

VII. Annex

PMR PROJECT IMPLEMENTATION STATUS REPORT (ISR)

1. SUMMARY INFORMATION

Implementing Country/Technical Partner:	P.R. China
Reporting Period:	From February, 25 th 2015 to April 1 st , 2018
Report Date:	April 1, 2018
Implementing Agency:	Department of Climate Change, National Development and Reform Commission, PR of China (NDRC DCC) National Center for Strategy and International Cooperation (NCSC)
Contact Person:	Mr. Wenbo LIU

Grant Executed By:	World Bank
Grant Effectiveness and Closing Dates:	03/23/2015 - 06/30/2018 Applying to extend closing date to 06/30/2019
Grant Amount (USD):	USD 8,000,000
Funding Mobilized (USD):	USD 109,900,000
Funding Committed (USD)	USD 117,900,000

2. OVERVIEW

Objectives

The China Partnership for Market Readiness Project (CPMR Project) has been implemented by the Government of China (GOC), with the World Bank (WB) as the delivery partner. China is an Implementing Country Participant in the Partnership for Market Readiness (PMR). The CPMR project's development objective is to enable China to design a national Emissions Trading Scheme (ETS).

Indicators

The Project Development Objective will be achieved when a proposal for a national carbon emissions trading system is put forward by the NDRC Department of Climate Change. In particular, the Project Development Objective will be achieved and measured through the following intermediate output indicators:

- 1) Proposal on methodologies of scope, coverage, caps and allocation. The second draft report has been submitted on March 2017. For detailed progress see Section 3.
- 2) Proposal on legal framework and governing system of the national ETS. The second draft report has been submitted on March 2017. For detailed progress see Section 3.
- 3) Proposal of the MRV system for the national ETS. The second draft report has been submitted on March 2017. For detailed progress see Section 3.
- 4) Proposal to improve the national registry. The second draft report has been submitted on March 2017. For detailed progress see Section 3.
- 5) Thematic research reports on SOEs and power sector. The second draft report for SOE and power sector have been submitted on March 2017. For detailed progress see Section 3.

Monitoring and evaluation is given high priority at all project levels and the indicators for monitoring and evaluation will be relevant when measuring the effective and timely implementation of all activities and their impact. Monitoring of the implementation of the proposed project will involve: (a) monitoring of performance indicators as included in the results framework in Table 4; (b) semi-annual progress reports; and (c) a midterm and a final evaluation of implementation.

The Project Management Office (PMO), with the supervision of Steering Committee, will be responsible for overall monitoring and systematic evaluation of implementation progress including collection of project performance information and reporting on the impact and results of the project. NCSC assists NDRC DCC for Day-to-day technical and financial monitoring. .

China's National ETS is launched on 19th December 2017. CPMR supported the decision and updated the timeline of activities, including inputs to the technical outputs and policy recommendations. Considering there are many specific works to do in the next phase of ETS construction, PMR support is needed especially in the field of carbon market financing management and annual updating of benchmarking and default values in the allowance allocation.

3. IMPLEMENTATION REPORT BY COMPONENT

Differences between the Objectives/Activities in the Market Readiness Proposal and the Grant Agreement

<p>Are there any important and material differences between the objectives/activities proposed in the Market Readiness Proposal and endorsed by the Partnership Assembly of the PMR and those agreed to in the Grant Agreement with the Delivery Partner and described in the Project's Results Framework?</p>	<ol style="list-style-type: none"> 1. Activities of Component 7 has slight change, changes of activity is reported to the PA16. Specific information refers to the ISR in PA 16. 2. Additional Output of the project. Construction of national ETS is more and more clear with continues research and study. A clear route map is essential to the construction of national ETS. With is regard. A policy recommendation, "General Construction Plan of China's National ETS", is
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	<p>raised by the project. The additional output is approval by state council and published by NDRC in December 2017.</p>

Implementation Progress by Component

A. Component 1: Coverage, cap, allocation methodologies and supplementary mechanisms	
<p>Status: Ongoing</p>	<p>A number of elements are essential to the functioning of an ETS. The first set of questions that need to be studied and addressed are the coverage and scope, cap setting, allocation, and price containment mechanisms of ETS. The inception report, outline of study report, and first draft report have been completed. Currently, the activities of this component are progressing smoothly. The completion rate of the project is about 50% based on the actual disbursement, while the actual completion rate, based on the completion of activities and related deliverables is higher. The activity progress is following the development of the ETS, which has been faster than planned; but the disbursement is still following the sub-component contract, which is in line with the original schedule.</p> <p>The progress to date of the activities under this component is summarized as below:</p> <ol style="list-style-type: none"> 1) Evaluation of domestic experiences: Completed comparative analysis and performance evaluation of the seven regional pilot ETS, including coverage, allocation mechanisms, offset mechanisms, emissions reduction effectiveness, degree of compliance, market performance etc. 2) Evaluation of international experiences: Completed review of ETS design in six international case studies (EU, California, Quebec, Australia, New Zealand, and South Korea), including ETS scope, emissions cap, allocation mechanism, market regulation, offset mechanisms, and international linkages. 3) Analysis of the coverage and scope of the national ETS: Completed and submitted policy recommendation on “Coverage of the National ETS”, including GHG type, emission type, emission boundaries, enterprise threshold standards, and sectors included. 4) Determination of national emissions caps (ETS and non-ETS caps): Draft version of “The principle and method of emissions caps and allowance allocation of the National ETS”. 5) Determination of regional emissions caps (ETS and non-ETS caps): Draft version of “The principle and method of emissions caps and allowance allocation of the National ETS”. 6) Methodology development for allocating emission allowances: Completed and submitted preliminary policy recommendations for the “ETS Allowance Allocation Method”, including general principles

