A. Template for Funding Proposals Related to Activities to Complement Existing PMR Activities

I. Overall mitigation strategy and (Intended) Nationally Determined Contribution (INDC/NDC)

The purpose of this section is to provide an overview of the overall mitigation strategy and commitments of the Implementing Country Participant (ICP) or Technical Partner (TP), as put forward in its INDC/NDC, including the expected role of carbon pricing instruments toward meeting them.

i. Brief status of INDC/NDC preparation and implementation, including:	
Overview of the country's commitments:	Kazakhstan is one of the largest emitters of GHG in Europe and Central Asia with annual total national emissions of 300,9 MtCO2e in 2015 – with the energy sector accounting for 82% of total GHG emissions, followed by agriculture (9.6%) and industrial processes (6,4%). Given the abundance of the domestic cheap coal, more than 80% of the electricity is coal fired, followed by natural gas (7 percent) and hydro power (8 percent). In addition, energy poverty remains an issue and 67% of households in rural areas still use coal as a primary heating source. The Kazakh Government has consistently advocated ambitious global mitigation goals. Kazakhstan has played an active role in the UNFCCC negotiations since the Convention's inception in 1992, not least because of its own significant vulnerability to climate change and threat of land degradation, desertification and fresh water deficit. Throughout the years following the adoption of the Kyoto Protocol, Kazakhstan was one of the few countries leading in advocating increasing the ambition of the Kyoto framework and spearheading the negotiations on extending and amending the Annex I of the agreement to cover countries that have not been previously part of it. Although Kazakhstan was not listed as Annex I Party of the Convention at the time of its adoption, it has taken Annex I obligations through a unilateral declaration in March 2000. In 2012, at the Doha Conference of Parties, Kazakhstan took on a legally binding target for the second commitment period of the Kyoto Protocol at the level of 95% of 1990 levels during the period of 2013–2020. Also in Doha, Kazakhstan announced a long-term goal to reduce GHG emissions by 25% until 2050. Recognizing the importance of concerted global effort on safeguarding the future climate, Kazakhstan proposed as its Nationally Determined Contribution (NDC) an economy-wide

	absolute reduction of GHG emissions of 15% from 1990 emissions levels by 2030. The objective will contribute to sustainable economic development and enable Kazakhstan to enter the path of low-carbon "green" development, and contribute to the achievement of the long-term global goal – to keep increase in global temperature below 2 degrees Celsius Kazakhstan ratified the Paris Agreement in November 2016 and committed itself to fulfillment of the proposed target as its first INDC.
Emission reductions objectives and targets set in the INDC/NDC:	In its NDC, Kazakhstan commits to an economy wide absolute reduction of GHG emissions of 15% from 1990 emissions levels by 2030. Kazakhstan has also stated in its NDC that it is interested in increasing the ambition of its climate change mitigation target to 25% from 1990 emissions levels, should there be additional international support and finance, access to international carbon markets and low carbon technology transfer. Kazakhstan supported the inclusion of market based mechanisms in the Paris Agreement, and the opportunity for countries to use carbon units recognized by the UNFCCC. Kazakhstan's NDC covers all sectors (i.e. energy, agriculture, waste, land use, forestry) and following GHG: Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur hexafluoride (SF6). Kazakhstan's NDC target set represents a significant progression from its obligations under the Kyoto Protocol, when Kazakhstan voluntarily pledged a 7% emission reduction of greenhouse gas emissions by 2020 compared to the 1990 base year. The target was chosen as an ambitious and inspirational indicator. It was prepared under the leadership of the Climate Change Department of the Ministry of Energy of Kazakhstan and involved extensive consultations with experts and stakeholders from authorities, academics, Non-Governmental Organizations, the industry and business associations, and international technical assistance (incl. World Bank, EBRD, USAID). In particular, the study "Development of Policy Options for Mid- and Long-term Emissions Pathways and Role of Carbon Pricing" supported by the PMR provided critical input to the Ministry of Energy in the INDC preparation process and beyond. To elaborate the emission reduction projections, first, a baseline scenario was developed to reflect the impact of currently foreseeable developments in the energy sector, as well as in the overall economy. The baseline scenario was based on the

	assumption of "business as usual" (BAU) principle, when no change in current policies is expected. The long-term BAU economic development reflects the strategic objectives of Kazakhstan to enter the world's top 30 most competitive economies by 2050. Utilizing a hybrid model with soft-linked energy system model (bottom-up approach) and macroeconomic model (top-down approach) of Kazakhstan in the analysis of the emissions, the current report explores the development paths of the economy and energy system subject to INDC target, the currently adopted mitigation policy (Emissions Trading System – ETS) and various policy designs with respect to emission reduction targets. Up to 10 scenarios were developed and three options discussed and further analyzed during consultations. The scenario which was selected (i.e. -15% from 1990 levels by 2030) means that in case of moderate economy growth (annual GDP growth at 2%), modest emissions reduction (around 4% by 2030) are required to achieve such target. In case of accelerated economy growth (annual GDP growth at 4%), however, the emission reduction required should be 11% by 2030. A price of USD$10-20 per CO2 ton would be needed to achieve such emission reductions.
Roadmap/action plan:	Kazakhstan's effort to shift to low carbon transition path started when the Paris Agreement was still under negotiation and reflected Kazakhstan's long-term vision of harness low carbon development as part of its economic growth strategy. Kazakhstan's long term objectives is to become one of the 30 most developed countries in the world by 2050. Its overall national development strategies are articulated in the strategies "Kazakhstan-2050" and "Kazakhstan-2030: Prosperity, Security and Growing Welfare of All the Kazakhstanis" and the "Strategic Plan for the Development of the Republic of Kazakhstan until 2020". **National "Strategy Kazakhstan 2050"** (2012) provided the development framework for the transition of Kazakhstan to a low-carbon economy. The strategy prioritizes the low emission development of the Kazakh economy through modernization, conservation of raw resources and transition to green sources of energy. Specifically, it sets the goal of 50% solar and wind generation in the total power consumption by 2050. **Concept of transition of the Republic of Kazakhstan to "Green Economy"** (2013). Green economy measures under the concept are implemented in seven different sectors or areas: sustainable

	use of water resources, development of sustainable and productive agriculture, energy efficiency, power sector development, waste management, reduction of air pollution and effective management of ecosystems. The concept is translated into specific sectoral targets and actions: – 30% alternative and renewable generation by 2030, and 50% by 2050; – 25% gas-fired generation by 2030, 30% by 2050; and – 30% reduction of energy intensity of GDP from 2008 level by 2030, 50% by 2050. **Concept of development of fuel-power complex of the Republic of Kazakhstan till 2030 (2014)**. The concept highlights the current state of the fuel-power sector and identifies key activities to address its weaknesses and create opportunities for transition to the "Green Economy". It also reconfirms and strengthens alternative and renewable generation target from "Strategy Kazakhstan 2050": – 30% share of alternative and renewable generation in power mix by 2030, and 50% by 2050; – 3% solar and wind share by 2020, 10% by 2030; – 10% coal-mine methane generation in power mix by 2030; and Stabilization of CO_2 emissions from power production at 2012 level by 2020, 15% reduction by 2030. The basis for the energy-saving policy are the laws **"On Energy Saving and Improvement of Energy Efficiency**" (2012) and **"On Amendments and Supplements into some Legislative Acts relating to Energy Saving and Improvement of Energy Efficiency"** (2012). Twenty-two pieces of secondary legislation have been adopted to operationalize the regulatory framework for energy efficiency. These laws and their respective by-laws provide a comprehensive legal framework for the development and improvement of energy efficiency and conservation, in particular they established: – energy standards for different types of products and services; – mandatory energy efficiency requirements for all modes of transport, electric motors, as well as buildings, – structures, constructions and design documentation; – rules for conducting energy audits in industrial plants and buildings; – requirement of the conclusion of the energy efficiency agreements with large industrial customers (with the State Energy registry mechanism); – mechanism to assess the activities of local executive agencies on energy saving and energy efficiency; and

	– rules for the activities of training centers for retraining and professional development of individuals and legal entities carrying out an energy audit and (or) examination of energy saving, as well as the creation, implementation and organization of the energy management system. The basis of support for renewable energy development in Kazakhstan is formulated in the law **"On amendments and additions to some legislative acts of Kazakhstan on the issues of support of renewable energy sources" (**2013), which sets a fixed tariff for the supply of energy produced from renewable energy sources. Specific plans with regards to renewable development are set in the Resolution # 43 **Action Plan for the development of alternative and renewable energy in the Republic of Kazakhstan for 2013 – 2020.** The documents outline responsibilities of the government and local authorities in renewable R&D, development of domestic technologies and service capabilities, and supporting information service development in the sector. It also outlines 106 specific renewable energy projects with a total installed capacity of 3054.55 MW, that are planned to be put into operation by 2020, including: – 34 wind parks - 1787 MW; – 41 hydropower plants - 539 MW; – 28 solar stations - 713.5 MW; and – 3 bioelectric stations - 15.05 MW. In 2014, the President of Kazakhstan established **Council on Transition to the Green Economy**, a high-level government body, chaired by the Prime Minister of Kazakhstan, which monitors the implementation of the Green Economy Concept, its subprograms, and target indicators. Also in 2014, the president of Kazakhstan announced a dedicated financing plan, national development program "**Nurly Zhol"** totaling US$9 billion, to modernize domestic infrastructure. Among other, it includes measures to improve energy efficiency, and digitalize power sector by introducing smart metering. Two new laws supporting the NDC were adopted in 2016: the law **"On ratification of the Paris Agreement"** and **"On introducing amendments and addenda to some legislative acts of Kazakhstan on the transition to green economy"** (Green Economy Law). The latter aims to improve legislation related to ecology and renewable energy, and among other delivered also a significant reform of the Kazakhstan's ETS.

