

2018

Project Implementation Review (PIR)

**NAMA Peru**

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# Basic Data

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| **Project Information** |
| UNDP PIMS ID | 4679 |
| GEF ID | 4884 |
| Title | Nationally Appropiate Mitigation Actions in the Energy Sector in Peru |
| Country(ies) | Peru, Peru |
| UNDP-GEF Technical Team | Energy, Infrastructure, Transport and Technology |
| Project Implementing Partner | Government |
| Joint Agencies | *(not set or not applicable)* |
| Project Type | Full Size |

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| **Project Description** |
| The GEF project will strengthen the capacity of the Peruvian government to identify and structure NAMAs in the energy sector, namely to create incentive for investment in new renewable energy facilities connected to the grid (solar, wind, biomass, geothermal and hydro under 20 MW), and the use of renewable energy in isolated systems (solar, biomass, wind and micro-hydro). The project will build upon existing and planned energy sector mitigation efforts, national development policies, and the national NAMA development and implementation framework. The project will establish priorities within the energy sector, define specific NAMAs with clear and achievable mitigation results, and pilot the implementation of four NAMAs in renewable energy generation, both on and off grid. The project will contribute to the country’s attainment of its voluntary mitigation targets in the energy sector, with an expected direct emission reduction of 962,000 tons of CO2 equivalent and an additional indirect emission reduction of 1,600,000 million tons of CO2e. As a positive side effect, NAMAs will generate national benefits related to national economic growth, poverty reduction, competitiveness and energy security. |

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| Other Partners | *(not set or not applicable)* |

# Overall Ratings

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| Overall DO Rating | Satisfactory |
| Overall IP Rating | Moderately Satisfactory |
| Overall Risk Rating | Moderate |