	<p>for allocation, two allowance allocation methods, and recommended allocation methods for 8 sectors (18 sub-sectors). Field investigations and data collection are being conducted to assess feasibility of the allocation methods for the 8 sectors. And also submitted detailed guidelines of emission allowance allocation for power industry, cement industry, electrolytic aluminum production industry in 2017.</p> <p>7) Study on market regulation mechanisms: Completed literature investigation and the draft of research report.</p> <p>8) Study on offset mechanisms: Completed literature investigation and the draft of research report.</p> <p>9) Study on international ETS linkages: Completed literature investigation and the draft of research report.</p>
<p>Comments:</p>	<p>Expected main results were achieved early than planned. According to the Programme Implantation Plan (PIP), the outcome of component 1 shall be submitted in 2018. Since the target date for initiation of national ETS was set in 2017 and the development of ETS is included in the key reforming works led by the Party Central Committee, the NDRC should complete all related tasks as early as possible. According to schedule of reforming work, the main output of program of allowance allocation was finished in 2016 and it will be published in 2018.</p>
<p>B. Component 2: Legal Framework and supervision system</p>	
<p>Status: Ongoing</p>	<p>The smooth operation of China's national emissions trading scheme needs a comprehensive management and supervision mechanism. It is envisioned the national ETS management and supervision system would cover or need to consider the following elements on which studies and research will be done to provide recommendations for decision making: administrative rules of China's national ETS, administrative rules for exchanges in the China's national ETS, administrative rules on market supervision of China's national ETS, compliance mechanism for China's national ETS, and necessity and feasibility of futures trading in China's national ETS. The inception report, outline of study report, and first draft report and revised reports have been completed and submitted. The cost disbursement rate of this component is about 50%, while the actual research activities have almost been finished. Output of the research activities has supported the development of the national ETS, which was launched in December 2017.</p> <p>The progress to date of the component activities is summarized as below:</p> <p>1) Administrative Rules of China's National ETS: a) Completed review of legal framework and regulatory systems governing all major international ETSS and China's seven pilot ETSS; b) Completed draft Regulation on Carbon Emissions Trading, including general provisions, management of emission allowances, emission trading, reporting, auditing and settlement, information disclosure and supervision management, legal liability, and supplementary provisions, based on stakeholder comments solicited by the NDRC in</p>

