the policy-making process when their advice conflicts with the government's agendas. Furthermore, the government treats these NGOs as potentially suspicious and seeks control and regulation over their activities.

Under these circumstances, it is rare for the government to include environmental NGOs in the legislative process of a law. In the case of the Renewable Energy Law, at least their advocacy did not conflict with governmental agendas. We have analyzed that the government is seeking to utilize these NGOs to achieve its own goals, which leads us to ask: What are the government's goals in this case?

Just like the objectives of those international environmental NGOs, the domestic environmental NGOs are also eager to develop renewable energy in China. This proposal has no political colors, posing no threat to the government. Generally speaking, the government excludes NGOs from the policy-making process because they clash with the government's plans or they conflict with some vested interests. In the case of renewable energy, the government's plans are consistent with these NGOs' proposals. Additionally, as I have previously analyzed, there are few vested interests in this field because it is a new industry for China. So the government does not need to exclude

these NGOs from the policy process. However, why did the government actively include these NGOs?

The first reason lies in the fact that the NGOs can perform some functions that the government cannot. According to Sawin (2004), the commercialization of renewable energy needs public participation. It requires not only the participation of some organizations, but also that of the mass public. In other words, some green mobilization is necessary to push the public to accept renewable energy. Although the government can mobilize consumers to pay a bit more money for renewable energy, this approach will be less effective than leaving part of this job to the NGOs. Ordinary citizens would feel it as governmental pressure if the government alone touted renewable energy. However, the involvement of NGOs makes the promotion of renewable energy a more voluntary action. In other words, the policy image of renewable energy can be improved greatly due to the involvement of environmental NGOs. This is even more important given the usual top-down model of implementation of Chinese policies. Chinese people will feel less coerced by the government when they see the participation of NGOs, which have grown from the grassroots.

The other reason that the government included the NGOs is that states feel a necessity to conform to international norms in both environmental and energy problems. In addition to responding to those pressures from international society that we have discussed, the Chinese government also intends to enhance its international legitimacy and improve its international image. In some sense, inclusion of environmental NGOs in relevant decision-making processes is also an international norm. The Chinese government cannot ignore this norm if it seeks to address its energy and environmental problems in the international context. In addition to this, taking into consideration the close partnership of domestic environmental NGOs with international NGOs and some foreign governments, the inclusion of these NGOs will bring China more resources to develop renewable energy.

Therefore, the Chinese government will include domestic environmental NGOs and adopt their proposals selectively. If they do no harm to the political dominance of the government's authority, and even help it deal with some difficult problems and consolidate its legitimacy, the government will be very active in including the NGOs in the policy-making process.

The common interests among the government, international NGOs, and domestic environmental NGOs serve as the tie that draws all of the actors together. In this special case of renewable energy, the NGOs participated in the policy-making process due to the permission and even welcome of the authorities and acted as a dynamic, though relatively weak, of the dramatic policy change. Without the participation of these NGOs, the law might not have been formed and adopted so quickly; and I predict that without active public participation, of which the participation of the

NGOs is an important part, the Renewable Energy Law will not be implemented successfully.

### Conclusion and Discussion

The passage of the Renewable Energy Law initiated a national policy framework to develop renewable energy and will change the energy structure of China. After a long period of policy stasis, the National People's Congress unlocked this issue from various political subsystems and formed and adopted a new law quickly. This dramatic policy change resulted from many complicated and interrelated factors. To understand the dynamics of the policy change, I apply two Western theoretical frameworks of policy change—punctuated-equilibrium theory and advocacy coalition framework—to this case. I find, to some extent, both frameworks can explain the case well. Due to the efforts of newcomers, the policy image of renewable energy has been changed and the issue was moved out of the control of subsystems to the serial processing of a macropolitical institution. Policy monopoly was broken down and dramatic policy change occurred. In the whole process, we can find an advocacy coalition, though a nascent one, composed of a broad range of actors, including energy specialists and research institutions, enterprises and entrepreneurs, congressmen, government officials, international organizations, and emerging domestic non-governmental environmental organizations. Exogenous shocks changed or created the coalition's belief system and led to their actions, which eventually resulted in major policy change.

However, I find some important elements that have been left out of the analysis. The two frameworks cannot explain the speed of the policy change. Most important, the analysis neglects the existence of a dominant core in Chinese political context. Given its existence, any policy change must be attributed to the change of attitudes of the dominant core. In the case of renewable energy, I find some great exogenous pressures that led to this critical change. These pressures include energy security, shortage of electricity, environmental deterioration, and international norms. In addition, these pressures also created new beliefs and values for the nascent advocacy coalition, which articulated these problems and proposed to develop renewable energy as an appropriate policy alternative. At the same time, this policy change encountered few retarding forces because there are no entrenched interest groups, which may potentially block the process. Strong driving forces and few retarding forces made the law pass quickly and overwhelmingly.