# Development Progress

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| **Description** |
| **Objective****The objective of the project is to support the government of Peru in the development and implementation of National Appropriate Mitigation Actions in the energy sector** |
| **Description of Indicator** | **Baseline Level** | **Midterm target level** | **End of project target level** | **Level at 30 June 2017** | **Cumulative progress since project start** |
| Baseline emission trends | GHG inventory developed at sectoral and national level | *(not set or not applicable)* | GHG energy inventory sufficiently detailed at the regional and sub-sectoral levels to define clear baseline conditions for NAMA implementation | A GHG Inventory for the energy sector for 2014 has been completed by MINEM in 2016 and was officially approved by MINAM in 2017. The final approved Annual Report on Greenhouse Gas Emissions (RAGEI) for 2014 and approval by MINAM are attached. (Annex 1).The project is currently collecting data for the 2015 Inventory, which will be completed by the end of 2017 (Annex 2). Need to clarify that regional level inventory is not necessary for this Project given that the regulatory changes made apply at the national level and projects are not being implemented by region.  | The Project has developed the official GEI Inventory for the energy sector and sub-sectors for 2014, and the associated Annual Report (RAGEI), both of which have been approved and published by MINAM (see Annex 1 RAGEI 2014 and Annex 2 MINAM approval letter). Additionally, as required for the sector, but not specified in the Prodoc, the Project has also developed preliminary inventories for 2015 and 2016 (Annex 3); however, these will be updated once the adjusted National Energy Balances are provided (currently being updated by MEM). The inventories were developed in coordination with a team of selected technicians in the Energy Efficiency Direction to ensure institutional capacity building and continuation of future annual inventories after the completion of the NAMA Project. These inventories for the energy sector and subsectors have served as inputs for the development of the baseline conditions (BAU) in the design of the 4 energy NAMAs: Electric Transport (Annex 4a and 4b), Grid-Connected Renewable Energy (Annex 5), Energy Efficiency (Annex 6a and 6b), and the preliminary baseline for the Universal Access to Sustainable Energy NAMA (Annex 7).  |
| Portfolio of NAMAs in the energy generation and end use sectors | No systematic assessment of potential abatement measures in energy sector | *(not set or not applicable)* | Full assessment of mitigation options in energy sector is conducted and portfolio of potential NAMAs is generated | Diagnostic studies are currently in process and the mitigation actions have been evaluated. The diagnostic studies for the Electric Transport, the Energy Efficiency and Grid-Connected NAMAs are currently being finalized and the Off-Grid NAMA diagnostic studies will be completed in August 2017. The reports that have already been approved are attached (Annex 3). The final mitigation actions are being incorporated in the detailed designs that will be completed by the end of 2017 [goo.gl/ah6MEu]) and [ goo.gl/9VUJ3r]. | During the diagnostic studies conducted by the Project for the four NAMAs, multiple mitigation options within each sub-sector were evaluated based on various criteria such as: potential for reducing GHG emissions and local pollutants, transformational potential and level of potential impact in the short and medium term, replicability and scalability potential, the cost of implementation and cost per mitigated ton of CO2, concordance with national policies and level of commitment of the government to implement the measures, potential to generate social and environmental co-benefits, probability of success within the timeframe of the Project and the NDCs, and reduced level of risk and identified barriers. As a result of these comprehensive diagnostic assessments, the focus of the 4 energy NAMAs were refined to be included in the detailed designs. The final approved diagnostic studies are published on the Project website for public access (http://namasenergia.minem.gob.pe//es-pe/estudio), and have been uploaded for reference: Electric Transport (Annex 8), Grid-Connected Renewable Energy (Annex 9), Energy Efficiency (Annex 10), and Universal Access to Sustainable Energy (Rural Electrification Annex 11, and Clean cooking Annex 12).  |
| Implementation of NAMAs in off grid and in grid renewable energy generation | No NAMAs in the off grid renewable energy sub sector under implementation | *(not set or not applicable)* | One NAMA in off grid renewable energy generation fully designed and under implementation (on off grid electrification with PV panels), including implementation of MRV mechanisms. | Implementation of the national rural electrification program is currently underway. 6,000 PV panel systems have been installed in the North, Central and Southern Regions (2,000 each) and the remaining systems of the 170,000 in total are expected to be installed during 2017 [goo.gl/fxMvH9]) (Annex 4). MINEM has commited $20,800,000 in co-financing for this NAMA Project, which is partly attributed to the resources dedicated to the rural electrification program. Ergon recently gave a presentation on the history and status of the project which can be seen in the following link: https://prezi.com/view/SBgYlTrSTADcM5ioz85x/  | The rural electrification component of the Universal Access to Sustainable Energy NAMA is in full implementation with 67,000 off-grid photovoltaic systems installed through May 2018, and the remainder of the planned 172,890 systems are programmed to be installed by mid-2019 (https://prezi.com/view/TyYqwiQwJtGUHa9btJg3/). The national subsidy to finance up to 80% of the costs of rural electrification projects in the private sector is also in full implementation (FOSE - BT8) and is currently being evaluated by the Project as part of a consultancy to propose possible modifications to the subsidy and business models to promote additional massive rural electrification programs at the national scale. The installation reports submitted by the company in charge of the installation (Ergon) (Annex 13) and the verification reports completed by the local Energy Distribution Companies (Annex 14) have been uploaded for reference. These reports are being considered as part of the MRV protocol, to collect information regarding the number of systems installed, as well as verify their continued use by the families.  |
| Implementation of NAMAs in grid connected renewable energy generation | No NAMAs in the off grid renewable energy sub sector under implementation | *(not set or not applicable)* | One NAMA in on grid renewable energy generation and/or efficiency energy fully designed and under implementation including implementation of MRV mechanisms. | Four non-conventional renewable energy auctions have been implemented to date since 2010. The results of these auctions are summarized on the Osinergmin website and below (http://www2.osinerg.gob.pe/EnergiasRenovables/contenido/SubastasAnteriores.html). As part of the Project’s diagnostic study for the Grid-Connected Renewable Energy NAMA, the NAMA Project has developed an energy sector model that is now being used by the energy planning team in MINEM to evaluate potential regulatory changes that promote a greater share of renewables in the national grid, as well as the development of a new 10-year National Energy Plan. The diagnostic study proposes regulatory changes that not only increase the current of objective of 5% contribution from non-conventional renewable energy resources to 10%, but also give wind and solar energy projects access to the free and regulated markets, of which they are currently excluded. It presents alternatives to the renewable energy auction that help to further expand the opportunities for renewables. The diagnostic study also presents a finance mechanism which would help offset the difference in costs between conventional and renewable energy resources until market conditions allow renewable energy to compete fairly in a transparent market. Lastly, the study presents regulatory changes required to capture the carbon emissions from both existing and new RER projects. Key actors in the sector (Osinergmin and COES) as well as key members of the ministry have been continuously involved in the development of the diagnostic study, giving their input to ensure that the proposals are relevant, feasible and aligned with the political agenda. The final proposed regulatory changes resulting from the diagnostic study will be presented to the Vice Minister of Energy in late July 2017. The results of the previous 4 renewable energy auctions are summarized as follows: • First Auction: 12 February 2010 (first round) and 23 July 2010 (second round): 181 MW Mini Hydro (• Second Auction: 23 August 2011: 102 MW Mini Hydro, 90 MW Wind, 16 MW Solar, 2 MW Biomass. • Third Auction: 12 December 2013: 240 MW Mini Hydro. • Fourth Auction: 16 February 2016: 80 MW Mini Hydro, 162 MW Wind, 184 MW Solar, 4 MW Biomass.  | The Project has completed the design of the Grid-Connected Renewable Energy (RER) NAMA and this has been presented to the Directive Committee. One of the enabling conditions of the NAMA is to change the regulatory framework for Firm Capacity of non-conventional Renewables, which are currently not allowed to participate in the energy market outside of the biannual renewable energy auctions. A proposal has been developed by the Project as part of the diagnostic study, modified, and submitted to the Minister as a formal proposal from the Energy Efficiency Direction. The Project also submitted a proposal to implement energy blocks for distributors, allowing RER Projects to have a competitive advantage during periods of greatest generation and enable energy -only contracts in the case that the Firm Capacity proposal is not approved. If either of these proposals are approved, it will allow solar and wind energy projects to participate in the energy market via bilaterial contracts with distributors and potentially free market clients, which would significantly increase the share of RER in the energy market considering the competitive costs that these projects offer in Peru. The implementation of the MRV mechanism has also been initiated for the RER projects that have been approved and are currently injecting to the grid via the national renewable energy auction mechanism, however, this will be updated once the verification of the Emissions Factor for the SEIN is completed (currently in the final stage of validation). The Project has contracted the development and third-party verification of the Emission Factor for the grid, which will be used as the official value and methodology for the national emission factor in national inventories and mitigation projects related to grid-connected electricity consumption. The Project has also developed proposals for normative changes to allow renewable energy projects to sign contracts with free and regulated clients, and for new auctions for distributors to include energy blocks favoring renewable energy with a minimum quota of RER for distribution companies. These normative changes are currently under review and consideration by the vice minister and if implemented will help stimulate a greater share of grid-connected RER that will be counted towards the NAMA and NDC. The design document for the Grid-Connected RER NAMA (Anexx 5), the normative changes submitted to the minister for Firm Capacity and Energy Block Auctions, the proposed emission factor for the SEIN and the validation report currently being finalized have been uploaded for reference. The Project is currently starting a pilot project to install eight 3 kW solar PV systems in the Ministry of Energy and Mines and 7 public universities in Peru, to support greater understanding and promotion of solar systems and incorporate them into existing curriculums. The Project also collaborated with NREL to develop a solar map tool for public use in Peru to provide information for development of individual solar systems throughout Peru (https://maps.nrel.gov/rede-peru/).  |
| Establishment and operation of MRV protocols | No systematic methodology for monitoring GHG emission reductions in the energy sector | *(not set or not applicable)* | Fully designed and operational MRV protocols and procedures for NAMAs in the energy sector | The MRV protocols will be included within the consultancies for the detailed design of the NAMAs. The detailed design for the electric transport and energy efficiency NAMAs will start in July, and the consultancies for the other 2 NAMAs will start in July/August. The protocols and procedures for MRV will be established according to the national protocol developed by the Ministry of Environment (MINAM) and implemented by the Project. | The MRV protocols have been designed and are in early stages of implementation for three of the four NAMAs: Energy Efficiency, Electric Transport and Grid-Connected Renewable Energy. The MRV protocol for the Universal Access to Sustainable Energy NAMA is currently in development and will be finalized by the third trimester of 2018. Additionally, the Project has developed a document describing general guidelines for MRV Protocol, which has been submitted to MINAM as well as distributed to all relevant actors involved in the four energy NAMAs (Annex 21). This document was approved by MINAM in August of 2017 (Annex 22) and is considered as a contribution to the national MRV Protocol. Indicators have been proposed in the design documents and are summarized in Annexes 23a-23d.  |