	<p>April 2015, feedback from a public hearing held in July 2015 and stakeholder comments received in January 2016; c) Based on the comments and requirements by NDRC and State Council Legislative Affairs Office, supplemental supporting documents on the draft regulation have been prepared.</p> <p>2) Administrative Rules for Exchanges in China's National ETS: a) Completed review of management methods of exchanges in international ETS, including trading rules, supervisory and regulatory models, and organizational frameworks of key exchanges, and prepared draft report; b) Completed review of management methods of exchanges in domestic pilot ETSs including their main functions, administrative and supervisory rules, key issues and lessons learned, and prepared draft report; c) Completed review of management methods and regulatory requirements for traditional financial exchanges, e.g. securities and futures, and prepared draft report; d) Completed preliminary draft of Administrative Rules of Exchanges in China's National ETS, solicited stakeholder comments on the draft and several rounds of revisions have been made to the draft.</p> <p>3) Administrative Rules for Market Supervision of China's National ETS: a) Completed review of regulatory mechanisms for all major international ETSs, including the EU ETS and US RGGI carbon markets, covering legal and institutional framework, key risks and issues; b) Completed review of lessons learned in regulating and supervising domestic carbon and financial markets, including the pilot ETSs, securities and futures exchanges; c) Identified regulatory requirements for the national ETS, including targets and activities to be regulated; d) Completed draft of Administrative Rules for Market Supervision of China's National ETS, including general provisions, auctioning of allowances, trading platform, basic trading rules, trading service institutions, carbon trading association, supervision and management, legal responsibilities, and supplementary provisions; e) Solicited stakeholder comments on the draft and several rounds of revisions have been made to the draft.</p> <p>4) Compliance Mechanisms for China's National ETS: a) Completed review of compliance related regulations in international ETSs, including compliance authorities, period, rules, incentive mechanisms, penalty mechanisms, key issues, and experiences and lessons learned, etc.; b) Completed review of compliance mechanisms in the domestic pilot ETSs, including compliance authorities, period, rules, incentive mechanisms, penalty mechanisms, degree of compliance, key issues, and experiences and lessons learned; c) Completed draft compliance rules for China's national ETS, and several rounds of revisions have been made based on comments received.</p> <p>5) Study on Necessity and Feasibility of Futures Trading in China's National ETS: a) Completed literature review on carbon futures</p>
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	<p>markets in major international ETSs; b) Consulted national and local stakeholders on the status of carbon spot trading and the need for futures trading, and identified major challenges for establishing a carbon futures market in China; c) Completed draft reports on the Necessity and Feasibility of Futures Trading in China's National ETS.</p>
<p>Comments:</p>	<p>The expected results will be achieved as scheduled with some outcome such as the administrative rules of the national ETS achieved earlier.</p>
<p>C. Component 3: MRV system</p>	
<p>Status: Ongoing</p>	<p>MRV may be covered by the ETS is an important feature for protecting the interests of participants and precondition for a well-functioning ETS Scheme. The inception report, outline of study report, and first draft report have been completed. The completion rate of the project is about 50% based on the actual disbursement, while the actual completion rate, based on the completion of activities and related deliverables is higher. The activity progress is following the development of the ETS, which has been faster than planned; but the disbursement is still following the sub-component contract, which is in line with the original schedule.</p> <p>The progress to date of the component activities are summarized as below:</p> <ol style="list-style-type: none"> 1) Improve existing sectoral GHG emissions accounting methods and reporting guidelines: a) Completed Guidance on Accounting Methods and Reporting of Greenhouse Gas Emissions for Enterprises in different industries; b) Completed Accounting and Reporting Template for Supplementary Data on Carbon Emissions by National Carbon Emission Trading Enterprises in eight industries, which have been released as Annex 2 and Annex 3 of NDRC Notice Climate [2016] 57 and NDRC Notice Climate [2017] 1989. 2) Develop Regulations for GHG Emissions Reporting by Companies: a) Completed draft Regulations for GHG Emissions Reporting by Key Companies and Institutions, covering accounting methods, monitoring plan requirements, reporting requirements, internal data management, and penalties for non-compliance; b) Completed The Carbon Emission Monitoring Plan Template, which has been released as Annex 4 of NDRC Notice Climate [2017] 1989. 3) Develop Regulations for Third Party Verification Bodies: a) Completed a suggestion draft of Interim Measures for Management of Third Party Verification Companies in the National ETS, covering qualification requirements and application procedures, code of conduct, supervision and management, and legal liabilities, etc.; b) Completed Reference Conditions of Third-party Institutions and Personnel of National ETS, which have been released as Annex 4 of NDRC Notice Climate [2016] 57. 4) Develop Guidelines for Third Party Verification Bodies: a) Developed a suggestion draft of Guidelines for Third Party, Verification of the National ETS, covering the principles, procedures, requirements for

	<p>verification and review of reported data (including verification report template); b) Completed Reference Guidance on Third party Verification of National ETS, which has been released as Annex 5 of NDRC Notice Climate [2016] 57; c) Completed Reference Guideline on Third party Verification of Monitoring Plan and Carbon Emission Reporting of National ETS, which has been released as Annex 5 of NDRC Notice Climate [2017] 1989.</p> <p>5) Design electronic reporting system for emissions verification: Ongoing. Completed the Design Scheme of Electronic Reporting System for Emissions Verification.</p> <p>6) Capacity building on emissions accounting and reporting for companies: a) Completed training materials of eight key industries; b) Completed Training of Industry Accounting Reporting Guidelines, Supplementary Data Forms and Third Party Verification Guidelines, Shanghai, May 4-5, 2016; c) Completed Training of Industry Accounting Reporting Guidelines, Supplementary Data Forms and Third Party Verification Guidelines, Wuhan, September 20-22, 2016.</p>
<p>Comments:</p>	<p>The research work of component 1-component 4 has finished and the corresponding outcomes have been released as Annex of NDRC Notice and have provided strong support for the MRV system of national ETS construction. According to PIP, the outcome of component 5 and 6 would be also submitted in 2018. Currently, the national ETS has been launched in December 2017 and the main task of phase one is capacity building concerning all stakeholders and electronic system construction. Therefore, the capacity building will be conducted according to the national ETS construction progress.</p>
<p>D. Component 4: Improvement of registry</p>	
<p>Status: Ongoing</p>	<p>The Norwegian Government has supported through the UNDP the NDRC DCC the design and development of the framework of a national registry. PMR grant to refine the existing framework by providing analytical support on special topics such as the relations between the national and local registry, clarifying their function depending on the final design. The inception report, outline of study report, and the final report have been completed. Currently, the activities of this component are progressing smoothly. The activity progress is following the development of the ETS, which implies the major tasks have been completed. The progress to date of the component activities are summarized as below:</p> <p>1) Review of existing national and local registries: Completed assessment of the current status and identified areas for improvement of the carbon trading registries at the national level and at the seven pilot ETS (through a series of consultation meetings).</p>