ii. Overview of the additional analysis needed to support the design/implementation of the policies, including:	
Assessment of critical readiness gaps:	Kazakhstan was an early mover in the adoption of low carbon strategies and implementation policies. Its NDC was envisaged with an understanding that the basic framework for the reaching the announced target was already in place. However, progress in attracting investments and project implementation has been slow due to insufficient enabling environment. A multitude of issues has affected the country's capacity to capitalize on its ambition. With time, it became clear that the target sectoral indicators, which are the main monitoring instrument of the Green Economy Concept lack an overarching analytical framework that could quantify these targets as specific contributions towards the NDC objectives. The indicators and sectoral policies are not sufficiently reflected in regional and local action programs. Policy gaps were discovered in the legal and administrative set-up of the national ETS. Disparity between ETS and non-ETS sectors, where abatement could be costlier, became a concern for the industrial stakeholders. For renewable projects, barrier issues included lack of implementing mechanism for fit-in-tariff indexation to the foreign currency exchange rate, grid connection issues, lack of comprehensive and bankable contractual framework, lack of awareness of specific characteristics of RE plants among key sector stakeholders, and insufficient institutional capacity. More efforts were needed in building institutional capacity and improving regulatory frameworks in support of project identification and assessment, financing, and implementation of low carbon investments. At the same time, the economic slowdown and the decline in oil prices have reduced the amount of domestic finance available for implementation of some of the envisaged measures.
iii. The role of carbon pricing instruments in achieving the country's mitigation strategy, as identified in its INDC/NDC, including:	
Planned/existing carbon pricing instrument(s):	The centerpiece of the Green Economy framework is Kazakhstan's ETS (KZ ETS), covering all major emitting sectors of the country. The system is the country's main instrument to regulate domestic CO_2 emissions and drive the development of low-carbon technologies, energy efficiency, and renewables. The national ETS covers more than 55% of the GHG produced with energy, industry

	and extraction of oil, gas and coal included with only CO_2 regulated and methane reported but not regulated. The first National Allocation Plan (NAP) covered 178 companies, and set the total emissions cap at 147.2 Mt CO2 for 2013. The second NAP (2014-2015) covered 166 enterprises with caps of 155.4 and 153 MtCO2 respectively, accounting for more than a half of the country's yearly CO2 emissions. Although the first phase of KZ ETS, starting from January 1, 2013 was a piloting exercise, Kazakhstan became the first country in Asia to implement emissions trading at a nationwide scale. During this period, no actual allowances trading took place, while the technical aspects of the ETS operation were tested and finalized. In addition, no specific target for emission reductions was set during the pilot phase. Nevertheless from. During the first (pilot) phase of the ETS, the allocation was based on the grandfathering approach and equaled to 100% of the non-verified emissions reported by companies in the reference year, namely 2010. This approach has been kept for the second phase (2014-2015). The base year for the second phase was based on an average of reported emissions for 2011-2012, rather than 2010 emissions as in the first phase. This resulted in a higher number of allocated allowances, this is 154.9 million in 2014 against 147.2 million in 2013. Kazakhstan designed the system to have a reducing number of allowances from year-to-year by introducing a specific emission reduction coefficient. In 2014, no coefficient was applied requiring companies zero level reduction from the allocation. In 2015, for the first time in the system's operation, the coefficient was set at 1.5%. This meant that all participating companies in 2015 were required to reduce their emissions by 1.5% compared to 2014. Trading in KZ ETS started in 2014, which is the year of the settlement of the 2013 ETS obligations. A total of 14 transactions were concluded that year, involving 20 companies. Trading continued until August 2014, which corresponds approximately to the end of the lifetime of 2013 allowances in 2014. The total volume of allowances transacted in 2014 amounted to 1.27 million tCO2. The average price for the 14 transactions was 301 tenge (US$ 1.6) per ton of CO2. The KZ ETS has succeeded in putting a price on carbon and raising awareness of the emission reduction opportunities and costs to the most senior executive level in the Kazakh industries. Also, many of the components of an effective ETS have been introduced

	successfully; for example, allowance units were given the legal status of commodity from the start of the system, and the designation of a professional commodity exchange provided the market with a solid trading infrastructure. Finally, the overall sentiment of stakeholders – including the industry – is that the initial allocation process had been fair. At the same time, a number of significant issues and barriers were identified with the design of the ETS that required urgent action, including some uncertainties left in definitions and legal texts, the lack of electronic MRV and registry systems, etc. Therefore, after three years of implementation, the system was paused in 2016 for 2 years to allow for the improvement of the legislative and technical basis for its implementation. On January 1, 2018, the system will resume and the allocation will be based on a benchmarking approach as adopted in the EU ETS Phase III.
Analysis/modeling:	*Please provide a brief description on how analysis/modeling was conducted to support the design and implementation of the carbon pricing instrument(s).*
Future plan for developing and submitting the country's NDC:	Kazakhstan developed its INDC in the run up to the COP 21 and CMP 11 which took place in Paris in 2015. In 2016, prior to adoption of the law of ratification and finalization of the domestic ratification process of the Paris Agreement, the INDC was significantly expanded and strengthened to be resubmitted as Kazakhstan's first INCD. There is currently no immediate plan for further reassessment of the communicated commitments in preparation of the country's second NDC.

II. Level of political commitment to carbon pricing within the country and clarity on the institutional arrangement for implementation

The purpose of this section is to demonstrate the country's political commitment to carbon pricing, along with the existing political support for the proposed activities.

ICPs/TPs are invited to provide the following information:

i. Overview of legal and institutional framework, including:	
Existing/planned laws and directives:	The Environmental Code is a primary legislative act that establishes the general framework of Kazakhstan's ETS and defines its main technical elements. Section 9-1 of the Code, entitled "State regulation in the field of GHG emissions and sinks", describes the main provisions and instruments for the state regulation of GHG emissions such as, inter alia, emission quotas and emission certificates, National Allocation Plan (NAP), market mechanism for GHG emissions reduction and sequestration, requirements for trading in carbon units, domestic offset projects, monitoring procedures and environmental (green) investments. Section 20-1, entitled "State system for estimating emissions and sequestration of greenhouse gases" addresses such issues as the state system for GHG inventory, assessment of GHG emissions and sequestration, registry of carbon units and verification and validation. In March 2014, the Parliament introduced changes to the schedule of enforcing penalties for non-compliance (pilot phase emissions are no longer subject to penalties), and reduced the amount of the fine from 10 to 5 MCI (approximately US$ 100 down to US$ 50) for each tone of CO2 emitted over the allocation. There is also a significant body of secondary legislation that regulates the administration and operation of the ETS, establishes various procedures, clarifies the application of the MRV system and governs the domestic offset projects. Overall, there are 35 individual documents including 14 Governmental Orders and 19 Ministerial Orders which provide the legislative base for the ETS functionality, although many are repetitive. Following numerous complaints from the industry on some of the technicalities of the scheme, the PMR assisted Kazakhstan with a study identifying barriers to trading in the KZ ETS. The issues identified included uncertainties in definitions and legal texts, interpretations in application of the provisions of the scheme, and lack of certain safeguards.

	The discrepancies in the legislation were addressed by the law on amendments to the Environmental Code of Kazakhstan of 08.04.16 г. № 491-V. The law also paused the system for two years to allow for the changes in the legislation to be translated into corresponding changes in the secondary legislation and to address outstanding technical issues, such as the lack of electronic MRV and registry systems. According to the law on amendments, the emissions trading provisions of the Environmental Code will be applicable again from January 1, 2018.
Institutional arrangements:	The Ministry of Energy of the Republic of Kazakhstan (MOE) is the designated competent authority with the overall responsibility for the ETS in Kazakhstan. As per the Environmental Code, its responsibilities include: – Data collection of plant passports to ensure the participation of enterprises in the trading of quotas; – Maintenance of the State Register of Carbon Units; – Improving the reporting procedure for greenhouse gas emissions; – Ensuring the functioning of the market for trading greenhouse gas emissions by creating an appropriate regulatory and legal framework; and – Supporting projects aimed at reducing greenhouse gas emissions. JSC Zhasyl Damu (ZD) is the state organization which is acting as the executive body – on behalf of the MOE – for ETS operation and administration. The means that since inception of the KZ ETS, ZD has been responsible for the collection and compilation of GHG emissions data from operators, drafting secondary legislation, designing MRV methodologies and procedures, modeling the allocation plans, and administering the ETS registry. ZD also performed the roles of granting and maintaining plant permits, and reviewing monitoring plans and verified annual emission reports. At the end of 2014, however, some of the functions of the ETS operator performed by the ZD were transferred to the Committee for Environmental Regulation, Control and State Inspection in the Oil and Gas Complex of the Ministry of Energy of the Republic of Kazakhstan (KERK), a government agency controlled by the MOE. This includes, in particular, the functions of monitoring, reporting, verification of emissions and compliance with the requirements under the ETS. In addition, the accreditation of independent organizations for implementing validation, verification, and confirmation of the emissions report from operators was transferred to the Ministry of Investment and Development of the Republic of Kazakhstan.