| Renewable energy generated by on and off grid sources | Grid connected - 2.7% participation of non-conventional RE Generation in National Grid  Off Grid – No systematic monitoring of off grid RE generation | *(not set or not applicable)* | Grid Connected: 3.5% participation of non-conventional RE Generation in National Grid by 2018.   Off grid – 17 MW additional off-grid generation  | Peru has achieved nearly 4% contribution from non-conventional renewable energy by 2017 according to official documentation of MINEM, COES and Osinergmin. In reality, the off-grid electrification project that is being managed by DGER originally planned to be installed in 500,000 houses (50 MW) has been reduced to 170,000 houses (17 MW) (Annex 4). This change was reported and agreed in the Inception Workshop (see attached Inception Workshop Report in Annex 5).  | In comparison with the target of 3.5% RER expected to be installed by 2018, Peru has exceeded this target with a total participation of 4.5% RER as of May 2018, resulting from the projects that won the first four renewable energy auctions (Annex 24). The participation of RER in the national grid is expected to reach 5% by 2020 with the RER projects that won the fourth RER auction but aren't yet connected to the grid. The projects that are not participating in carbon markets have been considered in the MRV system for the Grid-Connected NAMA, considering that these projects could not have existed without government assistance (Annex 5). Regarding the off-grid systems, to date, nearly 67,000 off-grid PV systems have been installed as a result of the massive government auction program (Annex 13), and it is estimated that the remaining systems up to 172,890 will be installed by mid-2019 (Annex 14). The Project is currently doing initial estimates of the reductions associated with the installed systems, according to the preliminary baseline and mitigation measures study (Annex 7).   |
| Direct and indirect GHG emissions resulting from the project | N/A | *(not set or not applicable)* | MRV protocols are used to track the following project targets: Direct emission reductions of 962,000 tons CO2 over 10 years Indirect emission reductions of 1,600,000 tons CO2 over 10 years | The protocol for MRV is currently in finalization by MINAM and will be included in the detailed design phase for implementation by the Project.  The mentioned reduction targets are associated with the 50 MW rural electrification program and should be adjusted according to the reduced scope of this rural electrification project (now 17 MW) (See attached bases and addendums). This change was agreed during the Inception Workshop (see attached Inception Workshop Report Annex 5). However, it should be noted that these emission reductions limits are only associated with the off-grid renewable energy NAMA and will be expanded both for this NAMA and the other three NAMAs as part of the Detailed Designs for each NAMA. The overall Project emission reductions are expected to be much greater and will be estimated for the complete NAMA Project (4 NAMAs) by the end of 2017.    | The MRV protocols are being implemented, and to date early estimates indicate that the four energy NAMAs have already exceeded the direct emission reduction target of 962,000 tons CO2 with over 1 million tons of CO2 mitigated in 2017. The actual number of tons mitigated will be updated once the emissions factor developed by the Project is finally validated by UNFCCC (Annexes 18-19). These estimations can be found in the design documents that have been uploaded (Annexes 4-7), with emphasis on the Grid-Connected Renewable Energy NAMA Design, which has the greatest potential for mitigation of the 4 energy NAMAs.  |
| NEW INDICATOR: Implementation of two NAMAs in energy effciency (energy final use) | No NAMAs in the energy efficiency sub sector under implementation | *(not set or not applicable)* | Two NAMAs in energy efficiency fully designed and under implementation ( final energy use), including implementation of MRV mechanisms | *(not set or not applicable)* | The energy efficiency and electric transport NAMAs are both fully designed and in early stages of implementation, including the MRV mechanisms. In the following sections below, these NAMAs are described in greater detail.  |
| **The progress of the objective can be described as:** | **On track** |
| **Outcome 1****Established national and regional GHG emission BAU reference baseline for the energy sector** |
| **Description of Indicator** | **Baseline Level** | **Midterm target level** | **End of project target level** | **Level at 30 June 2017** | **Cumulative progress since project start** |
| One GHG inventory procedure validated by the relevant energy entities and coherent with InformaGEI and the National Energy Balance by 2014. | Existing legal procedure Supreme Decree N 013-2014-MINAM "Provisions for the elaboration of the National Greenhouse Gas Inventory -INFOCARBONO", whose operation will allow the development of institutional arrangements for the collection, evaluation and systematization of information related to the emission and Removal of greenhouse gases | *(not set or not applicable)* | Procedure validated, approved and implemented by the second quarter of 2016. | The procedure for the 2014 GHG inventory was modified by the NAMA Project for the Energy Sector, and presented to MINAM for validation in the second quarter of 2016. This was approved and used to complete the 2014 GHG inventory in 2016 (Annex 6). The NAMA Project is currently implementing the new procedure for the development of the GEI inventories and annual reports (Annex 1 and Annex 2). | The GHG inventory for the energy sector was completed by the Project for 2014, along with the revised procedure and methodology proposed by the Project. Both have been approved and validated by the Environmental Ministry (Anexes 1 and 2). Preliminary inventories have also been developed for 2015 and 2016 (Annex 3), however, to finalize these inventories, the Project is awaiting National Energy Balances for these years, which are currently being updated by the Energy Efficiency Division of the Ministry of Energy and Mines. Once received (in 2018), the inventories for 2015 and 2016 will be finalized.  |
| One final report of an inventory based on the approved procedure divided by sub-sector developed during 2014. | Inventory of GHG emissions per selected sub-sector is updated until 2010, based on a formal methodology. Non-periodically updated inventory to assess the real emissions and impact of mitigation activities. | *(not set or not applicable)* | Updated inventory based on approved procedure using the latest available and required year information. | The 2014 inventory and associated annual report developed by the NAMA Project have been approved and validated by MINAM in the last quarter of 2016. The final approved Annual Report on Greenhouse Gas Emissions (RAGEI) for 2014 produced by the NAMA Project is attached (Annex 1). The inventory for 2015 is currently in development by the NAMA Project and will be approved and validated by MINAM by the last quarter of 2017 (Annex 2). These inventories will be incorporated as formal inputs during the development of the BAU for each of the 4 NAMAs.  | The annual GHG report has been completed through 2014 for the energy sector, based on the annual inventory for 2014 and has been uploaded to the Project website (www.namasenergia.minem.gob.pe). This report (RAGEI) was submitted to the Environmental Ministry and has been approved (Annexes 1 and 2).  |
| BAU systematized and publicly available reference baseline reports for the selected sub-sectors during 2014 and for a period no shorter than 2013-2021. | Non-existent updated or systematized national or regional GHG BAU reference baselines. | *(not set or not applicable)* | BAU reference baselines approved and in accordance with procedure and PlanCC outcomes by June 2016. | The BAU has been estimated by the project and will be refined by the external consultants during the detailed design of each NAMA. A preliminary excel workbook with these estimations has been included in this report (Annex 7). The period of no shorter than 2013-2021 should be changed to 2010-2030 according to the timeline of the NDC. This change was agreed during the Inception Workshop (see attached Inception Workshop Report Annex 5). Also, the goal of completing this by June 2015 is incorrect and not in agreement with the Prodoc which says the first semester of 2016. In reality both should be adjusted to the end of 2017.  | The BAU scenarios for the four NAMAs and respective sub-sectors have been established for the relevant years corresponding to each NAMA between 2010-2030. These BAU have been presented in the NDC Multisectorial Work Groups and are being included in the updated in the national NDC communications and tentative programmed actions (Annexes 25-26). The Project is currently conducting studies to evaluate the emissions factors for the national grid, firewood for cooking, and the transport sector, in order to determine nationally appropriate values for these sectors that will be considered in the BAU and national inventories (studies currently in progress). It should be noted that PlanCC was developed as a preliminary stage of NDC development, but with the development of the NAMAs in different sectors, Multisectorial Work Groups, and updated NDC mitigation measures, the PlanCC is now outdated and is being updated with more realistic goals, objectives and mitigation measures.  |
| **The progress of the objective can be described as:** | **On track** |
| **Outcome 2****Prioritized mitigation options and MACCs are identified, NAMA Design Documents are developed in the selected sub-sectors (new renewable energy sources both connected and non-connected to the grid), and 4 NAMA activities are ready for implementation** |
| **Description of Indicator** | **Baseline Level** | **Midterm target level** | **End of project target level** | **Level at 30 June 2017** | **Cumulative progress since project start** |
| 1 sector wide and 2 sub sectoral MAC curves | Nonexistent mitigation options listed and assessed. Nonexistent MAC curves in the selected sub-sectors. | *(not set or not applicable)* | Energy sector MAC curve reports and detailed sub sectoral mac curves for on and off grid RE approved by the Project Steering Committee. | During the Detailed Design phase of the four NAMAs, MAC Curves will be developed for each of the 4 NAMAs. These will consider the values included in the MAC Curves developed by Plan CC, but updated as appropriate for the Project in 2018.  | The MAC curve was originally developed as part of PlanCC, and the specific values relevant to the 4 Energy NAMAs have been updated as part of the detailed designs (Annexes 4-7). These values serve to support in decision making processes when deciding between financing alternatives for different mitigation measures, but at this stage, the costs of mitigation are more focused on costs of implementation of the selected mitigation measures and not on evaluation of alternatives.  |
| Portfolio of NAMA activities and NAMA factsheets | No portfolio of energy generation and end use NAMAs in place | *(not set or not applicable)* | Portfolio of NAMA activities at the conceptual design level in place for energy generation and end use. | Portfolios and factsheets for the NAMAs will be developed as part of the consultancies for the detailed design of the 4 NAMAs, which will be completed by the end of 2017. The 4 NAMAs that will be designed by the end of 2017 include: 1. NAMA # 1: Promotion and improvement of national energy efficiency measures via regulatory changes and financial mechanisms that promote energy efficiency in all sectors; 2. NAMA # 2: The promotion of a greater share of renewable energy (RER) in interconnected systems; 3. NAMA # 3: Improvement of universal access to sustainable energy solutions in off-grid (rural) areas, using renewable energy (RER) resources; and 4. NAMA # 4: Transformation of the energy sector through regulatory changes and financial mechanisms that promote a transition towards electric transport. | The Project has completed diagnostic studies for the sub-sectors related to energy efficiency in the public and private sectors, electric and hybrid transport, rural electrification, clean cooking, and grid-connected renewable energy (Annexes 8-12). These studies focused on evaluating data gaps, projections, regulatory proposals and enabling conditions to achieve the goals outlined in the NAMAs. These studies have served to support and justify proposed normative changes such as 1) a new procedure to calculate firm capacity for solar and wind energy, allowing them to participate in the energy market via bilateral contracts with free and regulated clients (Annexes 15 and 16); 2) proposed law and supreme decree to promote electric and hybrid transport (Annex 27), 3) the inclusion of clean stoves and additional renewable energy technologies for rural populations in the national energy inclusion fund (Annex 28), and 4) potential changes to the massive government renewable energy auction programs for rural populations (in progress). Additionally, various inter-institutional agreements and acts have been drafted (Annexes 29-32), which support the commitment of the other competent entities in supporting the implementation of the NAMAs, and their respective MRV Protocols. The designs for the Energy Efficiency, Electric Transport and Grid-Connected NAMAs have been completed and presented to the Steering Committees. And finally, a Climate Change Law (Annex 33 and https://busquedas.elperuano.pe/normaslegales/ley-marco-sobre-cambio-climatico-ley-n-30754-1638161-1/) was passed, which includes the mitigation measures associated with the 4 NAMAs as part of the objectives, demonstrating the embeddedness of the NAMAs in both national and international policies.  |