	<ol style="list-style-type: none"> 2) Gap analysis of existing functions in the national registry: Completed recommendations on the functional improvements needs in the national registry based on user feedback from Task 1. 3) Identification of required software changes: Completed the identification of the software changes needed to implement the functional improvements identified in Task 2. 4) Software development/ update: Completed software changes identified in Task 3. 5) User manual update: Updated user manual based on the changes to the registry completed in Task 4.
<p>Comments:</p>	<p>The expected results will be achieved early. According to PIP, the outcome of component 4 would be also submitted in 2018. But now, the national target for initiation of ETS has been done in 2017 and the development of ETS is included in the key reforming works led by the Party Central Committee. The prime improvement of national registry has been accomplished, additional improvements will be based on feedback from user. The management agency is prepared to be launch registry when the National ETS needed.</p>
<p>E. Component 5: Research on large state-owned enterprises</p>	
<p>Status: Ongoing</p>	<p>This sub-component will provide analytical support to assess barriers and propose measures to facilitate inclusion of State Owned Enterprises (SOE). The completion rate of the project is about 50% based on the actual disbursement, while the actual completion rate, based on the completion of activities and related deliverables is higher. The activity progress is following the development of the ETS, which has been faster than planned; but the disbursement is still following the sub-component contract, which is in line with the original schedule.</p> <p>The progress to date of the component activities are summarized as below:</p> <ol style="list-style-type: none"> 1) Analysis of SOE Characteristics: a) Completed assessment of SOE management characteristics; b) Completed assessment of SOE energy consumption and GHG emission characteristics, including SOE emissions reduction efforts and emissions management systems. 2) Assessment of SOE Participation in the National ETS: a) Completed analysis on the SOE involvement in the seven pilot ETS, China Certified Emission Reduction (CCER) projects, and Clean Development Mechanism (CDM) projects; b) Completed assessment of SOE readiness for participation in the National ETS, focusing on power, petrochemical and chemical, non-ferrous metals, construction material, iron and steel, light industry (paper), and the aviation industries; c) Completed the assessment and identification of challenges for SOE participation in the national ETS; d) Completed preliminary recommendations for SOE participation in the national ETS.

	<p>3) Study of allocation methods for SOE emissions: Completed the analysis of the entities representing SOEs in carbon emission trading system.</p> <p>4) Study of SOE carbon trading management system: Completed the analysis of carbon asset management mode of SOEs.</p> <p>5) Other Activities: a) Organized 7 capacity building training workshop for SOEs and other enterprises from different industries, including petrochemical, iron & steel, non-ferrous metals, building materials, and paper industry. The total participants are around 1000. b) Completed the capacity building report of SOEs.</p> <p>6) Technical Assistance to the PMR PMO: Completed preliminary report based on above progress in November 2016.</p>
<p>Comments:</p>	<p>The expected results is achieved at the end of 2017, which is a little bit early than the April 2018(in the plan). The national target for initiation of ETS has been done in 2017 and the development of ETS is included in the key reforming works led by the Party Central Committee. This implies that the NDRC should finish all related tasks as early as possible. According to schedule of reforming work, the key task of program of allowance allocation has to be finished before national launched. Furthermore, the asset management mode of SOEs, the capacity building of SOEs, and the suggestion on SOEs participating the national carbon trading system will be valuable for the launch of national market.</p>
<p>F. Component 6: Research on power sectors</p>	
<p>Status: Ongoing</p>	<p>The component will provide supplementary analytical support for special topics relating to the inclusion of the power sector in the national ETS including in areas of scope, allowances allocation methodology, pricing mechanisms, risk management and allowance adjustment mechanisms and other supporting policies that would be needed to include effective participating of the power sector in the ETS. The inception report, outline of study report, and first draft report have been completed. The completion rate of the project is about 50% based on the actual disbursement, while the actual completion rate, based on the completion of activities and related deliverables is much higher. The activity progress is following the development of the ETS, which has been faster than planned; but the disbursement is still following the sub-component contract, which is in line with the original schedule.</p> <p>The progress to date of the component activities are summarized as below:</p> <p>1) Analysis of Existing Status and Characteristics of the Power Sector: Completed assessment of the development trends and key characteristics of the power sector in China, including power generation and consumption trends; key technologies; management methods and relevant policies; emissions trends; pricing reform; management of power companies, etc.</p>