	Therefore, the Ministry of Investment and Development will accredit such organizations in accordance with the legislation on accreditation in the field of conformity assessment, that is to say, in accordance with international standards.
ii. Assessment of in-country political support for the implementation of the carbon pricing instrument(s) and the proposed activities, including:	
Public statements and official documents:	The law on amendments to the Environmental Code of Kazakhstan of 08.04.16 г. № 491-V stipulates that the emissions trading provisions of the Environmental Code will be applicable again from January 1, 2018. The allocation plan for 2018-2020 is expected to be released in September 2017.
Other evidence:	Not applicable
iii. Summary of stakeholder engagement and consultations with relevant ministries and other stakeholders regarding the development of the proposal, including:	
Key government ministries/agencies involved:	In view of the upcoming restart of the ETS, there has been a number of active work streams conducting consultations on the issues such as benchmarking, allocation, and electronic MRV systems. The following entities have been involved on behalf of the government and government agencies: – Department of Climate Change (MOE); – Committee of ecological regulation and control (MOE); – Department of Information Technology and State Service (MOE); – JSC "Zhasyl Damu" (under MOE); and – Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan.
Other stakeholders involved:	Industrials and other external stakeholders which have been active in latest consultations include: – KazEnergy (i.e. business association for energy producers); – The National Chamber of Entrepreneurs of the Republic of Kazakhstan (i.e. "Atameken"); – Coordination Centre on Climate Change (NGO); – Scientific –educational Centre (i.e. «Green academy»); – Kazakhstan Business Association for Sustainable Development (i.e. KAPUR); and – Partnership Program Green bridge.

III. Progress made on PMR activities under the first proposal[1]

The purpose of this section is to provide an assessment of the progress made on the initial PMR activities, as outlined in the first proposal, as well as to report on the allocation of funds and progress made on achieving the original objectives and outcomes.

ICPs/TPs are invited to provide the following information:

i. Brief summary of the country's most recent Implementation Status Report (ISR), including:	
Objectives included in the first proposal:	The Republic of Kazakhstan joined the PMR in March 2014 as a Technical Partner with the Ministry of Energy (MOE) as implementing agency. Kazakhstan was allocated US$ 1 million to support ETS implementation with technical assistance, development of analytical tools, and build the related institutional and technical capacity. The funding allocated was divided into two Phases (1st tranche and 2nd tranche of US$500,000 each) with respective activities identified based on the needs of the MOE and consultation with stakeholders.
Description of the progress made on the initial PMR activities:	The activities under the 1st tranche are completed, and 2 activities under the 2nd tranche have started – as detailed below. **First tranche (November 2014 – June 2016):** ***Study on Barriers to the Implementation of Kazakhstan's ETS and Options to Overcome Them (Completed)*:** The objective was to identify potential barriers to trade in Kazakhstan's ETS and to make actionable recommendations for the Government to address them. The study was completed in the autumn of 2015. Its main findings, recommendations, and suggested action items were discussed with the Ministry of Energy and other governmental stakeholders and have fed into Kazakhstan's "Action Plan of the Government of the Republic of Kazakhstan on GHG Emissions Reductions/Limitation by 2030". The Government, line Ministries and key stakeholders considered the final report during the consultation process on further carbon financing operations in Kazakhstan in light of the economic slowdown and considering the current bottlenecks constraining the performance of the KZ ETS. Some of the key barriers and corrective actions identified in the final report will be addressed in 2016 and 2017 – while the KZ ETS is suspended – in view of successfully restarting it on January 1, 2018. *Output:* Final report "Barriers to the Implementation of Kazakhstan's ETS and Options to Overcome Them", identified barriers and action plan for addressing them

[1] In this document, "first proposal" refers to Kazakhstan's Proposals for Targeted Technical Support.

	Results: The report provided roadmap towards improvement of the ETS. The recommendations were implemented in amendments to the Environmental Code, development of benchmarks and establishment of an electronic MRV and registry systems. ***Adaptation of Emissions Benchmarks for Emissions Allowances Allocation to Industry (Completed)*:** The objective of this activity was to develop product emissions benchmarks to support the allocation of emissions allowances to industrial sectors when the KZ ETS introduces benchmark-based allocation in the future. A number of reports were produced in 2014-2015 and discussed with local stakeholders – in particular the private sector – in dedicated workshops. The activity was finalized in September 2015. Following the recent amendments to the ecological regulation defining the benchmarking as an allocation method (2016), the Ministry of Energy is considering the introduction of the benchmarks developed in consultation with industry. Because the benchmark development process is still ongoing, there was a need to support stakeholder engagement activities on the developed benchmarks. The stakeholder consultation process, and refining of the developed benchmarks, are supported by PMR under the second tranche of funding. *Output:* Sectoral notes, workshops, benchmarks. *Results:* Benchmarks proposed for consultation. ***Development of Policy Options for Mid- and Long-term Emissions Pathways and Role of Carbon Pricing (Completed)*:** The objective is to combine top-down and bottom-up economic models to understand the economy-wide impacts of the ETS and other complementary policies in Kazakhstan's development plans – and also assist with Kazakhstan's INDC process. A Working Group was officially established to ensure accurate data collection, robust discussions on the modeling's assumptions, and review the project's findings. The study was finalized and the results were presented to the key stakeholder at a dissemination workshop in June 2016. In addition, and importantly, the MOE presented the results of the study to the Prime Minister and his Cabinet in July 2016 during the Green Economy Council Meeting under the President of Kazakhstan. The Council meeting was dedicated to discussing the economic implications of INDC implementation before Kazakhstan signs the Paris Agreement. The PMR also supported the participation of an international expert (Dr. Felix Matthes, Öko-Institut), who presented the international perspective of the Paris Agreement – and how

	Kazakhstan may position itself in adhering to this commitment. As of today, this is the only analysis of Kazakhstan's NDC implementation, which considers the role of the National ETS for Kazakhstan to achieve its mid- to long-term mitigation objectives. Following the signing of the Paris Agreement by Kazakhstan in August 2016, the final report was circulated to Parliament and line Ministries to support the ratification process of the Paris Agreement. In addition, the project substantially contributed to strengthening the capacity and modeling tools of the local modeling team at Nazarbayev University Research and Innovation System (NURIS) of which the Ministry of Energy increasingly relies for analysis related to the country's climate change strategy and policy options. *Output:* Final report "Assessment of economic, social and environmental effects of different mitigation policies using combined top-down (CGE-KZ) and bottom-up (TIMES-KZ) models." *Results:* The project supported the NDC process and also provided first analysis on ETS within the overall economy-wide target. In addition, new economic modeling tools were created and have been used for further analysis since then. **Second tranche (June 2016 – December 2017):** ***Stakeholder consultation process on the developed benchmarks (June 2016–September 2017, active):*** The objective of this activity is to develop an appropriate set of benchmarks for the industrial sector (industry, oil and gas and power) based on the previous benchmarking work by the MOE and operating arm branch JSC "Zhasyl Damu", the Norwegian Ministry of Foreign Affairs, USAID and PMR. Stakeholder engagement and consultations with industry and line Ministries is an integral part of this process to ensure the full understanding of the methodology and calculation of the benchmarks considered. Following the finalization of the procurement process in June 2016, the selected consultant (Norway's Carbon Limits and Kazakhstan's Climate Change Coordination Center) conducted two consultation workshops with line Ministries and other technical assistance programs (i.e., in June and August 2017). A number of broad methodological issues related to the choice of benchmarks and their use for allowance allocation in the ETS (e.g. use of benchmarks at sub-installation level, use of cross-sectoral correction factor) are currently under consideration. Once a consensus is reached, cross-ministerial consultations and additional industry consultations will take place to further refine and adopt the final benchmarks.