| Policy and finance instruments for NAMA implementation in two selected sub sectors defined | No systematic assessment of existing and potential policy and finance instruments for on and off grid RE development in Peru | *(not set or not applicable)* | Specific set of policy and financial instruments defined for supporting NAMAs in residential energy efficiency | Specific policy and financial instruments are currently being proposed as part of the diagnostic studies, and will be developed and included as part of the consultancies for the detailed design of the 4 NAMAs, which will be completed by the end of 2017.  | There are various policy instruments that have been defined as enabling conditions for the NAMAs. These are included in the detailed designs of the NAMAs and have been presented to the respective institutions during technical and directive committee meetings (Annexes 4-7).  |
| 3 formal training sessions by sub-sector, related to the design of mitigation programmes, | Training sessions exist in different sectors but are not coordinated, with no major consistency in the people that assist, no systematic evaluation system and no formal methodology for NAMA development process. | *(not set or not applicable)* | Training sessions developed by year 1, including content and evaluation methodology. Two annual training sessions (one per sub-sector) conducted during project lifetime | The Project has completed 3 training sessions related to GHG inventories for the NAMA to be used as part of the BAU y MRV (Annex 8). Additionally, the grid-connected renewable energy NAMA is preparing to conduct a training on modeling of the energy sector to help in the design and implementation stages as part of the Terms of Reference for the Grid Connected Renewable Energy NAMA, which will be conducted in July.  | A training session on the LEAP software was conducted in the first year, which is used to establish projections for the energy sector and support the development of the BAU (Annex 34). In the second year, two formal training sessions were conducted regarding the development of the GHG inventories and annual reports. This was given to the representatives of the Ministry of Energy and Mines that will responsible to continue the production of the annual inventories after the completion of the project (long-term sustainability) (Annex 35). In the third year, the Project has organized a workshop and course for the Ministry of Energy and Mines and interested actors in the public and private sector on the solar map tool developed with NREL and the SAM renewable energy planning tool. This workshop will provide tools to the public for utilizing renewable energy resources, and tools for the energy planning division of the Ministry of Energy and Mines to help them consider renewable energy resources in energy sector planning (planned for July 2018).  |
| Four NAMA detailed designs in place | No NAMA concepts in any of the selected sub-sectors, therefore no potential GHG mitigation potentials, barriers, benefits, financial resources or responsible determined. | *(not set or not applicable)* | NAMA concepts approved by the Project Steering Committee, based on a list of assessed and prioritized mitigation actions; including financing sources and containing coordinated institutional arrangements, and ready to initiate piloting. | The project is currently in the finalization of contracts to begin the detailed design of the energy efficiency and electric transport NAMAs, which will be completed in October / November 2017. The other two detailed designs for the grid-connected and off-grid renewable energy NAMAs will November / December 2017.  | The final designs of the NAMAs: Energy Efficiency, Grid-Connected Renewable Energy, and Electric Transport have been presented formally to the Directive Committee and the comments received by the committee have been incorporated in the final versions (Annexes 36 and 37). The fourth NAMA is in the final stage of the detailed design and will be presented to the directive committee in the third quarter of 2018. |
| **The progress of the objective can be described as:** | **On track** |
| **Outcome 3****Entities related to renewable energy connected to the grid (all technologies excluding large hydro) and (ii) off grid renewable energy sub-sectors are implementing prioritized NAMAs in a piloting phase and contributing to the achievement of Peru’s voluntary mitigation target.** |
| **Description of Indicator** | **Baseline Level** | **Midterm target level** | **End of project target level** | **Level at 30 June 2017** | **Cumulative progress since project start** |
| Implementation of NAMA activity #1 (off grid RE with PV) | Large scale PV program programmed for launch in 2014, but not framed as a NAMA | *(not set or not applicable)* | PV electrification NAMA is fully operational and supports the installation of 170,000 PV panels. Expected installed capacity 17 MW. MRV mechanisms fully in place. | The contract is now in implementation for the installation of 170,000 off-grid PV systems (see attached bases and adendums), 6,000 have already been installed and the remaining systems are expected be installed by the end of 2017. Need to correct this target for the total number of systems, reducing from 500,000 to 170,000. This change was agreed with GEF during the Inception Workshop (see Annex 5).  | The rural electrification program is currently in implementation and nearly 67,000 home systems have been installed throughout Peru (Annex 13). The remaining systems are programmed to be installed by mid-2019 (Annex 14). These installations are being considered as part of the design and MRV Protocol currently in development. The final MRV Protocol will be completed in the third quarter of 2018.  Additionally, the Universal Access to Sustainable Energy NAMA also incudes a clean cooking mitigation measure, focused on bringing clean cooking stoves to rural families that cook with traditional open fire stoves. The government has already distributed over 200,000 improved cookstoves and 1.5 million LPG stoves, and these will be counted as part of the NAMA within the MRV Protocol. Additionally, the Project has implemented two pre-pilots to evaluate new clean stoves that can be promoted by the government (solar, gasifier and ventilator). The results of the first pre-pilot is included in Annex 38.  |
| Implementation of Performance Based Payment System for off Grid RE with PV Systems | Payment mechanisms for off grid PV systems not fully defined, energy and GHG abatement goals not integrated. | *(not set or not applicable)* | Mechanism established for payment upon delivery of off grid PV based energy services, based on independent assessment of compliance with NAMA MRV protocol | The performance based payment system has been finalized and is starting implementation for the initial 6000 systems. This is one component of the implementation of the off-grid renewable energy NAMA (see attached R.S. No. 175-2017-MEM-DM). Additionally, this NAMA is focused on increasing universal access to energy via other programs and potentially with other renewable energy technologies for both rural electrification and clean cooking solutions.  | The payment mechanism is now in implementation by the local energy distribution companies, however, only recently started given that the massive installation program is in the early stage of implementation. These payments will be reported to the General Direction of Rural Electrification and this report allows monitoring of the number of systems that are still functioning. With the introduction of third generation photovoltaic pre-pay systems, the payment mechanism is expected to improve in efficiency with a lower rate of defaulted payments. The Project is currently conducting a study to propose ways to improve the massive rural electrification programs, which is being considered by DGER (Annex 39).  |
| Implementation of NAMA activity #2 (Renewable Energy and/or Energy Efficiency) | NAMA activity undefined | *(not set or not applicable)* | Energy Efficiency NAMA activity fully operational. MRV mechanisms fully in place. | This Energy Efficiency NAMA is focused on strengthening various initiatives in development by the Energy Efficiency Direction (DGEE) to ensure their success and implementation at the national scale, as well as monitor and report the emission reductions associated with their implementation. As part of the Detailed Design consultancy currently underway, the NAMA Project is developing the MRV system to monitor and report the GHG reductions associated with the Energy Efficiency measures being implemented in DGEE, including the Energy Efficiency Labelling Regulation which was approved in April 2017, the mandatory audits in the public sector according to D.S. Nº 053-2007-EM, implementation of the approved “fichas de homologación”, which provide the standards for energy efficient equipment included in the “Peru Compras” approved list for public sector purchases [goo.gl/kyD5pq], and the lighting market transformation initiatives. Additionally, the NAMA Project is completing a consultancy to develop a financing mechanism to promote the purchase and replacement with energy efficiency equipment in the private sector (residential and commercial). The project is also currently developing a Project website that will be completed in 2017 and will include information on energy efficiency such as the 17 energy efficiency guides for seven sectors ([goo.gl/ntMjYy], promotional and education information, and updates on the pilot projects, programs and implementation results of the NAMA Project.  | The Energy Efficiency NAMA is now in implementation with the Energy Efficiency Labelling for 9 categories of equipment (washers, dryers, refrigerators, motors, water heaters, boilers, air conditioners, lighting and lighting fixtures) now implemented nationally (since April 2018) and minimum energy efficiency standard for the same categories of equipment implemented in the public sector. Additionally, the energy service provider (ESCO) registry will be published in 2018 to support the mandatory energy efficiency audits in the public sector every 2 years. The NAMA Project is developing a public campaign to promote the energy efficiency labelling including social media coverage and the development of a website platform that will provide comparative information for consumers and a calculation tool to evaluate their savings with energy efficient (see example here: http://www.topten.info/). The Project is also working with first tier banks to develop preferential financing for efficient products ("green credit") (Annexes 40a-c and Annex 41). During the second semester of 2018, the Project will conduct a market study and compare results with the 2013 market study, to evaluate the impact of the energy efficiency labelling and market evolution of the nine categories of equipment that now have labelling. This market study could not be started before august 2018 in order to ensure sufficient time for the implementation of the energy efficiency labeling. The results of this market study will be incorporated into the MRV system to quantify the level of impact of the first stages of implementation of the NAMA.  |
| Implementation of NAMA Activity #3 (grid connected Renewable Energy and or Energy Efficiency) | NAMA activity undefined | *(not set or not applicable)* | Electric Transport NAMA fully operational. MRV mechanisms fully in place | The project is currently finishing a consultancy for a diagnostic study to evaluate pilot projects and mechanisms to promote electric transport. A new consultancy is also currently starting to develop a detailed proposal and cost-benefit analysis of regulatory changes to promote and increase access to electric transport. The detailed design of the NAMA is also currently beginning and will be completed in October 2017. | The Electric Transport NAMA is in early stage of implementation via a number of interventions to promote electric transport. The Project has developed a proposal for a regulatory change to promote electric transport (Annex 27). As a result of this initiative, a proposed Law to Promote Electric Transport is currently under review by the Ministry of Energy and Mines, and the Project is continuously meeting with the Ministry of Transport, Ministry of Production and Ministry of Economy and Finances to support their roles in the transition towards electric transport. One of the proposed normative changes was to modify the selective consumption tax on combustible fuels and conventional vehicles, in favor of electric and hybrid vehicles, as part of the green growth strategy of the Ministry of Economy and Finance (MEF). Aligned with this recommendation, MEF recently published a change in the selective consumption tax, to reduce the tax for electric and hybrid vehicles and increase the tax for conventional vehicles and fuels (Annex 42) . an electric bus that has recently started circulation in the Lima public transport system. The data obtained from this pilot are going to be provided to the Project to include in the MRV system as an early evaluation of the system and check of the indicators. The Project is developing ToR for a study to evaluate the emissions factors used for the transport sector, and their applicability to the Peruvian transport sector based on field measurements. The Project is also helping to facilitate a second electric bus pilot project, and has an interinstitutional agreement for its development which is programmed to be signed in august (Annex 30). The buses will arrive in late 2018-early 2019 and will circulate in two of the principal ProTransporte routes. The Project will receive the data from the pilot study to incorporate in the MRV system and also to develop a replicability study to promote the inclusion of electric bus fleets in the upcoming concession calls. As a result of a request from the NAMA Project (via DGEE) to receive technical assistance from IDB for the promotion of electric public transport (Annex 43), the Project is now collaborating with IDB to develop financial and business models for the bus operators in Lima to ensure that they have access to competitive financing for electric fleets. The Project is also in the early stage of developing a preferential line of financing with first tier banks and the Peruvian development bank (Cofide) for taxis to purchase electric vehicles (Annex 41). Initial potential collaborations have been made with a fully female taxi service "Taxi Queen" (Annex 44), and the second company interested in supporting the pilot is Uber. The intention is to provide preferential financing to a minimum of 50% female taxi drivers to promote greater equality of gender in the transport sector. All of the pilots will provide key data for the MRV protocol.  |