The other highlight of the case is the inclusion of NGOs in the policy-making process. I argue that the common interests between the government and international organizations lead to a genuine and double-win cooperation between them. Common interests are also partly responsible for the inclusion of domestic environmental NGOs. However, the

government seeks to make use of these NGOs to achieve its own goals. In the case of the Renewable Energy Law, the government intended to improve the means of mass mobilization and to enhance its international legitimacy and image. The participation of these NGOs served as a dynamic, though a relatively weak one, for the policy change.

From this case we can draw some general conclusions about the dynamics of policy change in China. First of all, given the existence of the dominant core, any policy change must be attributed to a change of attitudes toward the issue. Advocacy groups must seek to persuade important political leaders by different means to achieve any policy goals. Second, exogenous pressures can exert great influence on various actors, including the dominant core. Some policy proposals as responses to exogenous pressures may become policy priorities of Chinese policymakers. Third, those policies that involve few vested interests are more likely to be adopted because they will meet with few objections. Last but not least, common interests of various actors, especially common interests between advocacy groups and the dominant core, can cause a policy to be formed and adopted very quickly and overwhelmingly. The last point can also explain the change of policy dynamics in China. The emerging advocacy coalition, including domestic and international environmental NGOs, served as a driving force in this case. This bottom-up process indicates some political pluralism has occurred in China. However, it seems that this pluralism is based on common interests between the dominant core and emerging advocacy groups. If their proposals can benefit both without doing harm to the dominant core, those proposals can be easily adopted. If their proposals conflict with the interests of the dominant core, they will not be adopted.

In this case, I apply Western theoretical frameworks to Chinese policy area. I find they can explain some aspects of the process very well. Although they were developed under a totally different political context from China's, they can, to some extent, explain Chinese policy practice effectively. This indicates that Western policy theories have some kind of universal explanatory powers. Students of public policy may make more efforts to apply various policy analysis theories to different policy areas. On the one hand, they can test the effectiveness of the theories. On the other hand, they can explain policy practice in these areas. However, I also find inapplicability of the Western theories, especially in the political context of non-democracy. With a dominant power in the political system, some assumptions of those theories are destroyed. So, we must understand the policy process and underlying dynamics in a different way. It indicates that when we use Western theories to analyze policy process in a different policy area, we must pay attention to the specific context to avoid any biases or misunderstandings. We cannot embrace these theories uncritically. However, we cannot reject them generally

under the excuse of Chinese special context, either. Chinese scholars should make every effort to create some native theoretical frameworks to analyze Chinese policy practice. It is a challenging task for all of us.

## Notes

<sup>1</sup> China does have large projects on hydropower, but I will not include it into my discussion of renewable energy because ecological crises related to dams make it hardly a way of sustainable development. In this article, renewable energy means energy from wind, solar (solar thermal and solar PV), geothermal, tidal, and biomass power. Discussion will focus on wind and photovoltaic power.

<sup>2</sup> Those laws guarantee renewable producers fixed, minimum prices and obligate electric utilities to provide grid access to renewable energy plants.

<sup>3</sup> Under this system, governments mandate a minimum share of capacity or generation of electricity to come from renewable sources (i.e., any power producer must generate a certain portion of electricity from renewable resources).

<sup>4</sup> <http://www.ef.org/home.cfm>.

<sup>5</sup> According to this system, green power consumers will select green power suppliers and purchase green power voluntarily. By doing so, they will usually receive a certificate from relevant government agencies or other authorized institutions.

<sup>6</sup> According to Xiliang Zhang (2004), a professor in Tsinghua University and one of the main drafters of the Renewable Energy Law, China's total reserve of wind energy is about one billion KW, and the total solar energy reserve is equal to 2.4 trillion tce. In addition to these, China's sea energy, geothermal energy and biomass energy are also very rich. If all of these kinds of energy could be used effectively, renewable energy would take the place of fossil fuels in the future.

<sup>7</sup> These three are traditionally viewed as the iron triangle in policy analysis. However, this iron triangle is different from the conception under the same term used by Baumgartner and Jones (1993).

<sup>8</sup> Policy-oriented learning refers to relatively enduring alterations of thought or behavioral intentions that result from experience and/or new information and that are concerned with the attainment or revision of policy objectives (Hecl, 1974, p. 306). The ACF assumes that such learning is instrumental, that is, that members of various coalitions seek to better understand the world in order to further their policy objectives (Sabatier and Jenkins-Smith, 1999, p. 123).

<sup>9</sup> (1) The participants regard themselves as a semiautonomous community who share a domain of expertise; (2) They have sought to influence public policy within the domain over a fairly long period of time (i.e., seven to 10 years); (3) There exist specialized subunits within agencies at all relevant levels of government to deal with the topic; (4) There exist interest groups, or specialized subunits within interest groups, that regard this as a major policy topic (Sabatier and Jenkins-Smith, 1999 136).