	Output: Sectoral consultation workshops. *Results:* Consultation workshops conducted across Kazakhstan, benchmarks discussed with the industry, consensus reached. ***Development of Electronic GHG Data Reporting (October 2016–December 2017, active):*** The objective is to support Kazakhstan in building online reporting platform and related data management systems in order to increase the accuracy, completeness and consistency of the GHG data reported by emitters, and to allow more accurate data review and analysis by authorities. Such assistance is timely given that recent amendments to the ecological regulation (2016) mandates for the development of such a platform. Currently, the GHG data reporting is processed manually. The procurement for the local and international consultants was finalized in October 2016. The development of the e-reporting system will take place over a period of 15 months including testing and users training. The electronic reporting platform is expected to be operational by January 1, 2018 when the KZ ETS resumes operations. The activity is split into two phases: Phase I (completed) consisted of assessment of existing regulatory framework and the data system, analysis of data exchange needs and research into similar systems in other countries, as well as presentation of a model (prototype) of such future system for Kazakhstan. Phase II (active) focuses on the development of functional requirements, including: types of data, categories of users, main functional components, requirements to the interface, requirements in resources and financing options. Phase II will be completed after a workshop with stakeholders in July. Once the system is developed based on the functional requirements, the system will be deployed to users with necessary training. ***Enhancement of Kazakhstan's Carbon Unit Registry (September 2017 – TBD, procurement stage):*** This activity relates to the infrastructure supporting the issuance, transfer, and cancellation/retirement of carbon units in Kazakhstan's carbon market. Support may include enhancement of low/outdated security standards and connection with other carbon unit registries outside Kazakhstan (i.e. currently no market linking is possible). However, the Ministry of Energy requested to hold off on this activity until there is more certainty on whether Kazakhstan will ratify the Doha Amendments. Further discussions between the World Bank and the Ministry of Energy in the coming months as to when this activity may start. Meanwhile, PMR is engaged in selection of an international expert to perform

	a needs analysis on requirements to upgrade the KZ registries to international standards.
Progress made towards achieving the expected results and outcomes of activities under the first proposal:	The objective of the first proposal was to support ETS development with analytical tools and build institutional and technical capacity for implementation of Kazakhstan's ETS. To support this objective, the project analytical capacity in modelling of ETS and GHG emissions in Kazakhstan and development and benchmarks. The technical objectives were supported by analysis of the trading barriers and Kazakhstan's swift actions to remove them and development of electronic GHG data reporting.

ii. Important policy or regulatory developments:

The discrepancies in the ETS legislation identified in PMR project *Study on Barriers to the Implementation of Kazakhstan's ETS and Options to Overcome Them* were addressed by the law on amendments to the Environmental Code of Kazakhstan of 08.04.16 r. № 491-V. The law paused the system for two years to allow for the changes in the legislation to be translated into corresponding changes in the secondary legislation and to address outstanding technical issues, such as lack of an electronic MRV and registry systems, which are supported through the second tranche of the project.

According to the law on amendments, the emissions trading provisions of the Environmental Code will be applicable again from January 1, 2018.

iii. Initial funding that has been committed for each of the activities under the first proposal:

Provide a brief report on the amount of initial funding that has been committed for each of the activities under the first proposal.

	Committed fund (USD$)	Actual fund (USD$)
First tranche		
Barriers to ETS	50,000	50,000
Industry benchmarks	100,000	100,000
Upstream policy	350,000	350,000
Second tranche		
Stakeholder consultation	60,000	50,000
E-reporting development	280,000	120,000
Carbon unit registry	0 (procurement stage)	0
TOTAL:	**840,000**	**670,000**

IV. Scope of work and additionality of proposed activities

The purpose of this section is to provide details on the scope of the proposed activities, as well as to demonstrate ways in which they are expected to complement the initial PMR activities (as outlined in the country's first proposal) and therefore help fill the identified readiness gaps.

ICPs/TPs are invited to provide the following information:

i. Outline of the proposed activities and related deliverable(s) and timeline:

The proposed activities are intended to support further development and strengthening of the ETS in Kazakhstan and its interaction with the sectors not covered by the ETS. The following two set of activities are proposed: (i) Low Carbon Development Study, which will primarily address interaction between ETS and on-ETS sectors in light of Kazakhstan's commitments under the Paris agreement, and (ii) Allowance Allocation and Market Regulation Study, which will address the role of the Allowance Reserve in the new phase of Kazakhstan's ETS.

1. Low Carbon Development Study

Kazakhstan's ratification of the Paris Agreement in 2016 confirmed its intention to abide by the ambitious goal of 15% reduction of its emissions by 2030 stipulated in Kazakhstan's intended nationally determined contribution. Underpinning this ambition is the Concept of Transition to Green Economy, adopted by the Government of Kazakhstan in 2013, and its implementation plan, adopted later same year. The Concept explored strategic policy directions for green growth, including water management, waste and energy efficiency. The accompanying implementation plan launched the process of updating the sectoral programs and relevant legislation to the priorities identified in the Green Economy Concept.

The proposed Low Carbon Development Study will build on the Concept of Transition to Green Economy and its implementing legislation, conduct a comprehensive policy and technological mapping across sectors, revisit sector master plans and policies and recommend revisions on additional actions and investment requirement to meet the INDC target. An important component of the study will be an analysis of the distribution of de-carbonization burden between ETS and non-ETS sectors of the domestic emissions trading system. Specific activities will include:

Activity 1.1. Stocktaking of existing policies, sectoral development plans and target indicators.

With a view to further consolidate and strengthen the low carbon impact of various existing policies in Kazakhstan, the study will map out the current status of components of relevant legislation, sectoral development programs, relevant target indicators, and actions plans that require further analysis and revision to facilitate Kazakhstan's transition to a deep de-carbonization path. Particular focus will be placed on the actual track-record of their implementation to assess the effectiveness of such policies and potential need for their revision.

Activity 1.2. Populating the model with an up-to-date data set.

Uncertainties of the current economic situation in the country and the performance of sectoral policies will need to be addressed in the modelling and analytical work. To enable the required economic analysis, relevant economic and sectoral data will be collected, and a set of broad economic and developmental scenarios will be built. The economic model, developed under the first tranche of

PMR activities, will be refined, calibrated and enhanced to assess the mitigation potential, expected effectiveness, and investment requirements of potential policies under the various scenarios.

Activity 1.3. Barrier analysis.

This activity will closely examine any potential factors that are hindering the implementation of low carbon policies in Kazakhstan. It will build on and expand the earlier analysis of to trading under Kazakhstan's ETS, undertaken as part of the first tranche of PMR support, and will address mitigation issues under the current policies. Specific recommendations towards addressing such barriers will be provided, including suggestions of targeted policy and legislation changes. This could include, among another, ways of improving the enterprises' ability to correctly reflect carbon-related investments in their profit and loss calculations, addressing lack of mitigation focus at the local and regional level, and others.

Activity 1.4. Comprehensive analysis of de-carbonization options and low carbon development opportunities.

Building on the three previous activities, the model will be applied to assess suitable de-carbonization policies and actions in light of Kazakhstan's Paris Accord commitments. Current estimates predict a shortfall of 30 million tons of CO_2e given the current set of enacted policies. The analysis will particularly consider what ETS and non-ETS sector reforms would have to take place in order for KZ to reach its NDC target. The allocation of allowances under Kazakhstan's ETS, complimentary policy instruments for non-ETS sector, and regional burden sharing methods will also be studied. An array of low-carbon options in the communal, commercial and building sectors, which offer relatively small carbon savings and require participation or oversight from multiple actors, together with region-specific "actions", will be considered. In-depth analysis of the impacts of the proposed policies, their trade-offs, and interactions with other measures and policy options will be undertaken.

Model sensitivity will be tested to a number of economic and sectoral indicators in order to generate strategies to cope with the key elements of unpredictability. The assessment of how uncertainties affect the fulfillment of GHG reduction targets will also be conducted.

Activity 1.5. Co-benefits analysis.

Climate mitigation policies complement current efforts on air pollution control through technology and fuel transformations in the energy system. Integrated assessment methods will be applied to quantify the co-benefits of mitigation policies in terms of their impact on local air pollution (PM2.5, NOx, SOx) and reduced health damages will be quantified. The activity will include capacity building and further development of the hybrid model (developed under the first tranche of PMR support) to examine complimentary air quality policies.

Activity 1.6. Investment requirements and availability of funding.

A cost analysis of the proposed measures will be provided, including any specific investment requirements and a review of the potential sources of funding. Climate and carbon finance, infrastructure finance and green bonds will be analyzed among other financing options. Market, economic, and fiscal instruments to support low-carbon investments and provide the right incentives for private sector actions will be considered.

Activity 1.7. Case studies based on international experience.

To illustrate and provide an insight into implementation of some of the policies suggested above, the project will review experience, timelines, lessons learned and any potential issues with

implementation of key de-carbonization policies from an international perspective, for example on renewable generation support.

Activity 1.8. Comprehensive master plan of low carbon policies and their interaction with the ETS.

Recommendations will be elaborated towards a suite of new policies as well as revision of existing legislation, action plans, and local master plans, which collectively will allow meeting the national NDC target. The recommendations will be discussed, and potentially adjusted, through a series of consultations with ETS and non-ETS actors – to better ensure buy-in from stakeholders. The resulting suite of policies and decisions, effectively making up the low carbon strategy of Kazakhstan, is expected to be adopted as an order of the Green Economy Council, the interagency institution chaired by the President of Kazakhstan.

The approach is expected to increase the effectiveness and coordination between various government agencies and local authorities in implementing the NDC.

Activity 1.9. Policy recommendations towards Kazakhstan's update of the NDC.

The above-mentioned analysis will also be used to inform the updating of the existing NDC commitments of Kazakhstan.

2. Allowance Allocation and Market Regulation Study

Kazakhstan's ETS legislation envisages establishment of an allowances reserve. The functions of the reserve are stipulated in Article 94-5 of the Environmental Code as:

1) Allocation of allowances for new entrants;
2) Issuance of additional allowances to expanding installations;
3) Allocation of allowances to installations that were not part of ETS before but have exceed the ETS's inclusion threshold during the trading period;
4) Issuance of carbon units for domestic projects to reduce greenhouse gas emissions and (or) increase the absorption of greenhouse gases;
5) Auctioning of allowances to the market.