| Implementation of NAMA Activity #4 (grid connected Renewable Energy) | NAMA activity undefined | *(not set or not applicable)* | On grid NAMA activity fully operational. Must track contribution to increasing RE grid participation to 2.5% by end of project and 5% by 2020. MRV mechanisms fully in place. | Peru has achieved nearly 4% contribution from non-conventional renewable energy by 2017 according to official sources from Osinergmin. (http://www2.osinerg.gob.pe/web\_osinerg/includes/marcos4.html) and COES (http://www.coes.org.pe/portal/)  In addition to the bi-annual renewable energy auction to achieve 5% of demand contribution from non-conventional renewables, there is a pending distributed generation regulation currently in development which should be proposed by the end of 2017, and another regulatory reform in development to allow renewable energy generation to compete with conventional generation in the free and regulated markets.  As part of the Project’s diagnostic study for the Grid-Connected Renewable Energy NAMA, the NAMA Project has developed an energy sector model that is now being used by the energy planning team in MINEM to evaluate potential regulatory changes that promote a greater share of renewables in the national grid, as well as the development of a new 10-year National Energy Plan. The diagnostic study proposes regulatory changes that not only increase the current of objective of 5% contribution from non-conventional renewable energy resources to 10%, but also give wind and solar energy projects access to the free and regulated markets, of which they are currently excluded. It presents alternatives to the renewable energy auction that help to further expand the opportunities for renewables. The diagnostic study also presents a finance mechanism which would help offset the difference in costs between conventional and renewable energy resources until market conditions allow renewable energy to compete fairly in a transparent market. Lastly, the study presents regulatory changes required to capture the carbon emissions from both existing and new RER projects. Key actors in the sector (Osinergmin and COES) as well as key members of the ministry have been continuously involved in the development of the diagnostic study, giving their input to ensure that the proposals are relevant, feasible and aligned with the political agenda. The final proposed regulatory changes resulting from the diagnostic study will be presented to the Vice Minister of Energy in late July 2017.  | The Grid-Connected RER NAMA is in full implementation and data from the first four renewable energy auctions have been incorporated in the MRV system. To date, as a result of the RER auctions, non-conventional renewable energy accounts for nearly 4.5% of the grid-connected electricity generation and including small hydro projects this percentage increases to 7%. Just this NAMA alone has already achieved the ambition for direct GHG emission reductions included in the Prodoc. Additionally, considering that solar and wind energy in Peru are now very competitive with conventional energy resources (gas and hydro), the Project conducted a study to propose normative changes to allow these renewable energy resources to receive firm capacity recognition to allow them to sign contracts with free and regulated users (this is currently not allowed according to existing law, which is a massive barrier for renewable energy development) (Annexes 15 and 16). This study also provided detailed models to evaluate different scenarios of RER participation to support the Planning Team of the Energy Efficiency Division in decisions regarding the contribution of RER, which were used to help justify the proposed normative change for firm capacity of RER (Annex 45). The proposal for firm capacity is currently under evaluation by the Ministry of Energy and Mines (Annexes 15 and 16). It is expected that this will be implemented by the end of 2018 and all new RER projects that enter the Peruvian grid as a result will be counted as part of the Grid-Connected RER NAMA. The new emissions factor procedure that the Project developed is currently being validated as the official national Emission Factor and this validated Procedure will be applied to all calculations of reductions in the MRV system for the grid-connected RER NAMA, Energy Efficiency NAMA, and Electric Transport NAMA, as well as other national initiatives to reduce emissions in the energy sector (Annexes 18 and 19). The Project is also conducting a pilot project to install PV systems in the Ministry of Energy and Mines and 7 public universities across Peru (Annex 20) to provide information on the spatial and temporal variability of solar resources in Peru and support the development of the Distributed Generation Regulation that is programmed to be published in 2018. The distributed generation regulation will help promote grid-connected self generation with PV systems with a financial mechanism (i.e. net metering, net billing, or feed-in-tariff) to help recuperate investment. The Project has developed, in collaboration with NREL, a solar map for Peru (https://maps.nrel.gov/rede-peru/), which serves as the first step towards determining a national potential for solar energy, and to be used for developing an integrated renewable energy map that can be used by all Peruvians (residential, commercial or utility) to develop their PV systems (as well as other renewable energy resources). The Project is planning to incorporate this solar map into a renewable energy map developed with the Ministry of Energy and Mines, which will also include data from the 2017 Census as well as other sources of data produced by the Ministry related to the utilization of clean energy solutions. The Project solicited the data base for the 2017 Census to incorporate in the integrated energy map and this will be provided in the third quarter of 2018 (Annexes 46a and 46b). The Project also submitted to the Ministry of Energy and Mines a proposal to implement energy block auctions with the distributors associated with a quota for renewable energy generation (Annex 17). This would add additional market opportunity for renewables to compete in favorable conditions with conventional sources.  |
| Implementation of MRV protocols and tracking of NAMA related GHG emission reductions | MRV protocols for pilot NAMAs not in place | *(not set or not applicable)* | MRV protocols are used to track the following project targets: Direct emission reductions of 962,000 tons CO2 over 10 years Indirect emission reductions of 1,600,000 tons CO2 over 10 years | The national MRV protocol is currently being finalized by MINAM.  The mentioned reduction targets are associated with the 50 MW rural electrification program and should be adjusted according to the reduced scope of this project (now 17 MW). This change was agreed with GEF during the Inception Workshop (see attached Inception Workshop Report Annex 5). However, it should be mentioned that the reduction of GEI attributed to the Project is expected to be much higher than this as it will also include the reductions associated with electric transport, energy   | MRV protocols have been designed for the Energy Efficiency, Grid-Connected RER, and Electric Transport NAMAs, and have been proposed for the Universal Access to Sustainable Energy NAMA (Annexes 4-7). These are in early stages of implementation as a result of the first stages of pilot projects and measurement and reporting of previous actions that form part of the four energy NAMAs, but have not yet been accounted for in the NDC registry. For example, the Grid-Connected Renewable Energy NAMA, has already achieved a reduction of over 1 million tons CO2 according to the MRV Protocol, which is greater than the direct emission reduction target of 962,000 tons CO2 specified in the Prodoc. This has been calculated in the MRV Protocol for the NAMA and will be updated with the newly validated emissions factor procedures according to the MRV Protocol outlined in the NAMA design document. |
| **The progress of the objective can be described as:** | **On track** |
| **Outcome 4****Accurate mechanism for measurement and accounting of actual GHG emission reductions from mitigation actions in the energy generation and end-use sector are in place.** |
| **Description of Indicator** | **Baseline Level** | **Midterm target level** | **End of project target level** | **Level at 30 June 2017** | **Cumulative progress since project start** |
| MRV protocol designed | No MRV protocols in place | *(not set or not applicable)* | MRV protocols for energy sector NAMAs designed and approved by Steering Committee | The national MRV protocol is currently being finalized by MINAM and the NAMA Project is collaborating continuously with MINAM to support the development of the protocol. The protocol will be presented by MINAM at the end of 2017 in the NAMA Workshop that will be developed by the NAMA Project. The specific design as appropriate for each NAMA will be developed in the detailed design consultancies, which will be completed in October - December 2017.  | Three of the four NAMAs (Energy Efficiency, Electric Transport and Grid-Connected Renewable Energy) have been designed along with their respective MRV Protocols and have been presented to the Steering Committee for approval (Annexes 36 y 37). The comments received have been incorporated into the final design documents (Annexes 4-6). The MRV Protocol for the fourth NAMA (Universal Access to Sustainable Energy) is in the final stage of design and will be presented to the Steering Committee in the fourth quarter of 2018 for their approval.  |
| Implementation of energy sector MRV registry | No energy sector MRV registry | *(not set or not applicable)* | Energy sector MRV registry in place | The specific design as appropriate for each NAMA will be developed in the detailed design consultancies, which will be completed in October - December 2017 in concordance with the national MRV protocol and implemented starting in 2018.  | At least three of the four NAMAs are estimated to be officially registered with MINAM and UNFCCC by the end of 2018, pending the finalization of the national MRV Protocol and Registry Processes, and approval from the Steering Committee, MINAM and other competent entities.  |
| Mainstreaming of climate change mitigation in Ministry of Finance’s Results Based Budgeting Program | Results Based budgeting program in operation with no CC-related indicators | *(not set or not applicable)* | Climate Change related indicators incorporated in ministry of Finance’s Results Based Budgeting Program | This will be developed in collaboration with MEF next year after the finalization of the detailed design of the NAMAs.  | The Ministry of Economy and Finance has incorporated the NAMAs into their Green Growth Strategy (Annex 47), Institutional Operational Plans (POI) for 2017 and 2018 (Annexes 48a and 48b), financing of capacity building programs for rural electrification via the Administrative Council of Resources for Training in Electricity (CARELEC), and the inclusion of energy efficiency audits in public budgets according to Ministerial Resolution N° 186-2016-MEM-DM.  |
| Application of MRV procedures | No MRV procedures in mlace for Energy sector NAMAs | *(not set or not applicable)* | MRV procedures implemented in all energy related NAMA activities | The national MRV protocol is currently being finalized by MINAM. The specific design as appropriate for each NAMA will be developed in the detailed design consultancies, which will be completed in October - December 2017.  | The MRV procedures are currently being implemented for the Grid-Connected RER NAMA to account for the RER Projects that won the RER Auctions and are now contributing to the grid, and for Electric Transport NAMA for the electric pilot bus. The MRV for the Energy Efficiency NAMA will commence after the completion of the market evaluation study in the fourth quarter of 2018, and the MRV for the Universal Access to Sustainable Energy NAMA will commence in 2019 with the completion of the MRV Protocol design and incorporation of the results of the studies on existing improved cooking stoves, implementation of the first massive rural electrification program, and completion of the emissions factor study for firewood. |
| **The progress of the objective can be described as:** | **On track** |