<sup>10</sup> I use the term exogenous factors in the same sense as Sabatier and Jenkins-Smith. They are external to political subsystems as well as the dominant core. "Exogenous" does not mean these factors all come from abroad.

<sup>11</sup> These numbers come from Philip Andrews-Speed, Xuanli Liao, and Roland Dannreuther, *The Strategic Implications of China's Energy Needs*, Oxford University Press, 2002, pp. 31-32. They compute these numbers based on a number of specialists' estimates.

<sup>12</sup> Wu Yunsheng, Jiang Yeqing, and Zhong Wen, *Causes of Current Power Shortage and Policy Measures, Electric Power Technologic Economics (Chinese)*, Vol. 16, No. 5, October, 2004, p. 4.

<sup>13</sup> According to Smil, the verified coal reserves of China are roughly 115 billion tonnes, ranking third in the world. It takes up one-third of the world total. However, at the end of 1996, the total of 3.3 billion tonnes of China's proved oil reserve amounted to just over 2% of the global total (ranking 11th in the world), and the country's proved natural gas reserves are amounting to a mere 0.8% of the global total, ranking only 23<sup>rd</sup> worldwide. At the extraction rate of 1998, China's coal reserves could support nearly a century of extraction, while its oil reserve is only enough for no more than two decades' extraction at the rate of 1996. Vaclav Smil, *Chinese Energy and Resource Uses: Continuity and Change*, *The China Quarterly*, No. 156, December, 1998, p. 936.

<sup>14</sup> <http://www.ifce.org/ifcecn/hjwz/2004status/dq.htm>

<sup>15</sup> Coal took up 51.4% of the total prime energy consumption of Beijing in 2000. Zhu Guanghua *The Current Energy Structure of Beijing*, December, 2004, <http://www.c2008.org/study.asp>.

<sup>16</sup> The total number of automobiles in Beijing was 1 million in 1998 and increased to 2.4 million in 2005. [http://news.xinhuanet.com/comments/2005-07/11/content\\_3204452.htm](http://news.xinhuanet.com/comments/2005-07/11/content_3204452.htm).

<sup>17</sup> Beijing Olympic Action Plan—Environmental Protection. <http://en.beijing-2008.org/17/49/article211614917.shtml>.

<sup>18</sup> On February 16, 2005, this document came into force.

<sup>19</sup> Vaclav Smil, Chinese Energy and Resource Uses: Continuity and Change, *The China Quarterly*, No. 156, December, 1998, p. 949.

<sup>20</sup> [http://news.xinhuanet.com/zhengfu/2005-02/17/content\\_2585518.htm](http://news.xinhuanet.com/zhengfu/2005-02/17/content_2585518.htm).

<sup>21</sup> Beijing Olympic Action Plan—Environmental Protection.  
<http://en.beijing-2008.org/17/49/article211614917.shtml>.

<sup>22</sup> [http://finance.dayoo.com/gb/content/2005-06/29/content\\_2114262.htm](http://finance.dayoo.com/gb/content/2005-06/29/content_2114262.htm)

<sup>23</sup> From Wikipedia, the Free Encyclopedia.  
[http://en.wikipedia.org/wiki/Pareto\\_efficiency#searchInput](http://en.wikipedia.org/wiki/Pareto_efficiency#searchInput).

<sup>24</sup> China Environment Series, Issue 5 (2002).

<sup>25</sup> The Chinese word *guanxi* means literally “a relationship” between objects, forces, or persons.

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#### References

Andrews-Speed, Philip, Xuanli Liao and Roland Dannreuther, *The Strategic Implications of China's Energy Needs*, Oxford University Press, 2002.

Baumgartner, Frank R., and Bryan D. Jones, “Agenda Dynamics and Policy Subsystems,” *Journal of Politics*, 53, 1991.

Baumgartner, Frank R., and Bryan D. Jones, *Agendas and Instability in American Politics*. Chicago: University of Chicago Press, 1993.

Brady, David, *Critical Elections and Congressional Policy Making*. Stanford: Stanford University Press, 1988.

Brezis, Elise S., Paul R. Krugman, and Daniel Tsiddon, “Leapfrogging in International Competition: A Theory

of Cycles in National Technological Leadership,” *The American Economic Review*, Vol. 83, No. 5 (December 1993), pp. 1211-19.

Burnham, Walter Dean., *Critical Elections and the Mainsprings of American Politics*. New York: W.W. Norton, 1970.

Byrne, John and Daniel Rich, *Energy and Environment: The Policy Challenge*, Transaction Publishers, 1992.

Capello, R., P. Nijkamp, and G. Pepping, *Sustainable Cities and Energy policies*, Springer, 1999

Chan, Gerald, “China's Compliance in Global Environmental Affairs,” *Asia Pacific Viewpoint*, Vol. 45, No. 1, April 2004.

