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China's experiment of emission permits trading

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ABSTRACT

This paper identifies the main issues and weaknesses of China's current policy design and practice regarding emission permits trading. China's experiment establishing an emission trading market has advanced progressively for over 10 years covering more than 24 regions. By analyzing the latest official set of trading guidelines issued by the State Council in 2014 and its supplementary laws and regulations, this paper argues that the emission permits trading policy in China is a hybrid framework consisting of multiple policy instruments, each of which is intended to achieve efficiency. However, underlying conflicts among these instruments impair the overall efficiency of the policy and cause a waste of resources, and other problematic designs in this policy framework reduce the necessity and feasibility of emission trading. This paper further examines the emission trading practices in one typical pilot province and provides evidence and explanations of a non-competitive local trading market. In order to make the best use of the power of the market to reduce emissions in China, this paper argues that those issues in policy design should be addressed in the future.

1. Introduction

China is accelerating its experiments using incentive-based mechanisms to reduce emissions and save energy. In its latest Five Year Plan (2016–2020) (FYP), the State Council emphasizes three market mechanisms: carbon trading, energy permits (*yong neng quan*) trading, and emission permits (*paiwu quan*) trading (State Council, 2016). On the Central Government's agenda, the current progress for establishing a carbon market is ahead of the other two markets, since a nationwide carbon market will be launched soon, while permits trading is still under experiment, and the energy permits trading just started in 2016.¹

Carbon trading and emission permits trading are two related yet different policy instruments coexisting in China. While the carbon trading system was established in a top-down manner in 2011 under international pressure (National Development and Reform Commission, 2011), the emission permits trading in China is more like a bottom-up experiment since the 1990s, which has been driven by both the Central Government and local governments (Chang and Wang, 2010). While literature focuses on the development of carbon trading in China (Lo, 2016; Jiang et al., 2017), less attention has been paid to the progress of China's general

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Abbreviations: FYP, Five Year Plan; 2014 Guidelines, an official set of guidelines regarding emission permits trading issued by the General Office of the State Council in 2014 in a document named Guideline for Further Promoting the Pilot Experiments Regarding Paid Use and Emission Permits Trading (*Guanyu jingyibu tuijin paiwu quan youchang shiyong he jiaoyi shidian gongzuo de zhidao yijian*); EPA, Environmental Protection Agency; Acquisition Fee Standard, the unit price standard determined by each pilot region for acquiring emission permits. Usually different pollutant has different price standard; SPATC, a platform for emission permits trading in Shanxi province established by Shanxi government. Its full name is Shanxi Pollution Allowance Trade Center

¹ It is stated in the 13th FYP that a national carbon market shall be launched in 2017, while the State Council only requires all pilot regions, where the emission permits trading experiment are conducted, to fully establish relevant rules and to develop a system of cross-region trading (State Council, 2016). The energy permits trading has just been launched in four pilot provinces in 2016 (State Council, 2016; National Development and Reform Commission, 2016).

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emission trading.

China's experiment establishing the emission permits trading market has advanced progressively. Until now, twenty four provinces and municipalities have conducted their own emission trading experiment by establishing trading rules and online/offline trading platforms.² In 2014, the State Council issued an official set of guidelines (2014 Guidelines) related to emission permits trading based on the lessons learned over 10 years (General Office of the State Council, 2014). In 2016 emission permits trading was written into the national law regarding atmospheric pollution for the first time (Standing Committee of the National People's Congress, 2016a, 2016b, 2016c).

This paper discusses China's experiment of emission permits trading by analyzing the 2014 Guidelines (including its supplementary laws and regulations) and by examining the trading practice in one pilot province. A comprehensive policy framework has been established, which has taken into consideration of multiple incentive-based tools, and trading practice has been actively conducted for years. However, some issues and weaknesses still exist. The purpose of this paper is to identify those main challenges in China's current policy design and practices regarding emission trading, hoping these challenges can be addressed in the future in China in order to make the best use of the power of the market to reduce emissions.

2. Guidelines for emission permits trading

The preparation of the 2014 Guidelines started in 2009. Many related ministries and pilot regions participated in the discussion (Ministry of Environmental Protection of the People's Republic of China, 2012). These guidelines serve as an important summary for the over 10-years experiment and provide general principles for dealing with common issues arising from the permits trading. After the issuance of the 2014 Guidelines, the Central Government promulgated a series of laws and regulations to elaborate those general rules set forth (Ministry of Environmental Protection of the People's Republic of China, 2016; General Office of the State Council, 2016; Ministry of Finance et al., 2015). The Central Government's long-term plan has been to continuously expand the scope of the emission permits trading nationwide and to exploit the power of the market for resource allocation (State Council, 2016; General Office of the State Council, 2014).

The 2014 Guidelines and its supplementary laws and regulations have provided a policy framework for emission permits trading, which includes two sets of rules: allocation of emission permits and trading of emission permits.

2.1. Emission permits system

The Central Government views the proper allocation of emission permits as the foundation for the emission trading and requires all pilot regions to complete the issuance of permits by the end of 2015 (General Office of the State Council, 2014). Moreover, it plans to establish an emission permits system to all polluters nationwide by 2020 (General Office of the State Council, 2016).

Emission permits in China refer to the specific pollutant type(s) and the emission quantity that a firm is allowed to discharge (Ministry of Finance et al., 2015; General Office of the State Council, 2014). The rules regarding emission permits in China have some interesting features.

2.1.1. Comprehensiveness and long period of validity

Each polluter in China should hold one overall permit for one polluting location, covering all pollutant types (e.g. air pollutants, water pollutants and others) and emission quantities that it is allowed to discharge in this location (Ministry of Environmental Protection of the People's Republic of China, 2016). The emission quantities set forth in that overall permit can be deemed as "specific permits" that are tradable. When it comes to permits trading, polluters trade with the specific permits for a specific pollutant. The "specific permits" are always associated with an overall permit and have no separate period of validity. As long as the overall permit which they associate with is valid, the specific permits are valid, and they will expire simultaneously when the overall permit expires.

The trading will change the permitted emission quantity for a specific pollutant during the period of validity of the overall permit; therefore, each trading participant is required to file for changing its overall permit to reflect such updated information (General Office of the State Council, 2014; Ministry of Environmental Protection of the People's Republic of China, 2016).

The period of validity for an overall permit which is initially allocated is *three* years (Ministry of Environmental Protection of the People's Republic of China, 2016). Upon its expiration, a polluter can apply for an extension of an even longer period—another *five* years, and the extension is subject to the review and approval of the local Environmental Protection Agency (EPA) (Ministry of Environmental Protection of the People's Republic of China, 2016).

2.1.2. Filing and approval requirements for obtaining a permit

There is a specific filing, approval, and issuance process for a polluter to get an emission permit. A polluter needs to report detailed information regarding its emissions to the local EPA, including pollutant types, emission quantities, operation phases that will emit pollutants, and relevant pollution prevention infrastructure (Ministry of Environmental Protection of the People's Republic of China, 2016). The local EPA reviews filed documents, conducts on-site inspection to verify some questionable information if necessary, and issues the emission permit to the polluter who has filed complete information and complied with relevant laws and regulations.

² This number is calculated based on the existence of local regulations regarding emission permits trading.

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