# Implementation Progress



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| --- | --- |
| Cumulative GL delivery against total approved amount (in prodoc): | 24.17% |
| Cumulative GL delivery against expected delivery as of this year: | 27.84% |
| Cumulative disbursement as of 30 June (note: amount to be updated in late August): | 1,087,512.29 |

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| **Key Financing Amounts** |
| PPG Amount | 45,000 |
| GEF Grant Amount | 4500000 |
| Co-financing | 32,010,000 |

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| **Key Project Dates** |
| PIF Approval Date | Jun 7, 2012 |
| CEO Endorsement Date | Apr 9, 2014 |
| Project Document Signature Date (project start date): | Oct 19, 2015 |
| Date of Inception Workshop | Jun 15, 2016 |
| Expected Date of Mid-term Review | Dec 10, 2018 |
| Actual Date of Mid-term Review | *(not set or not applicable)* |
| Expected Date of Terminal Evaluation | Sep 9, 2019 |
| Original Planned Closing Date | Dec 31, 2019 |
| Revised Planned Closing Date | *(not set or not applicable)* |

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| **Dates of Project Steering Committee/Board Meetings during reporting period (30 June 2017 to 1 July 2018)** |
| 2017-12-05 |
| 2018-04-04 |
| 2018-04-17 |

# Critical Risk Management

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| --- | --- |
| Current Types of Critical Risks  | Critical risk management measures undertaken this reporting period |
| Political | During the last year, the Project has had 3 different directors as a result of changes in the government (presidents, ministers and vice ministers). The risk that this presented to the Project was delays in progress on pending activities due to the need to familiarize each new director on the background and advances of the Project, and the potential for the new directors to have different priorities or objectives that were not necessarily aligned with the goals and objectives of the four Energy NAMAs. However, the Project managed these risks by ensuring that the new directors were updated on all history and critical project learnings and advances to date, and the Project also adapted to the vision of each new director within the framework of the NAMAs to ensure continuous advances, support, and integration with the Direction of Energy Efficiency and Ministry of Energy and Mines.  |

# Adjustments

**Comments on delays in key project milestones**

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| **Project Manager: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure.** |
| The project completed a project audit during the second trimester of 2018, and a mid-term review is programmed to be conducted in the third trimester of 2018. The terms of reference have been sent to the Steering Committee for suggestions and should be published within the next month.  |
| **Country Office: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure.** |
| The main key project milestones are on track , the inception workshop was hold on 2016, and the MTR is expected to conduce in the second semester of 2018, the procurement process should be public in the next weeks, according GEF Evaluations Guides. |
| **UNDP-GEF Technical Adviser: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure.** |
| Project is on track in key implementation milestones.  |