The reserve is intended to serve as a regulatory body with a function of adjusting the volume of allowances through the mechanism of auctions. The basic principle, according to which the reserve is to be calculated, is prescribed in Order #370 of the Government of Kazakhstan on "On the Approval of the Rules for the Allocation of Allowances for Greenhouse Gas Emissions and the Creation of Reserves for the Assigned Amount and the Allowances of the National Greenhouse Gas Emission Trading Scheme" of June 15, 2017. Existing regulatory framework links the reserve to Kazakhstan's national GHG reduction target, following the principle of carbon budgets, however the methodology is not precise. The goal of the Allowance Allocation and Market Regulation Study will be to support the operation of the reserve analytically, to confirm the volume of allowances required for the above needs, and to examine potential role of the reserve in market control and management.

Activity 2.1. Modelling and forecasting of the allowance market.

The National Allocation Plan for the 2018-2020 trading period of Kazakhstan's ETS is expected to be adopted in September 2017. Once the NAP will be adopted, basic modelling and forecasting of the possible supply and demand will be undertaken to establish the market's fundamentals, expected price level, and market's sensitivity to key economic indicators and price drivers.

Activity 2.2. Scenario development.

A set of scenarios will be prepared for (i) market price equilibrium based on defined number of key indicators examined above and also in Activity 1.2, and (ii) for the size and the functioning of the reserve. The volume and the mode of the release of the allowances from the reserve can have a significant impact on its functioning, trading activity and success in reaching the mitigation objectives. It is paramount therefore to set clear quantitative limits to the release of allowances from the reserve. The analysis under this activity will therefore examine the potential impact of releases of allowances from the reserve in a number of optional ways, reflecting the basic scenarios for the development of the market with the given allocation and the impact of pre-defined uncertainty factors.

Activity 2.3. Review of the auctioning methods.

Apart from allocation from the reserve to new entrants and expanding installations, Kazakhstan's competent authority can release allowances from the reserve through auctions, thus acting as a market regulator, controlling supply of allowances on the market and providing the market with a guaranteed ceiling price. Currently there is no procedure for the use of such mechanism, and hence auctioning is practically impossible. This component will examine how such mechanism could be potentially engaged and will provide Kazakhstan's stakeholders with analytical review of various auctioning methods and modalities in relation to an ETS, as well as their applicability in Kazakhstan.

Activity 2.4 Analysis and elaboration of recommendations.

Specific recommendations will be made on the volume of allowances to be put into the reserve and the exact auctioning modality to be applied in each situation.

ii. Outstanding readiness gaps and risks/barriers to achieving the objectives of the first proposal and the country's overall mitigation goals:

Low Carbon Development Study.

The Green Economy Concept, on which many sectoral policies are based, was developed in 2013. Currently these policies are not reflected in regional and local programs. The operation of the National ETS, the country's main instrument to regulate domestic GHG emissions, and which drives the development of low-carbon technologies, began the same year. After three successful years of implementation, the scheme was paused in 2016 for 2 years to allow for the improvement of the legislative and technical basis for its implementation. On January 1, 2018, the scheme will resume.

Resumption of the ETS operation renews the need for solid economic background underpinning its market fundamentals. Of particular concern is the potential cost of the ETS to the economy in light of Kazakhstan's ambitious Paris Agreement commitments. The analysis conducted by PMR in the first tranche of support showed that focusing abatement obligations only on energy-intensive ETS industries could be a costly, although feasible, way to reach the NDC target. In the extreme case, GDP by 2050 might lose more than 14% compared to its baseline level. On the contrary, if the abatement burden is more equally distributed among different sectors and also includes GHG emissions in the commercial and residential sectors, economic costs can be minimized. If implemented properly, the NDC target can be reached at lower economic costs to GDP by 2050 – by less than 5% below baseline level. There is a growing realization that the abatement burden needs to be more evenly distributed among non-ETS sectors as well.

The further need for analysis arises from changing national economic circumstances. Since 2014, Kazakhstan has been experiencing a slow-down in economic growth due to falling oil prices and some

reduction of export volumes. In turn, this has led to reduced growth rates of domestic energy consumption and GHG emissions from fuel combustion in recent years. Important investments in the energy system (necessary for achieving emissions reduction) have not been made (e.g. construction of new power plants, efficiency improvements in energy transmission and distribution, etc.). Previous studies were assuming higher economic growth and consequently higher domestic energy demand, as well as the extension of the existing gas infrastructure as planned by the Government. New conditions and challenges have to be taken into consideration in the assessment of de-carbonization policies and their contribution to the INDC target.

Last but not least, there is high resistance to the implementation of climate policies and measures, due to concerns of its negative impact on economy and social conditions as a result of the potential ETS-related growth in energy prices. Kazakhstan has a strong reliance on coal in its domestic energy use. Coal combustion releases toxic chemicals including particulate matter (PM), NOx, SO2, CO, mercury and many other toxic substances which are hazardous if released into the environment. The quantification of the co-benefits of the ETS in improving environmental quality and public health would help to address the disproportionate focus of the negative aspects of the ETS.

Allowance Allocation and Market Regulation Study
The allowances reserve is a legislatively mandated part of the design of Kazakhstan's ETS that is primarily intended to hold allowances for new entrants and expanding installations. The reserve can also function as a tool for regulating the market through the release of additional allowances through auctions. No analysis of the potential size of the reserve and its role in the ETS has been undertaken thus far. There is therefore a need to analyze the volume of allowances for the needs of new and expanding installations in accordance to the Environmental Code and the National Allocation Plan (NAP). The analysis should contain forecasts of the carbon market trends for 2018-2020.

iii. Assessment of how the proposed activities are expected to complement the ongoing activities and help fill the readiness gaps:

The majority of the modelling and economic analysis of the ETS fundamentals has been undertaken under the Study on Policy Options for Mid- and Long-term Emissions Pathways and Role of Carbon Pricing, which lay foundations for the economic analysis of Kazakhstan's ETS. Proposed activities will broaden existing research by addressing uncertainties in the performance of the economy and in implementation of the sectoral development plans, distributional issues of low carbon measures in ETS and non-ETS sectors, and co-benefits of the low carbon policies. The suite of the research and analysis will be also used to drive the updating and strengthening of the countries Green Economy Concept. The analysis underpinning decisions concerning the ETS reserve is a new component of the ETS framework that is critically lacking for the relaunch of Kazakhstan's ETS in 2018.

V. Budget, timeline and outputs

The purpose of this section is to provide an indicative budget and timeline for the proposed activities, including government or other co-financing, as applicable.

ICPs/TPs are invited to provide the following information:

i. Outline of planned activities for the additional funding allocation:

Please refer to the IV.i. above.

ii. Timeline to complete these activities:

The timeline to complete the proposed activities is the following:

(I) Low Carbon Development Study

The tasks of the consultant are expected to span over the implementation of the entire project, i.e. a total of 15 months from signing the contract to the end of the implementation period.

(II) Allowance Allocation and Market Regulation Study

The tasks of the consultant are expected to span over the implementation of the entire project, i.e. a total of 15 months from signing the contract to the end of the implementation period.

The activities are expected to be launched in December 2017 and completed in February 2019.

iii. Financial requirements to support the proposed activities:

Please describe a budget summarizing the financial requirements to support the proposed activities.

Activities	**Requested Budget**
1. Low Carbon Development Study	*US$ 300,000*
Activity 1.1. Stocktaking of existing policies, sectoral development plans and target indicators	*US$ 25,000*
Activity 1.2. Populating the model with an up-to-date data set	*US$ 20,000*
Activity 1.3. Barriers analysis	*US$ 25,000*
Activity 1.4. Comprehensive analysis of de-carbonization options and low carbon development opportunities	*US$ 50,000*
Activity 1.5. Co-benefits analysis	*US$ 50,000*
Activity 1.6. Investment requirements and availability of funding	*US$ 50,000*
Activity 1.7. Case studies based on international experience	*US$ 25,000*

Activity 1.8. Comprehensive master plan of low carbon policies and their interaction with the ETS.	*US$ 25,000*
Activity 1.9. Policy recommendations towards Kazakhstan's update of the NDC	*US$ 30,000*
2. Allowance Allocation and Market Regulation Study	*US$ 200,000*
Activity 2.1. Modelling and forecasting of the allowance market	*US$ 60,000*
Activity 2.2. Scenario development	*US$ 40,000*
Activity 2.3. Review of the auctioning methods	*US$ 70,000*
Activity 2.4 Analysis and elaboration of recommendations	*US$ 30,000*
TOTAL	***US$ 500,000***

iv. Funding sources to cover the financial requirements including:

PMR funding request:	*Please include the PMR funding request as well as other (confirmed and/or potential) funding sources, from the national government, other governments and/or donors (as appropriate).* The Republic of Kazakhstan, through the Ministry of Energy, is requesting US$500,000 in additional funding from PMR to carry out the proposed activities. Given the importance of the identified outputs to the operations of the national ETS resuming in January 2018 and to Kazakhstan's NDC implementation strategy, substantial in-kind contribution of experts from the Climate Change Department of the Ministry of Energy will be provided. PMR continuous support is all the more important going forward given that most other technical assistance programs supporting ETS in Kazakhstan have been completed.
Sources of funding for other activities:	*Please identify other activities undertaken or planned that are related to planned PMR activities and indicate the sources of funding for these other activities.* All other activities related to ETS operations and NDC implementation are directly financed from the budget of the Climate Change Department of the Ministry of Energy.