	<p>2) Assessment of the Power Sector's Participation in the National ETS:</p> <p>a) Completed review of international and domestic case studies of power sector participation in emissions trading systems, including the EU ETS, California cap and trade system and RGGI in the US, Korea ETS, and the seven pilot ETS in China; b) Completed assessment of participation of power generation companies and power grid companies in the national ETS, including analysis of their current carbon management practices, key factors affecting their participation, different type of participation, key players, etc. c) Completed the development of preliminary recommendations for incorporating the power sector into the ETS</p> <p>3) Study of allocation methods and standards for power sector emission allowances: a) Completed review of the allocation of allowances for the power sector in international case studies, including in the EU ETS, the US RGGI and Western Climate Initiative (WCI), and the Korean ETS; b) Completed review of methods for allocating allowances for the power sector in the seven pilot ETS in China, including lessons learned for the national ETS; c) Completed analysis of the carbon emissions trends in the power generation, transmission and distribution sectors, including the impact of production technologies and processes on emissions; d) Completed recommendations for allocating emissions allowances in the power sector.</p> <p>4) Study of the effect of pricing mechanisms on the power sector's participation in the national ETS: a) Completed evaluation of the current pricing mechanisms across the power sector, the impact of ETS participation on profits and emissions reduction costs, the impact of sector and pricing reforms on power companies, etc.; b) Completed review of emissions reduction costs and responsibilities are shared across the power generators, transmitters, and consumers both in China and abroad; c) Completed preliminary recommendations on adjusting pricing mechanisms to facilitate effective participation of the power sector in the national ETS</p> <p>5) Study on risk management and allowance adjustment mechanisms for the power sector's participation in the national ETS: a) Completed evaluation of the impact of emissions trading schemes on the power sector (e.g. on electricity supply, structure, prices etc.) in international and domestic case studies, including the EU ETS, US RGGI, California ETS, Australia carbon pricing mechanism, Korea ETS, and China's pilot ETS; b) Completed identifications of key risks in the power sector's participation in the national ETS; c) Completed dynamic simulations of a province's electric power system under various scenarios (e.g. different allocation methods, power generation scheduling methods, carbon prices) to identify potential risks; d) Completed recommendations for risk management and allowance adjustment mechanisms for the power sector's participation in the national ETS.</p>
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<p>Comments:</p>	<p>On December 18th 2017, the NDRC issued "The National Carbon Emissions Trading System (ETS) Development Program (For power generation), and consecutively announced the launch of national ETS the day after that. Currently, the key task of program of scope, allowances allocation methodology, pricing mechanisms, risk management and allowance adjustment mechanisms and other supporting policies in the power sector has almost been finished to provide support for the inclusion of power sector in the national ETS.</p>
<p>G. Component 7: Supportive researches from 32 provinces (including Xinjiang Production and Construction Corps)</p>	
<p>Status: Ongoing</p>	<p>Six key region/provinces are selected for the research on emission cap allocation and provincial level enterprises and economic data collection and consultation. The six key region/provinces include Inner Mongolia Autonomous Region, Heilongjiang Province, Liaoning Province, Shandong Province, Shanxi Province, and Chongqing City (pilot region). Six separate sub-contracts will be awarded under component 7 and the procurement process is currently ongoing. The contract was signed in June 2017.</p> <p>Component 7 was meant to provide support to 32 provinces in China to help them prepare for joining the national ETS. In practice, the NDRC found that, given the existing capacity and financial resources, it would be more efficient to concentrate in several key provinces. As a consequence, after the extensive consultations, the NDRC select 6 key provinces to support for them make out necessary preparation work. This component is now under procurement process.</p>
<p>Comments:</p>	<p>The expected results will be achieved on time. Capacity and progress of provinces differs are taken into account and the resources are used in the most cost-efficient manner. The component helps the six selected provinces to participate the national ETS, especially in the data collection and capacity building of enterprises and local governmental officers.</p>

4. PROGRESS, CHALLENGES, AND LESSONS LEARNED

<p>Important policy or regulatory developments related to the Grant's objectives and activities:</p>
<p>Developments:</p> <p>Chinese government is very active in pushing forward the development of national ETS, which is considered to be one of the most cost-effective ways to reduce GHG emission, and also, a good approach to realize the economy transformation targets that have been put forward in the Central Economic Work Conference. In terms of the international commitments, the development of ETS is</p>

also a significant policy instrument which will contribute to achieving targets in China's NDC and contribute to achieving global targets under the Paris Agreement. Specific policy developments include:

