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From Local Carbon Emissions Pilots to the National Carbon Emissions Trading Scheme in China

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This study serves as a consolidation of existing research and practical foundations pertaining to the expansion of sectors within the China National Emissions Trading Scheme (CN-ETS). It delves into critical aspects such as the pace and sequencing for extending CN-ETS coverage beyond the power sector, addresses the challenges related to data quality that arise during the expansion of sectoral coverage within the CN-ETS, identifies the essential components of a robust Measurement, Reporting, and Verification (MRV) system for environmental regulation enhancements, and explores the complementary role played by the pre-existing China local emissions trading schemes (CL-ETS) in fostering cost-effective development within the CN-ETS landscape. Leveraging insights drawn from international experiences, including the EU-ETS I (the existing European Union Emissions Trading System), EU-ETS II (the forthcoming EU Emissions Trading System encompassing heating and transport sectors in the EU), and the German Emissions Trading System, this research endeavors to provide valuable perspectives on sectoral expansion within the CN-ETS.

The overarching objective of the paper is to facilitate the expansion of the CN-ETS and offer comprehensive guidance for the formulation of a precise timetable and a strategic roadmap for the seamless transition from CL-ETS to CN-ETS. The paper's structural framework as following. Section 2 serves as the introduction, offering a comprehensive overview of the research perspectives and methodologies employed in this study. Section 3 presents empirical insights gleaned from a rigorous examination of pertinent literature, meticulous document analysis, and insightful semi-structured interviews with carbon market experts familiar with Chinese and other carbon markets. Section 4 presents recommendations aimed at establishing a precise timetable and a strategically sound approach for the seamless transition from CL-ETS to CN-ETS, seeking to provide valuable guidance for policymakers and stakeholders involved in this crucial transition. Finally, section 5 encapsulates the conclusions derived from the analysis conducted in the study, offering insights and implications for future endeavors in the realm of CN-ETS.

Our investigation reveals the progress that has been made with carbon markets over time in China. The move from CL-ETS pilots to a CN-ETS covering electricity generation is a globally significant development for carbon pricing and carbon markets. The intentions behind these developments are good, as they are designed to promote Chinese carbon neutrality and they recognize that a carbon market is a key pillar of any serious net zero climate policy.

The urgency to reduce emissions globally, including in China, is increasing. Therefore, it is essential to accelerate the rollout of effective decarbonization policies in China. The Chinese government is making encouraging progress in this area. A significantly expanded and strengthened CN-ETS could play a crucial role in this process, similar to the impact of the EU-ETS in Europe.

Our study highlights that monitoring, reporting, and verification (MRV) issues remain critical in China, and timely improvements in this area are necessary. We outline the positive steps the Chinese government is taking to address these challenges. Additionally, we see potential for CL-ETSs to serve as innovation labs for the development of carbon markets in China.

We contend that the introduction of the EU's carbon border adjustment mechanism (EU-CBAM) acts as a catalyst for the evolution of the CN-ETS. It creates incentives to broaden the CN-ETS to encompass all sectors covered by the EU-CBAM, aligning with its implementation timeline. This alignment suggests that the EU and China should aim for full market coupling by 2034, establishing a unified carbon price across both regions by then. Such a move would benefit global decarbonization efforts and facilitate compliance with the EU-CBAM while minimizing transaction costs. If this coupling occurs, it would position China and the EU to collaboratively enhance the expansion of carbon markets and pricing worldwide, significantly increasing the likelihood of achieving global decarbonization goals.

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