Overview of activities and estimated overall budget

Activity	Output(s)	Time required for completion	Estimated completion date	Overall budget (in USD)
Activity 1 – Low Carbon Development Study	**1.1.** Stocktaking of existing policies, sectoral development plans and target indicators	2 months	February 2018	*US$ 25,000*
	1.2. Populating the model with an up-to-date data set	3 months	March 2018	*US$ 20,000*
	1.3. Barriers analysis	3 months	June 2018	*US$ 25,000*
	1.4. Comprehensive analysis of de-carbonization options and low carbon development opportunities	4 months	July 2018	*US$ 50,000*
	1.5. Co-benefits analysis	4 months	July 2018	*US$ 50,000*
	1.6. Investment requirements and availability of funding	6 months	September 2018	*US$ 50,000*
	1.7. Case studies based on international experience	4 months	September 2018	*US$ 25,000*
	1.8. Comprehensive master plan of low carbon policies and their interaction with the ETS	6 months	December 2018	*US$ 25,000*
	1.9. Policy recommendations towards Kazakhstan's update of the NDC	3 months	February 2019	*US$ 30,000*
Activity 2 – Allowance Allocation and Market Regulation Study	**2.1.** Modelling and forecasting of the allowance market.	8 months	July 2018	*US$ 60,000*
	2.2. Scenario development.	10 months	December 2018	*US$ 40,000*
	2.3. Review of the auctioning methods.	4 months	December 2018	*US$ 70,000*
	2.4. Analysis and elaboration of recommendations	6 months	February 2019	*US$ 30,000*
Total estimated budget (in USD)	/	/	/	***US$ 500,000***

Overview of activities and PMR funding request

Activity	Output(s)	Sources of funding		
		PMR funding request (in USD)	*National government (if applicable) (in USD)*	*Other (if applicable) (in USD)*
Activity 1	**1.1.** Stocktaking of existing policies, sectoral development plans and target indicators	*US$ 25,000*	In-kind contribution (Ministry of Energy's staff)	None
	1.2. Populating the model with an up-to-date data set	*US$ 20,000*	In-kind contribution	None
	1.3. Barriers analysis	*US$ 25,000*	In-kind contribution	None
	1.4. Comprehensive analysis of de-carbonization options and low carbon development opportunities	*US$ 50,000*	In-kind contribution	None
	1.5. Co-benefits analysis	*US$ 50,000*	In-kind contribution	None
	1.6. Investment requirements and availability of funding	*US$ 50,000*	In-kind contribution	None
	1.7. Case studies based on international experience	*US$ 25,000*	In-kind contribution	None
	1.8. Comprehensive master plan of low carbon policies and their interaction with the ETS	*US$ 25,000*	In-kind contribution	None
	1.9. Policy recommendations towards Kazakhstan's update of the NDC	*US$ 30,000*	In-kind contribution	None
Activity 2	**2.1.** Modelling and forecasting of the allowance market.	*US$ 60,000*	In-kind contribution	None
	2.2. Scenario development.	*US$ 40,000*	In-kind contribution	None
	2.3. Review of the auctioning methods.	*US$ 70,000*	In-kind contribution	None
	2.4. Analysis and elaboration of recommendations	*US$ 30,000*	In-kind contribution	None
Total estimated budget (in USD)	/	***US$ 500,000***	In-kind contribution	None

VI. Expected Outcomes and Monitoring and Evaluation (M&E)

The purpose of this section is to provide the list of the outcomes that are expected from the implementation of additional activities and a plan to monitor and assess the progress of the proposed activities.

ICPs/TPs are invited to provide the following information:

i. Overall objective and outcomes of proposed activities:

Please describe the overall objective and outcomes that the proposed activities are expected to achieve.

The overall objective of the requested additional funding is to support further development and strengthening of the ETS in Kazakhstan and its interaction with the sectors not covered by the ETS. The technical framework and policy environment will be enhanced for the national ETS to be one of Kazakhstan's main instruments driving its transition to a green economy.

ii. Indicators that measure progress towards achieving the stated outcomes:

Please provide a set of indicators that measure progress towards achieving the stated outcomes.

Progress towards the outcomes of the activities will be measured by timely submissions of the outputs listed under Section IV.i above.

The project-level intermediate output indicators are the following:

- Low Carbon Study for Kazakhstan done;
- Allowance Allocation and Market Regulation Study done.

iii. Proposed M&E arrangements:

Please describe the proposed M&E arrangements specifying clear units of measurement for each indicator, as well as the roles and responsibilities for collecting, reporting, and analyzing data on those indicators.

The Climate Change Department within the Ministry of Energy of the Republic of Kazakhstan will work alongside the World Bank – which executes the PMR grant – to monitor and evaluate effective and timely implementation of all activities, as well as the impact(s) of project activities. The indicators proposed above will be fully integrated to the Implementation Status Reports submitted to the PMR Partnership Assembly on an annual basis.

iv. Implementing agency's capacity to monitor and evaluate project outcomes:

Please provide a brief assessment of the implementing agency's capacity to monitor and evaluate project outcomes.

As for the 1st phase of the PMR Kazakhstan Project, the Climate Change Department within the Ministry of Energy of the Republic of Kazakhstan will continue to coordinate PMR activities and current implementation arrangement with the World Bank – which executes the PMR grant – will be maintained. The Climate Change Department, under the leadership of the Vice-Minister for Environment, demonstrated satisfactory performance in coordinating PMR activities jointly with the World Bank since the inception of the PMR Kazakhstan Project in 2014. Therefore, the Climate Change Department will be best suited to monitor and evaluate the project's impacts and outcomes under its second phase, in coordination with other Departments of the Ministry of Energy, local stakeholders, and development partners supporting Kazakhstan with ETS.

VII. Annex

ICPs/TPs are invited to provide the most recent ISR as an Annex to this new proposal.

PMR Project Implementation Status Report (ISR)

The PMR Project Implementation Status Report should be prepared by the Implementing Country or Technical Partner, with the support of the Delivery Partner and/or the PMR Secretariat. For any questions related to the preparation of the PMR Project Implementation Status Report (PISR), please contact the PMR Secretariat at: pmrsecretariat@worldbank.org.

1. SUMMARY INFORMATION

Implementing Country/Technical Partner:	Republic of Kazakhstan
Reporting Period:	October 2015 – October 2016
Report Date:	4 October 2016
Implementing Agency:	Ministry of Energy
Contact Person:	Ms. Gulmira Sergazina Director Climate Change Department Ministry of Energy g.sergazina@energo.gov.kz; gsergazina@mail.ru
Grant Executed By:	World Bank, Environment & Natural Resources Global Practice
Grant Effectiveness and Closing Dates:	June 2017
Grant Amount (USD):	US$1,000,000
Funding Mobilized (USD):	N/A
Funding Committed (USD)	US$837,000

2. OVERVIEW

The Republic of Kazakhstan joined the PMR in March 2014 as a Technical Partner with the Ministry of Energy as implementing agency, and was allocated US$1 million to build capacities and address key challenges facing the National Emissions Trading System (hereafter KZ ETS) as well as the country's climate change mitigation strategy. The funding allocated was divided into two Phases (1st tranche and 2nd tranche of US$500,000 each) with respective activities identified based on the needs of the Ministry of Energy and consultation with stakeholders. The previous Project Implementation Status Report of the PMR Kazakhstan Project for the period March 2014 – September 2015 can be found on the PMR website. As of October 2016, the three project activities implemented under the 1st tranche are completed, and 2 project activities under the 2nd tranche have started – as detailed below.

First tranche (November 2014 – June 2016):

1. ***Study on Barriers to the Implementation of Kazakhstan's ETS and Options to Overcome Them (Completed)*:** The objective is to identify potential barriers to trade in Kazakhstan's ETS and to make actionable recommendations for the Government to address them. The study was completed in the autumn of 2015. Its main findings, recommendations, and suggested action items were discussed with the Ministry of Energy and other governmental stakeholders and have fed into Kazakhstan's "Action Plan of the Government of the Republic of Kazakhstan on GHG Emissions Reductions/Limitation by 2030". The Government, line Ministries and key stakeholders considered the final report during the consultation process on further carbon financing operations in Kazakhstan in light of the economic slowdown and considering the current bottlenecks constraining the performance of the KZ ETS. Some of the key barriers and corrective actions identified in the final report will be addressed in 2016 and 2017 – while the KZ ETS is suspended – in view of successfully restarting it on January 1, 2018.

