



## Constructing China's MRV System

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## **EXECUTIVE SUMMARY**

China officially launched its plan to build a national carbon market in December 2017, and it is estimated to be the world's largest carbon emissions trading market, surpassing that of the European Union (EU). The market will first start with coverage of the power industry that will include entities emitting more than 26,000 annual tons of carbon dioxide, which is almost all of China's power plants.

China has chosen to begin with the power industry, which produces about 30% of China's national emissions, because of challenges in collecting data in other sectors, building a strong legal foundation, and establishing an efficient system for trading. While there are plans to address these issues over the next two to three years, the effectiveness and longevity of China's national carbon market depends on the construction of a robust monitoring, reporting, and verification (MRV) system for carbon emissions data, as well as gradually including all the "polluting industries" under the emissions trading scheme (ETS).

Successful MRV systems are comprised of traditional participants — government, corporate sector, and thirdparty verification companies — built upon a solid framework of relevant laws and regulations, technical standards, talent and capacity building, and data reporting systems. The processes to institutionalize and standardize MRV frameworks across MRV participants are essential. It underpins successful data collection used to quantify carbon emissions and to facilitate allowance allocation and trading. These are the building blocks of an effective carbon market.

Since 2013, the Chinese MRV experience in the seven pilot carbon markets that were established to test the system before the national carbon market was launched have provided valuable insights and takeaways, which have been applied in the construction of an MRV system for the national carbon market. Based on these pilot market experiences, the government announced greenhouse gas (GHG) accounting and reporting guidelines for 24 sectors, organized historical data reporting and verification for eight sectors, drafted rules for establishing MRV management systems – including a draft management decree on GHG reporting and on accreditation of third-party verifiers, and draft guidelines for third-party verification. All are pending official approval. Some key barriers to the establishment of the MRV system at this stage include addressing weak legal and institutional support, inadequate technical standards and guidelines, disparate competencies of third-party verification capacity, and the unmet demand for institutionalized and practical capacity building.

As other previously established MRV systems have shown, such as in the EU, it takes a lengthy process of "learning by doing" combined with continuous, incremental improvements, to build a robust and reliable MRV system. In addition, it is important that the government has good top-level design with a clear strategy, a welldefined position, and attainable expectations when constructing a national MRV system. Based on the experiences of the seven pilot markets — combined with research based on the European exchange, we recommend that the Chinese government consider the recommendations below to develop an effective MRV system.

- Accelerate development of legislative framework and technical guidance
- Strengthen guidance on unified implementation of rules and standards
- Improve and standardize construction of third-party verification service
- Enhance coordination and support for capacity building
- Establish evaluation mechanism for continuous improvement