# Ratings and Overall Assessments

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| **Role** | **2018 Development Objective Progress Rating** | **2018 Implementation Progress Rating** |
| **Project Manager/Coordinator** | Satisfactory | *- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -*  |
| Overall Assessment | The NAMA Project is a very ambitious Project with an immense potential to create transformational changes in the Peruvian Energy Sector with the promotion of an energy efficient culture, support in the transition towards electric transport, promotion of the gradual replacement of conventional generation with a greater share of renewable generation, and support in closing the energy gap in rural communities via greater use of renewable energy for off-grid electrification and clean cooking stoves. In this way, it is a challenging Project, as it aims to support paradigm shifts, which are always accompanied with resistance from the incumbent conventional sectors and government entities hesitant to change business-as-usual. The Project has helped stimulate key sector changes, primarily due to its strategic integration within the Ministry of Energy and Mines via the Energy Efficiency Direction, allowing for greater institutional support, advances towards key regulatory changes, and access to the various actors in the public and private sectors to promote paradigm shifts with multi-sectoral collaboration.  However, the Project has been slow in its execution relative to the chronogram outlined in the Prodoc, primarily due to delays in initiating the Project (7-month delay in contracting the Project Coordinator), time lost due to changes in government and project directors (3 Presidents and 4 Project Directors in 2 years), and inertia in developing multi-sectorial agreement and support regarding the 4 Energy NAMAs, from the Energy Efficiency Direction, Ministry of Energy and Mines, and other ministries and competent entities. Now, the Energy Efficiency Direction has incorporated the objectives and vision of the NAMAs into the overarching vision and activities promoted by the Direction. The products that the Project has developed to date, such as diagnostic studies, proposed regulatory changes, and pilot projects, are being reviewed and used by the ministry to justify transformational normative changes. The Project has accumulated a momentum that, although took time to achieve, is now well underway and the Project is now well on track to achieve a number of the ambitious goals and enabling conditions established in the designs of the Energy NAMAs.  Given the complexity and specific nature of a number of the services that the Project is contracting, there have been delays in initiating services due to lack of sufficient number of qualified bidders, and time required to adequately develop terms of references to ensure that the results will be appropriate, aligned with industry best practices, defensible, and ultimately useful for advancing the goals and agendas of the NAMAs. This has resulted in overall delays in nearly all of the processes that the Project has started this year. However, a number of these processes are finally being contracted, so the Work Plan is now back on track. All of the planned activities for 2018 as included in the Work Plan are expected to be implemented, although some will continue into 2019. Therefore, the financial execution is expected to change now that a number of hurdles have been overcome. The Project also has excellent support from the new director which is helping to move a number of the Project bottlenecks forward. We expect that by the end of 2018, the execution will have caught up in terms of planned activities and the budget will also be more aligned with the work plan for 2018. These upcoming planned activities will provide very useful and high impact results to support decision making and regulatory changes in the sub-sectors, provide tools that help close the gap in access to sustainable technologies, and results of pilot projects that can serve as replicable models to promote transformational change.  It is important to highlight that the full implementation of the 4 Energy NAMAs will require immense financial support in 2019-2020 for the implementation of the pilot projects, national surveys, technical studies, and MRV Protocols; and therefore the low financial execution during the first half of the Project is strategic and on-track to ensure that there are sufficient funds for the implementation and MRV phase that is now gathering momentum. Considering the long-term vision and required resources for the Project, this will help to guarantee the sustainability of the Project through completion as well as through the NDC commitment period through 2030.  |
| **Role** | **2018 Development Objective Progress Rating** | **2018 Implementation Progress Rating** |
| **UNDP Country Office Programme Officer** | Satisfactory | Moderately Satisfactory |
| Overall Assessment | The project has achieved several results through partnerships and leading the National Direction and the main authorities in MINEM which are totally engaged of the project results and goals. The selected NAMAs have been included in the national priorities in the Paris Agreement framework , and have been validated by the Multisectorial Group GTM lead by Environmental Ministry and his NAMAs are considering as part of their NDC Peruvian commitments.  he NAMAs are strategic not only by the Energy Sector, the NAMA of Electric Transport is very relevant for Transport Sector and it is contributing to the national goals to transform the sector toward a green and sustainable city, there is a National Proposal for Electric Vehicles which currently is been analyzed in the high government level. NAMA Off Gridd is very relevant because it will contribute in the poverty reduction and to integrate vulnerable people in rural areas to renewable energies and to have verifiable information of the solar panels and how contribute in livelihoods promoting gender leading. Those are examples of the positive effects achieved in this period.  Regarding the observed delays, several changes in National Authorities have affected the main decisions of the project. It had two National Direction changes and in the Ministry of Energy and Mines there were changes of ministry and viceministry generating different priorities, decisions and changes, but the Project and the Steering Committee has had a key role to mgmt. adaptive and to involve to the Directors in the project goals.  The Project has worked to promote partnerships with NGOs, private sector, academy to achieve its goals articulating with other sectors and levels.  In this period, it is expected to initiate or continue the pilots implementation which should generate strategic information through the MRV designed.  |
| **Role** | **2018 Development Objective Progress Rating** | **2018 Implementation Progress Rating** |
| **GEF Operational Focal point** | *(not set or not applicable)* | *- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -*  |
| Overall Assessment | *(not set or not applicable)* |
| **Role** | **2018 Development Objective Progress Rating** | **2018 Implementation Progress Rating** |
| **Project Implementing Partner** | Satisfactory | *- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -*  |
| Overall Assessment | “The NAMA project is well imbedded in the General Direction of Energy Efficiency (DGEE), and the Project goals and results are very well aligned with the vision and goals of the DGEE, the Ministry of Energy and Mines and the national goals defined by the current government. The four energy NAMAs in implementation by this Project have been included in the national priorities as part of the Paris Agreement framework for Peru, are continuously discussed and updated in the Multisectorial Group GTM lead by Environmental Ministry, and the reduction in GHG emissions associated with these 4 NAMAs are considered as a significant contribution to Peru’s NDC commitments.  The NAMAs are not only important in terms of helping to achieve Peru’s NDC targets, but more importantly they help Peru transition into a new paradigm of energy efficiency, clean transport and sustainable energy. These are all priorities of the current administration. The NAMA Project is helping to bridge gaps, identify areas for improvement, propose normative changes, stimulate the use of new technologies, promote these initiatives to the public and private sectors, create financial mechanisms to improve access, and build capacities in the public and private sectors to ensure transformational change and long-term sustainability of the mitigation measures.  Various products of the Project such as diagnostic studies, proposals for normative changes, pilot studies to promote new technologies such as clean cooking stoves, tools to promote a greater use of renewable energies, focused workshops, among others, continue to support the Ministry not only in the DGEE, but also in other directions such as the Rural Electrificacion Direction (DGER), Electricity Direction (DGE), and the Vice Ministry of Electricity.  As Director of the DGEE and the NAMA Project, I am committed to helping the Project achieve its goals and key indicators as outlined in the Project Document and Energy NAMA Designs, eliminating bottlenecks where possible, and implementing activities on time as planned, with continued support from the DGEE and MEM to achieve our common objectives of transformational change towards a more sustainable energy sector.”  |
| **Role** | **2018 Development Objective Progress Rating** | **2018 Implementation Progress Rating** |
| **Other Partners** | *(not set or not applicable)* | *- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -*  |
| Overall Assessment | *(not set or not applicable)* |
| **Role** | **2018 Development Objective Progress Rating** | **2018 Implementation Progress Rating** |
| **UNDP-GEF Technical Adviser** | Satisfactory | Moderately Satisfactory |
| Overall Assessment | This is the second PIR of the NAMAs project in Peru. In the last year project has managed to further advance in the development of the main milestones to design and implement the four NAMAS expected for the project. Project is on track to fully achieve its end-of-project targets by closure and has already exceeded some of the targets stated in PRODOC. The project can be presented as 'good practice' and is likely to achieve transformational change if government engagement and commitment is maintained. RTA, in line with project team, considers DO rating as Satisfactory. Project has finished the detailed design of the four NAMAs, preceded by the inventories for the definition of BAU scenarios, and is currently updating the MACCs that are outdated. The project is at a crucial moment when the studies, assessments, data and intelligence gathered about the 4 NAMAs are being used to develop adequate regulatory arrangements, policies and incentives to allow a higher and more cost-effective penetration of renewable energy. Related to the on-grid RE, NAMA an important outcome is the project recommendation on regulatory framework for Firm Capacity of non-conventional Renewables, which is key to allow a wider participation of those sources in the auctions. Besides the policy and regulatory derisking measures already identified, some financial derisking measures might reduce the cost of capital for investment and decrease the level and amount of subsidies needed to achieve Government targets. Please see some of the work implemented by UNDP worldwide in its recently launched Derisking Renewable Energy Investment report. Also the Financial LCOE (levelized cost of energy) Tool, that assists policymakers in selecting public instruments to promote renewable energy investment. The financial tool calculates the levelized cost of electricity (LCOE) for a given country’s baseline energy mix and the LCOE of the targeted renewable energy, before and after the introduction of public instruments. Please see the tool at: http://www.undp.org/content/undp/en/home/librarypage/environment-energy/low\_emission\_climateresilientdevelopment.html. The project has also been very proactive in the off-grid NAMA, developing a solar map of Peru and adding activities on technology assessment and the promotion of efficient cookstoves. Besides mapping generation potential, geospatial data has been successfully applied to determine the most cost-effective conventional and renewable energy technologies for bringing electricity to specific localities. This can generate economies of scale in the next level of implementation of this NAMA. For the next phase of the this NAMA and the implementation of pilot demonstrative projects project team should consider using the long term agreement on PV systems that UNDP has at the global level to speedup the process . This LTA encompasses a list of world class enterprises specialized in the different levels of PV systems projects from design, to equipment installation and commissioning. Very recently UNDESA and UNDP have developed an Open Source Spatial Electrification Tool (OnSSET) to identify means of providing access to safe, affordable and reliable electricity to households that currently do not enjoy this access. The model compares options such as connections to the electrical grid, and mini-grid or stand-alone systems, taking into account local characteristics, population density, distance to transmission and road networks, renewable energy potential, fuel prices and estimated electricity consumption per household (five tiers). This might be an interesting tool to support the definition of the next investment phase of this NAMA (Please check https://un-modelling.github.io/modelling-tools/#geo-electricity ). Overall the project has been innovative and has proposed two different gender strategies in the energy and transport sector: the energy school for women and the EV financing access to female taxi drivers. These are very interesting initiatives that break the paradigm of the traditional areas where woman are included in modern energy sector. Project should take the opportunity of the ongoing Mid-term evaluation to include indicators related to gender mainstreaming and to revise the SESP that do not capture the main safeguards related to the areas approached by the four NAMAS. Electric mobility programs require waste management strategies to deal with heavy metals batteries, and the EE NAMA should acknowledge the disposal of old equipment. In line with Project team and executing agency, RTA rates as Moderately Satisfactory the last period implementation of the NAMA project. Implementation is proceeding as planned with minor deviations and the Mid-Term Review can fine-tune some of those delays. Cumulative financial delivery is low but on track, management of risks is in place and the project is managed well. RTA recommends close collaboration and open communication line to ensure that the next phases of project implementation- access to vertical funds and financing – can be supported.  |