Chen, Yingrong, “Renewables in China,” *Energy Policy*, November, 1991.

China Electric Power News, February 1, 2005

David, Paul, “Clio and the Economics of QWERTY,” *American Economic Review*, 1985, 75(May): pp. 332-7

Downs, Erica Strecker, *China's Quest for Energy Security*, RAND

East China Electric Power News, June 16, 2005

Eisner, Marc., *Regulatory Politics in Transition*. Baltimore: Johns Hopkins University Press, 1993.

Gao, Yongqiang, and Zhilong Tian, “How Business Influences Government Policy in China,” *Chinese Public Administration Review*, Vol. 2, Nos. 1/2, March/June, 2003.

Goodstein, David, *Out of Gas*, New York: W.W. Norton & Company, 2004

Hayes, Michael T., *Incrementalism and Public Policy*, New York: Longman Publishing Group, 1992.

Hecl, Hugh, *Social Policy in Britain and Sweden*. New Haven: Yale University Press, 1974.

Ho, Peter, “Greening Without Conflict? Environmentalism, NGOs and Civil Society in China,” *Development and Change*, Vol. 32, 2001.

Jones, Bryan D., *Reconceiving Decision-making in Democratic Politics: Attention, Choice, and Public Policy*. Chicago: University of Chicago Press, 1994.

Kaya, Yoichi and Keiichi Yokobori, eds., *Environment, Energy, and Economy: Strategies for Sustainability*, United Nations University Press, 1997.

- Latham, Earl, "The Group Basis of Politics: Notes for a Theory," *American Political Science Review*, 46, June, 1952.
- Li, Wuwei, Taking Energy Bottleneck Seriously, *Wenhui News*, January 17, 2005.
- Lindblom, Charles, "The Science of Muddling Through," *Public Administration Review* 19, 1959.
- Pralle, Sarah B., "Venue Shopping, Political Strategy, and Policy Change: The Internationalization of Canadian Forest Advocacy," *Journal of Public Policy*, 23:3, 2003.
- Press, Daniel and Daniel A. Mazmanian, "Understanding the Transition to a Sustainable Economy," in Norman J. Vig and Michael E. Kraft eds., *Environmental Policy: New Directions for the Twenty-First Century*, Washington D.C.: CQ Press, 2003.
- Prugh, Thomas, Christopher Flavin, and Janet L. Sawin, "Changing the Oil Economy," in Worldwatch Institute, *State of the World 2005: Redefining Global Security*, 2005.
- Ravindranath, Rao, Natarajan, and Monga, *Renewable Energy and Environment: A Policy Analysis for India*, Tata McGraw-Hill Publishing Company Limited, 2000.
- Sabatier, Paul, "An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein," *Policy Sciences*, 21, 1988.
- Sabatier, Paul, and Hank Jenkins-Smith, *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder: Westview Press, 1993.
- Sawin, Janet L., *Mainstreaming Renewable Energy in the 21<sup>st</sup> Century*, World Watch Paper, May 2004.
- Sawyer, Stephen W., *Renewable Energy: Progress, Prospects*, Association of American Geographers, 1986.
- Simon, Herbert, *Models of Man*. New York: Wiley, 1957.
- Smil, Vaclav, Chinese Energy and Resource Uses: Continuity and Change, *The China Quarterly*, No. 156, December 1998.
- Steger, Ulrich, et al., *Sustainable Development and Innovation in the Energy Sector*, Springer, 2005.
- Stone, Deborah, *Policy Paradox and Political Reason*, New York: HarperCollins, 1988.
- Wu, Fengshi, "Environmental GONGO Autonomy: Unintended Consequences of State Strategies in China," *The Good Society*, Vol. 12, No. 1, 2003.
- Wu, Yunsheng, Jiang Yeqing, and Zhong Wen, Causes of Current Power Shortage and Policy Measures, *Electric Power Technologic Economics (Chinese)*, Vol. 16, No. 5, October, 2004.
- Yang, Guobin, "Environmental NGOs and Institutional Dynamics in China," *The China Quarterly*, 2005.
- He, Jiankun, Xiliang Zhang, and Jiangping, Xiao, *Research and Report on the Legislation of Renewable Energy*, December, 2004.
- Zhang, Ye, "China's Emerging Civil Society," CNAPS (Center for Northeast Asian Policy Studies) working paper, August 2003.
- Zhao, Xiumei, "From Adapting to Political Constraints to Influencing Government Policy: A Study of the Strategies of Chinese NGOs in NGO-State Interaction," *The Nonprofit Review*, Vol. 5, No. 1, 2005.
- Zhu, Guanghua The Current Energy Structure of Beijing, December, 2004, <http://www.c2008.org/study.asp>