2. ***Adaptation of Emissions Benchmarks for Emissions Allowances Allocation to Industry (Completed)*:** The objective of this activity is to develop product emissions benchmarks to support the allocation of emissions allowances to industrial sectors when the KZ ETS introduces benchmark-based allocation in the future. A number of reports were produced in 2014-2015 and discussed with local stakeholders – in particular the private sector – in dedicated workshops. The activity was finalized in September 2015. Following the recent amendments to the ecological regulation defining the benchmarking as an allocation method (2016), the Ministry of Energy is considering the introduction of the benchmarks developed in consultation with industry. The stakeholder consultation process, and refining of the developed benchmarks, are supported by PMR under the second tranche of funding.

3. ***Development of Policy Options for Mid- and Long-term Emissions Pathways and Role of Carbon Pricing (Completed)*:** The objective is to combine top-down and bottom-up economic models to understand the economy-wide impacts of the ETS and other complementary policies in Kazakhstan's development plans – and also assist with Kazakhstan's INDC process. A Working Group was officially established to ensure accurate data collection, robust discussions on the modeling's assumptions, and review the project's findings. The study was finalized and the results were presented to the key stakeholder at a dissemination workshop in June 2016. In addition, and importantly, the Minister for Energy presented the results of the study to the Prime Minister and his Cabinet in July 2016 during the Green Economy Council Meeting under

the President of Kazakhstan. The Council meeting was dedicated to discussing the economic implications of INDC implementation before Kazakhstan signs the Paris Agreement. The PMR also supported the participation of an international expert (Dr. Felix Matthes, Öko-Institut), who presented the international perspective of the Paris Agreement – and how Kazakhstan may position itself in adhering to this commitment. As of today, this is the only analysis of Kazakhstan's NDC implementation, which considers the role of the National ETS for Kazakhstan to achieve its mid- to long-term mitigation objectives. Following the signing of the Paris Agreement by Kazakhstan in August 2016, the final report was actually circulated to Parliament and line Ministries to support the ratification process of the Paris Agreement. In addition, the project substantially contributed to strengthening the capacity and modeling tools of the local modeling team at Nazarbayev University Research and Innovation System (NURIS) of which the Ministry of Energy increasingly relies for analysis related to the country's climate change strategy and policy options.

Second tranche (June 2016 – December 2017):

1. ***"Stakeholder consultation process on the developed benchmarks" (June 2016–June 2017, active):*** The objective of this activity is to develop an appropriate set of benchmarks for the industrial sector (industry, oil and gas and power) based on the previous benchmarking work by the Ministry of Energy and operating arm branch JSC "Zhasyl Damu", the Norwegian Ministry of Foreign Affairs, USAID and PMR. Stakeholder engagement and consultations with industry and line Ministries is an integral part of this process to ensure the full understanding of the methodology and calculation of the benchmarks considered. Following the finalization of the procurement process in June 2016, the selected consultant (Carbon Limits and Climate Change Coordination Center) conducted two consultation workshops with line Ministries and other technical assistance programs (i.e., in June and August). A number of broad methodological issues related to the choice of benchmarks and their use for allowance allocation in the ETS (e.g. use of benchmarks at sub-installation level, use of cross-sectoral correction factor) are currently under consideration. Once a consensus is reached, cross-ministerial consultations and additional industry consultations will take place to further refine and adopt the final benchmarks.

2. ***"Development of Electronic GHG Data Reporting" (October 2016–December 2017, active):*** The objective is to support Kazakhstan in building online reporting platform and related data management systems in order to increase the accuracy, completeness and consistency of the GHG data reported by emitters, and to allow more accurate data review and analysis by authorities. Such assistance is timely given that recent amendments to the ecological regulation (2016) mandates for the development of such a platform. Currently, the GHG data reporting is processed manually. The procurement for the local and international consultants was finalized in October 2016. The development of the e-reporting system will take place over a period of 15 months including testing and users training. The electronic reporting platform is expected to be operational by January 1, 2018 when the KZ ETS resumes operations.

3. ***"Enhancement of Kazakhstan's Carbon Unit Registry":*** This activity relates to the infrastructure supporting the issuance, transfer, and cancellation/retirement of carbon units in Kazakhstan's carbon market. Support may include enhancement of low/outdated security standards and connection with other carbon unit registries outside Kazakhstan (i.e. currently no market linking is possible). However, the Ministry of Energy requested to hold off on this activity until there is

more certainty on whether Kazakhstan will ratify the Doha Amendments. Further discussions between the World Bank and the Ministry of Energy in the coming months as to when this activity may start.

Figure 1 – Implementation period for PMR's activities for the period of 2014-2017

First tranche

		2014										2015												2016					
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Barries to ETS	PMR's								X										X									
Industry benchmarks	Technical								X										X									
Upstream policy	Partner															X												X

Second tranche

	2016							2017											
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Stakeholder consultation	X												X						
E-reporting development					X														X
Carbon unit registry																			

3. IMPLEMENTATION REPORT BY COMPONENT

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

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?	No

Implementation Progress by Component

Component 1: Study on Barriers to the Implementation of Kazakhstan's ETS and Options to Overcome Them	
Status:	**Completed (September 2015)** The objective was to identify potential barriers to trade in Kazakhstan's ETS and to make actionable recommendations for the Government to address them.

Comments:	The study was used by the Ministry of Energy to support the preparation of the "Action Plan of the Government of the Republic of Kazakhstan on GHG Emissions Reductions/Limitation by 2030" and to carry out an internal policy review process of the national ETS. For more information on the implementation progress, please, kindly refer to PISR as of October 2015.
Component 2: Adaptation of Emissions Benchmarks for Emissions Allowances Allocation to Industry	
Status:	**Completed (September 2015)** The objective was to develop the product emissions benchmarks to support the allocation of emissions allowances to industrial sectors in the future. EU ETS benchmarks were used as guidance and adapted to reflect the specific technical and economic conditions of Kazakhstan.
Comments:	The recently adopted amendments to the ecological regulation (2016) mandate allowance allocation to be done through benchmarking. Over the past few years, a number of benchmarks have been developed – including support from different technical assistance programs such as Norway, EBRD, USAID, and the PMR – and presented to representatives of the industrial, power, and oil and gas sectors. As a next step, the PMR will support the Ministry of Energy in the development of a single set of benchmarks emerging from further consultations with local industry and line Ministries. For more information on the implementation progress, please, kindly refer to PISR as of October 2015.
Component 3: Development of Policy Options for Mid- and Long-term Emissions Pathways and Role of Carbon Pricing	
Status:	**Completed (June 2016)** The objective was to combine top-down and bottom-up economic models to understand the economy-wide impacts of the ETS and other complementary policies in Kazakhstan's development plans – and also assist with Kazakhstan's iNDC process in the run-up to Paris COP21. The main outcome of year-long work includes: - An assessment of the adopted policies (i.e. ETS, Renewable, energy efficiency) in view of fulfilling Kazakhstan's mid- to long-term mitigation targets (i.e., 2020 and INDC targets); and - An analysis of the impacts of ETS on the country's economy: e.g., change in energy supply mix, impacts on GDP, welfare gains and losses incurred by emitters, etc.
Comments:	The findings of the project related to INDC implementation in Kazakhstan had significant value-added in supporting discussions and decision-making by the Government and line Ministries during the high-level meeting on signing the Paris Agreement in August 2016. In addition, the Ministry of Energy used the results in a

	number of consultation meetings with industry, in particular to underscore the role of KZ ETS in achieving Kazakhstan's NDC. The findings are also useful in helping other line Ministries involved in the implementation of Kazakhstan's sectoral policies supporting the shift to a green economy. Findings show that fulfillment of the INDC would only have a marginal impact on major economic indicators in the long-run (e.g. GDP +/- 1%). Sector impacts would be more transformational - mainly through increased energy and carbon prices. The analysis demonstrates that policies and targets listed in current strategic documents as such will not be able to meet INDC targets by 2030, nor in the long run. In particular, while these policies foresee ambitious targets for sectors like electricity generation (e.g. reduction of absolute CO_2 emissions by 2050), they impose only lax targets on other sectors such as heavy industry (e.g. metallurgy) where the abatement potential is substantial. As this analysis shows, achieving considerable reductions of GHG emissions (such as the INDC target) requires a more balanced allocation of the environmental burden. The KZ ETS covers utilities as well as industries and will have to play a key role. Compared to its present design, however, the system needs to be improved. In particular, emission caps need to be more strict and the coverage of the system more broad (e.g. to fully include heat generation). Finally, consumption of fossil energy (e.g. gas and coal) by non-ETS sectors (e.g. trade and services) should be taxed to avoid carbon leakage effects. As the analysis shows, these policies will induce a relatively high price of up to 100 USD per ton of CO_2 reduction by 2030. However, the assessment also shows that given the huge potential to increase energy efficiency and with significant investment in energy efficient technologies, these challenges can be dealt with. Overall, achieving Kazakhstan's mitigation commitment is economically feasible, but would require further regulatory and policy efforts.

Component 4: "Shareholder consultation process on the developed benchmarks" *(June 2016–June 2017)*

The core objectives of this activity includes:

- Development of an appropriate set of benchmarks for the industrial sectors covered by the ETS (i.e. industry, oil and gas, power) to be elaborated based on the previous work done on benchmarking by the Ministry of Energy and its operating arm JSC "Zhasyl Damu", USAID, EBRD, the Norwegian Ministry of Foreign Affairs, and PMR;

- Conduct in-depth stakeholder consultations including with line Ministries and the industry to ensure that the purpose of the benchmarks, their methodology/calculations, and how they are to be used is fully understood. These consultations also aim to ensure acceptance of the benchmarks by industries who may be affected by their implementation.