- 1) In 2014, the central government considered the development of national ETS as one of economic reform works.
- 2) In the Government Work Report of 2015 presented by Premier Minister, it was stated that China would develop national ETS as one of the measures to address climate change.
- 3) In 2015, the Chinese government issued the Program on Ecological Civilization Reform, in which the development of national ETS is considered as one of the import means to realize green and low carbon development.
- 4) In 2015, Presidents Xi and Obama announced together the China-U.S. Joint Statement in Climate Change in 2015, in which it was stated that China would launch national ETS in 2017.
- 5) In 2015, in the document of the Fifth Plenary Session of the 18th CPC Central Committee, it is stated that the carbon quota allocation mechanism would be established and to raise the trading market.
- 6) In the Thirteenth Five Year Plan approved in March 2016, the development of national ETS and establishment of allowance management is written in the article of climate change, as one of important measures to be implemented in the next 5 years.
- 7) In April 2016, the State Council agreed to put the rules of national ETS in the waiting list of laws to be issued.
- 8) In December 2017, Construction Plan of National ETS is approved with the state council, which is issued by NDRC.
- 9) On 19th December 2017, China launched national ETS .
- 10) January 2018, PMO and Designated Account are relocated in NCSC. NCSC assist DCC to manage the PMO, to implement the day-to-day work of CPMR Project.
- 11) The government's enhanced commitment provides an even more positive environment for the implementation of the project, and the outcomes of the project will also play an important role in the policy making on climate change within the Chinese government. That said, there are a number of challenges that remain to be tackled, including additional work that will have to be done, in order for China's national ETS to become operational.

Challenges:

Challenge 1: The process of developing legislation and related procedures is complex and lengthy. The CPMR project plays a critical role in facilitating these processes.

Challenge 2: The general allowance allocation methodologies have been proposed with the support of the project. As a part of lessons learned from the experience from Chinese pilot regions and international case studies, China's allowance allocation mainly use benchmarking approaches. On the other hand, the benchmarking approach requires solid and comprehensive database. Therefore, despite the key principles of the allocation methodologies have been proposed, substantial further work is required to optimize the applicability of the methodologies and enhance the fairness and effectiveness of allocation.

Challenge 3: Data and collection remain challenges in some sectors. For example, the chemicals sector has multiple processes with multiple products and by-products, therefore extensive data is needed for defining boundaries and coefficients. The CPMR is expected to address this challenge by proposing some solutions in this area.

Challenge 4: There is the lack of financial support for development of the ETS, including for verification, construction and operation of the national registry. Based on the CPMR project findings, among others, the NDRC is proposing to establish a specific agency for management of the registry and apply for financial support from the Chinese government.

Challenge 5: Capacity of local government, companies, verifiers, and others is sometimes weak. The CPMR is addressing this challenge by having a strong capacity development aspect.

Challenge 6: The outputs of the CPMR project are considered to be critical for the design and operationalization of the national ETS. However, during the implementation phase additional readiness gaps have been identified which would be the key for the successful implementation of the ETS. They include issues of sectoral benchmarking on national ETS, and carbon finance management.

Challenge 7: Updating the benchmark and default value in allowance allocation and compliance. Benchmarking is the main method to determine the allocation. It is necessary to monitor and analysis the variation of the benchmark and default value, in the initial phase of national ETS. NDRC propose to apply PMR additional funding to study on identify benchmark and default value.

Challenge 8: Carbon financing management is a challenge to the Chinese government as the launch of the ETS will have to evolve from a regulatory compliance policy instrument to market measures. To study the mechanism of price formation and put forward a comprehensive carbon finance management system policy suggestion and carbon trading product management research report as a carbon market construction policy reserve.

Challenge 9: Homogenize the ETS and related policies, such as green power certificate, energy conservation exchange, pollutant exchange.

Lessons learned:

Lesson 1: Legislation process serves as a basis of the ETS design and given the lengthy procedures in this regard, it is critical to initiate legislative processes as early as possible in the design stages.

Lesson 2: Historical GHG data is very important for allowance allocation, for which reason the solid MRV system is a key.

Lesson 3: Pursuing pilot programs before the national instrument design and implementation is a very useful approach, which enables the identification of issues early on. For large countries, specific areas with higher level readiness could pilot and pioneer for collecting early lessons learned (like China's case). And for smaller countries, piloting could be done in phases to support gradual rolling out of national programs. A piloting phase could allow adjustments in policy design while building capacity and readiness.

Lesson 4: The scope of work around the ETS design is massive and having adequate financial and human resources is critical for moving the agenda forward.

Lesson 5: Given the lack of capacity or differences in capacity among various stakeholders, capacity development activities should be given a priority.

Lesson 6: Mobilization of enterprises is very important issues and should be factored in the schedule.