To achieve these objectives, the main tasks of the project include:

Task 1: Inception Phase and Action Plan
During this first phase, all benchmarking activities done to date were reviewed, and an action plan towards further refining and eventual adoption of benchmarks will be developed in collaboration with

the Ministry. This action plan will also lay out the process for stakeholder consultation by the Ministry of Energy, with specific timelines, responsibilities and milestones with expected results. ***Task 2: Preparation and Delivery of Internal Workshop*** A dedicated two-day workshop will provide capacity building and awareness raising to government agencies with a view to support the revision and adoption process of benchmarks. ***Task 3: Cross-Ministry Meetings*** Following-on from the previous task, a workshop will be held with representatives from relevant ministries in order to present the benchmarking and allocation process, the proposed set of benchmarks and the results of the allocation based on the proposed benchmarks. Such cross-ministry meetings will be beneficial, as they will allow the different Ministries for which the ETS has some relevance to understand the issues. ***Task 4: Multi-Stakeholder Workshops and Meetings*** Stakeholder workshops will be held with each of the main industrial sectors (i.e. three workshops held with the three main sectors: industry, oil, gas, and power). The aim of these workshops will be to increase awareness on the benchmarking process, present the proposed benchmarks and invite feedback from industry representatives. ***Task 5: Review of Benchmarks*** Based on the feedback from the previous task, the proposed benchmarks will be reviewed and amended. ***Task 6: Action plan*** The initial action plan will be updated to reflect any need for further development of the benchmarks and the allowance allocation plan based such benchmarks – with timelines and proposed responsible parties.	
Status:	**Ongoing** Following the finalization of the procurement in June 2016, regular internal meetings have been arranged between the respective departments of the Ministry of Energy and stakeholders to agree on the final set of the benchmarks. A consensus was reached that benchmarks are needed; however, the power sector was identified as a somewhat problematic area with respect to accepting the benchmarks. They proposed to treat large power stations of national importance and other plants separately, and to propose benchmarks for electricity separate from heat. The oil and gas sector and industry sector are not as problematic and show little opposition to the discussed benchmarks. The work towards having one single set of benchmarks is being carried out in close cooperation with the Ministry of Energy and operating arm Zhasyl Damu, USAID, and EBRD. One important issue currently under consideration lies with the Power Sector Department of the Ministry of Energy as it relates to the benchmarks for the power sector. Other pending issues mostly relate to the use of benchmarks in the context of allowance allocation (e.g. use of benchmarks at a sub-installation level, use of cross-sectoral correction factors, etc.).

	Additional stakeholder consultations with industry and line Ministries are expected in the coming months once a final set of figures is agreed upon.
Comments:	The robust explanation of the methodology and estimates for benchmark development and use is an integral part of the consultation process to ensure industry's buy-in.

Component 5: "Development of Electronic GHG Data Reporting"

The objective is to build an electronic compliance system (i.e. online reporting platform and related data management systems) in order to increase the accuracy, completeness and consistency of the GHG data reported by emitters, and to allow more accurate data review and analysis by authorities.

To achieve these objectives, the local consultant (JSC "Zhyasl Damu") is undertaking the tasks detailed below. An international consultant (CITEPA) will provide technical guidance and expert input to ensure that international best practice and experience is considered during the e-reporting system design and implementation process.

Phase 1: Systems Needs Analysis is aimed to understand and clearly articulate what is being built, and to ensure that the system supports and is aligned with relevant policies and regulations.

Phase 2: Functional Systems Specifications is aimed at the development of the systems' functional requirements, which describe the goals and objectives of the system, and define the types of data, users, key functional components, and design requirements.

Phase 3: Technical Systems Specifications is targeted at the development of the systems technical requirements document(s), which will provide system developers guidance on system performance, architecture, hardware, software, security, and hosting. Technical requirements will also clarify processes related to software development, integration, testing, and deployment.

Phase 4: Systems Integration, Testing and Deployment is aimed to launch the system providing support to and building the capacity of GHG data management users who are key to ensuring smooth reporting cycles and accurate data input.

Status:	**Ongoing** The procurement for the local and international consultants was finalized and the project started in October 2016.
Comments:	N/A

4. PROGRESS, CHALLENGES, AND LESSONS LEARNED

Important policy or regulatory developments related to the Grant's objectives and activities:

Given the economic slowdown and the need to enhance the design and operations of the KZ ETS, in April 2016 Kazakhstan suspended the KZ ETS until January 1, 2018. Therefore, all ETS operations, except the MRV, have been frozen. The third National Allocation Plan adopted in early January 2016 – which defines a cumulative cap of 746.5 Mt CO2 for the period of 2016-2020 – was also suspended. In

the meantime, the ecological code was amended to improve the KZ ETS regulatory and technical environment. This process will lead to the preparation of amendments to revise over thirty national bylaws. It is expected that the Ministry of Energy will have to pass all legislation throughout 2017 to enable the KZ ETS to re-start in 2018.

There is a still strong resistance from industry who advocate a complete closure of the emission trading scheme and they propose technology upgrades, energy efficiency and RE as an alternative to the KZ ETS. Albeit, the recent PMR's work on the upstream analysis has shown that these measures would be insufficient to meet Kazakhstan's ambitious targets towards the transition to a green economy and achieving the country's INDC (i.e. an economy-wide target of 15%-25% reduction in greenhouse gas emissions by 2030 compared to 1990). Such strong resistance and lobby threaten the efforts to further enhance and enforce ETS in Kazakhstan.

Kazakhstan signed the Paris Agreement in August 2016 and expects to ratify it by the end of this year. The Government began negotiations with the Green Climate Fund (GCF) to leverage financing for the implementation of its NDC and is considering the appointment of the Ministry of Energy as the National Designated Authority. To this end, the Ministry of Energy has begun working on the estimated investments needed for the implementation of its NDC.

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

No significant change has occurred.

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

Since the PMR supported activities are executed by the World Bank, the Ministry of Energy is not involved in the financial management and procurement aspects of the PMR grant. On the one hand, this lowers the work load for the Climate Change Department which would face a shortage in human resources to do so. On the other hand, Kazakhstan – unlike other PMR Participants – does not benefit from a Project Implementation Unit (PIU) which would provide additional staff for the Ministry of Energy to implement PMR activities on the ground and build internal capacity.

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

In January 2014, the World Bank (Kazakhstan Country Office) hosted the first donor coordination meeting on technical assistance to ETS in Kazakhstan in collaboration with the Ministry of Environment and Water Resources (now Ministry of Energy). The different Technical Assistance programs supporting Kazakhstan's ETS (i.e. ADB, EBRD, European Union, Germany, Norway, USAID, World Bank) were represented, shared past experience and plans going forward. The meeting helped the Ministry identify synergies, overlaps, and gaps between the different technical assistance programs and define PMR activities under the first tranche of PMR funding. Since then, donor coordination calls and meetings have been taking place on a regular basis. The latest donor coordination meeting took place at the World Bank (Kazakhstan Country Office) in Astana on 21 September 2016 and brought together representatives from World Bank, GIZ, ADB, UNDP, EU, USAID, EBRD, and OECD. When needed, the Ministry of Energy shares documents and consults the donor group through emails and workshops.

Stakeholder engagement related to the Grant's activities:

All PMR-funded activities benefit from extensive stakeholder engagement – including with the private sector and industry – to collect data, validate assumptions, present and endorse findings. With regards to the activity on "Development of Policy Options for Mid- and Long-term Emissions Pathways and Role of Carbon Pricing", a Working Group was set-up requesting the main relevant stakeholders to nominate representatives to support the project. In addition, the findings were shared with a wide number of stakeholders during a specific dissemination workshop (June 2016). Comments and recommendations received at the workshop were considered in the final modeling simulations and reports.

The activity on stakeholder consultation on benchmarking entails a strong engagement and constant interaction with all stakeholders to ensure the proper interpretation of the benchmarks developed. Overall, the Ministry of Energy is open to share the deliverables and policy-related information among stakeholders and donors to ensure the synchronization of the effort and avoid duplication.

Other issues related to the Grant's activities

N/A

5. ADDITIONAL INFORMATION

Since the beginning of the support, the PMR has hosted Ministry staff to twelve international technical workshops in order to build capacity on ETS development and operations and exchange developments with experts from other countries. The workshops in which Kazakhstan representatives participated were related to relevant policy developments in Kazakhstan such as the development of post-2020 mitigation scenarios, issues related to the implications of the Paris Agreement, and scaled-up crediting approaches. The upstream analytical work of Kazakhstan under PMR was also presented by NURIS to other international experts at the PMR workshop on "Post-2020 Mitigation Scenarios & Carbon Pricing Modelling" in Brasilia in February 2016. The comments received were useful and taken into account in the subsequent project tasks.

In addition, the engagement of local consultants for the implementation of PMR's activities have contributed to enhancing local capacities, in particular where knowledge transfer from international to local consultants is enabled through joint work.