Important changes in the technical design or approach related to the Grant's activities:

Identified Needs for Additional Activities

The general target of CPMR is that to assist China government to construct national ETS, relative activities is serve for national ETS formation. Considering the construction goes into a new stage, many new issues are raised and should be settled urgently. Regarding this, combined with the key

work of ETS, the proposed additional activities that will complement the existing MRP are (I) Study on monitoring and evaluation of construction and maintaining the Registry & Exchange platform as well as linking study between pilot and national ETS. (II) Study on regulatory of carbon market, and Sectoral Benchmarking on National ETS, and (III) A study of the interaction between the carbon market and climate financing policies (IV) Trainings, consultation and dissemination workshops and project management. Details of related deliverables and timeline are as the followings:

Study on monitoring and evaluation of construction and maintaining the Registry & Exchange platform as well as linking study between pilot and national ETS. Assist China to monitor and evaluates the Registry and Exchange Platform in their construction phase and implementation and maintaining phase, output relevant policy recommendations. The on-going CPMR project focus on the maintaining of national Registry. The activity in addition funding focus on evaluation of construction progress of Registry and Exchange platform base on the ongoing CPMR project. The activity will present policy recommendation and technical support according to the national regulation.

Timeline: the activity will start since the registry and exchange platform be located. The activity will update the status report, evaluation report and recommendations of registry and exchange platform minimum every 6 month.

Study on supplementary regulatory system of carbon market, and Studies on Sectoral Benchmarking. The activity includes 2 main sub-activities. ONE is To support informing policy development for management and risk control on the national carbon market. This will be done through providing policy recommendations for a comprehensive carbon market. The on-going CPMR Project focuses on supporting the formulation of the ETS frameworks. Moving into its implementation phase, it is important that the management and risk control so that it can play a role in the national ETS scheme. This activity provides support to prepare the readiness of the compliance and trading at the earliest possible stage. TWO is To propose policy recommendations on sectoral benchmarking and default values. The activity specifically complements, and will provide more extensive and intensive analysis for the eight key sectors, of the on-going CPMR Project' s study on scope, coverage, cap setting and allocation. The CPMR study has supported the design of the general allocation methodology of the national ETS that will use the sectoral benchmarking approach for most of the sectors where data is available. This activity will support the next steps of operationalizing the methodologies by conducting deep-dives into each sector to refine, calibrate and enhance the data used to establish benchmarks. Ultimately the sectoral benchmarks will be updated to enhance effectiveness of allocations.

A study of the interaction between the carbon market and climate financing policies. Activity 3 aims to study interactions between the operation of the carbon market and climate financing policies. This activity mainly focuses on mutually promoting the operation of the carbon market and improving climate policies, which could jointly serve the real economy and help supply-side reform to achieve higher quality low carbon economics developments. It contains four major activities. Activity 3 contains four sections: The first section studies investment in incentives or financing policies for encouraging advanced covered entities and mitigation demonstration projects in the carbon market. The second section studies the construction of a transparent information disclosure system on climate finance to improve the MRV mechanism in the carbon market. The third researches improving efficiencies in both the operation of the carbon market and climate financing policies through interactions with their political tools. Combining methods, tools in data collection, analysis,

and assessment developed by multilateral banks including the World Bank in urban climate investment and financing practices with China's relevant climate investment and financing policies to form a policy that can effectively support China's climate investment and financing policies. The final section researches classifying investment in projects through climate bonds based on different criteria and the study of industries benchmark standards.

Researching, trainings and dissemination workshops and project management. Training and dissemination of Activities 1 and 2 are included in Activity 3 of this proposal. The training budget has been allocated for the CPMR Project for the on-going activities. Detailed training and workshop activities are to be defined through the work plan prepared annually by the PMO. The targeted groups for training, consultation and dissemination will initially start with compliance enterprises from the sectors to support them build the capacity in understanding the benchmarking approach. Trainings and consultations will also be provided to central level and local level regulatory authorities, who will need to lead and or participate in the dis-aggregation of allowance from the central level to provincial level, and to the enterprise level. Industrial associations, research institutes and the wider groups of private sector and civil society stakeholders will be engaged in the consultations. The capacity building events includes provincial (or ministry) level government officer training, central and local (provincial level) supporting organization, Central and local authority training, and training for spectral with specific topics. It is expected that four large scale/major launch and dissemination workshops (around 100 persons) will be organized, however, through the implementation process numerous smaller workshops will be organized for interim consultations, for example, topics of sectoral emissions coefficients.

Challenges:

For the additional activities outlined above, additional funding of US\$ 2 million will be needed, for which China has submitted a proposal to the PMR Partnership Assembly for additional resources to complement its ongoing activities. Lessons learned from the PMR project implementation (including on the procurement and contract management) are expected to help the smooth and accelerated implementation of the proposed additional activities.

Key capacity issues (implementation, technical, financial management, procurement) related to the Grant's activities:

Developments:

Institutional:

- 1) Local DRCs are the key institutions to implement in ETS, especially in complies and allowance allocation. Many local DRCs established climate change division to deal with ETS and other climate change tasks.
- 2) The NDRC established MRV experts group to help companies to finish GHG reporting work.
- 3) Through the implementation of the CPMR, a strong experts team was brought together to support the Chinese government in its effort to establish a national ETS.
- 4) Some large state-owned enterprise groups already set up a specific carbon asset management company.
- 5) Hubei DRC and Shanghai DRC are the lead contractors of the ETS registry system and ETS trading system, respectively.

Technical: N/A

Financial management:

- 6) The PMO employed a professional finance manager to help PMO's financial management. And PMO often organizes the training on finance management for all consultants which is part of the reason why the procurement process has been effective.
- 7) The Ministry of Finance is managing the budget.

Procurement: N/A

Challenges:

- 8) The finalization of payment processing is sometimes lagging due to the heavy workload of MoF.
- 9) The capacity of newly established agencies in the institutional set-up is sometimes inadequate and needs to be enhanced.

Lessons learned:

Lesson 1: Good communication and coordination among different sectors and stakeholders is critical.

Lesson 2: Change of the current domestic financial management structure is expected.

Lesson 3: The role of the PMO in project management is key.

Lesson 4: Delivery partner's knowledge of the country processes is an important factor that facilitates the implementation.

Lesson 5: Procurement can be an important factor affecting the implementation progress. The project's key TORs have been designed and approved by the Bank's team prior to implementation start. This set a smooth start of implementation at the initial stage. During implementation, it is also important to keep close communication with the Bank's team as World Bank procurement rules can be different from the government.

Coordination with other carbon pricing initiatives, including those funded by other donors:

Developments:

- 1) China is cooperating with the EU on capacity building in ETS with the aim to enhance stakeholders' capacity, including from the government, companies, and verification companies. The phase II of the project is being implemented.
- 2) China-Norwegian cooperation is assisting China to design national registry, develop GHG reporting guidelines, to make capacity building training. This project is at the second stage and is aimed at supporting the improvements of allocation methodologies, development of provincial implementation program, capacity building, and design of the information sharing platform on ETS.
- 3) China-Germany cooperation is aiming at capacity building in ETS and research work and is ongoing by GIZ. The total grant is 6.5 million Euros. The Project is applying extension.
- 4) China is cooperating with Australia to develop GHG accounting and reporting guidelines in several sectors, and to assist several provinces to finish GHG reporting work.

- 5) Chinese government is also establishing bilateral dialogue mechanism with EU, Germany, South Korean, Australia etc. in which the ETS is always one of exchange topics.
- 6) China is participating the carbon trading round table of Asian-Pacific region, and to contribute our experiences and lessons.
- 7) China is implementing south-south capacity training for other developing countries, and the development of ETS is one of training courses.

Challenges:

- 1) The coordination and harmonization of different initiatives is necessary.
- 2) The lack of human resources to attend all the relevant meetings under each of the initiatives.

Lessons learned:

- 1) Learning experiences related to coordination of different initiatives is useful.
- 2) It is important to identify which initiative is most relevant to which scheme/instrument.
- 3) Understanding both sides is the catalyst for cooperation.
- 4) Lesson on the complementarities of different initiatives can be added – showing how different initiatives support different aspects of the ETS design and as such are complementary.

Stakeholder engagement related to the Grant's activities:

Developments:

- 1) In the process of developing the ETS rules, the NDRC has organized large scale stakeholder consultation meetings in order to collect feedback and suggestions from different stakeholders.
- 2) The State Council is consulting all stakeholders' comments on the ETS rules.
- 3) For some important policies, the NDRC specifically engaged concerned stakeholders to collect their comments and suggestions.
- 4) The NDRC is using the capacity building events to also conduct wider stakeholders' consultations.
- 5) The NDRC is often inviting stakeholders from 7 pilot regions to discuss the design of national ETS, so that the related lessons can be taken into account more effectively.
- 6) CPMR project organize capacity building and public consultation by PMO and components.

Challenges:

- 1) While there's an extensive stakeholder engagement taking place, the level of stakeholder engagement is not sufficient yet.
- 2) It is sometimes challenging to reconcile different opinions of different stakeholders

Lessons learned:

- 1) Stakeholders' consultations is necessary and useful.
- 2) Identification of relevant stakeholders is important.
- 3) Stakeholders' consultation should be integrated other activities, which will make the implementation smoother. Construction of ETS is a systematical programme. The ETS is dynamically improved by components. According to the MRP, components of the project is highly inter-reacted to each other. One hand, The consultations shall focus on its self study, the other hand, they have to know about other components very well. Some output is input Some of

examples: 1. Legal framework is the overall component to other components, however, Legal framework also need feedback and recommendations from other components. 2, MRV and Allowance allocation shall work together in the same scope and dimension. 3. SOE, Power Sector, Provenance study shall both test output of Component 1-3, and raise their won recommendations.

Other issues related to the Grant's activities

Please describe any developments, challenges and lessons learned regarding any other issue related to the achievement of the Grant's objectives and the implementation of the Grant's activities.

5. ADDITIONAL INFORMATION

In this Section, please provide any additional information that may be relevant for the achievement of the Grant's objectives and/or the implementation of the Grant's activities. Please also provide any relevant information related to carbon pricing and the use of market-based instruments for climate change mitigation.