# Gender

**Progress in Advancing Gender Equality and Women's Empowerment**

This information is used in the UNDP-GEF Annual Performance Report, UNDP-GEF Annual Gender Report, reporting to the UNDP Gender Steering and Implementation Committee and for other internal and external communications and learning.  The Project Manager and/or Project Gender Officer should complete this section with support from the UNDP Country Office.

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| **Gender Analysis and Action Plan:** *not available* |
| **Please review the project's Gender Analysis. If the Gender Analysis is not attached or an updated Gender Analysis and/or Gender Action Plan is available please upload the document below or send to the Regional Programme Associate to upload in PIMS+. Please note that all projects approved since 1 July 2014 are required to carry out a gender analysis.** |
| *(not set or not applicable)* |
| **Please specify results achieved this reporting period that focus on increasing gender equality and the empowerment of women.** **Please explain how the results reported addressed the different needs of men or women, changed norms, values, and power structures, and/or contributed to transforming or challenging gender inequalities and discrimination.**  |
| The Project is very pro-active in the promotion of gender-equality and the empowerment of women in various aspects of the four Energy NAMAs.  As part of the Universal Access to Sustainable Energy the Project is developing a women's energy school focused on the training of rural women in the installation and maintenance of off-grid energy solutions to promote a greater involvement of rural women in the rural energy sector, support to develop local entrepreneurship for energy services, and improvement of the long-term sustainability of clean energy technologies. The first phase of implementation is focusing on two training programs: 1) solar home systems and 2) improved cookstoves. The first pilot will be held in Puno where 40,000 solar home systems have been installed as part of the massive rural electrification program. The second will focus on the maintenance of the improved cookstoves that have been installed by the massive government clean cooking stove programs that lack associated maintenance programs. The courses will include approximately 20 women from various local communities and will include introductory topics such as the importance of the role of women in the energy sector and the value of using sustainable energy solutions in terms of benefits to health, environment and economic return. They will also focus on required skills to implement basic maintenance of sustainable energy systems that will serve both for ensuring the sustainability of their own systems installed in their houses, as well as those of their neighbors, with the second providing an opportunity for additional income associated with their services. The curriculum is design to be flexible to include technologies most appropriate for each area, culturally sensitive to the different areas of intervention, and replicable to enable broader implementation of the courses at the national scale. The courses will also address topics such as energy efficiency to ensure optimum use of the systems and promotion of secondary markets for replacement parts or ancillary appliances. The general idea of the energy school for women is to build capacities and empower women in their own communities, in their native language, using technologies appropriate for their needs, and providing access to better living conditions and potential work opportunities, helping to promote a greater long-term sustainability of clean energy technologies, and improving gender equality in a country that has long suffered from patriarchal tendencies, especially in rural areas.  As part of the Electric Transport NAMA, the project is working with both first-tier banks and the national development bank Cofide to develop a green credit line to finance electric vehicles (with initial emphasis on taxis). The Project has identified a taxi service in Lima that only has female drivers and only accepts female clients to help increase the level of security of the taxi service. This results in improved access to work, financing and security so that more women will be interested in entering the sector. The credit line will also be available to other taxi services, but the idea is to ensure that 50% of the recipients are female to incentivize greater gender equality in the sector. Uber has already expressed an interest in supporting the pilot project, and it is expected that the result of the project will be transformational in creating a greater market demand for electric vehicles in the sector via attractive financing conditions, and a model that other taxi service providers can use. The Project is planning a fair to promote electric transport in November 2018, where various models of electric vehicles will be presented, and the banks will also be present to discuss the green credit line with interested parties. The Project will promote this fair with publicity campaigns regarding the benefits of electric transport for all, as well as promoting the credit line with favorable conditions for female taxi drivers.    |
| **Does this project specifically target woman or girls as direct beneficiaries?** |
| Yes |
| **Please describe how work to advance gender equality and women's empowerment enhanced the project's environmental and/or resilience outcomes.** |
| Both the Women's Energy School and Green Financing Line to promote female taxi drivers with electric vehicles both offer opportunities to significantly improve environmental emissions via transformation of two of the most contaminating sectors: 1) rural populations that cook with firewood and use combustible fuels for electricity, and 2) the high impact of taxis in the transport sector. Additionally, they improve the overall sustainability of clean technologies, ensuring that local users are trained on the optimum use and maintenance of rural systems and that the sources of fuels for the transport sector are from sustainable sources (renewable energy in place of limited and contaminating combustible fuels). This improves both the environmental footprint as well as the resilience and sustainability of the solutions, and both with significant benefits in terms of the health of the populations (human resilience) via significantly improved local air quality conditions.  |

# Social and Environmental Standards

**Social and Environmental Standards (Safeguards)**

The Project Manager and/or the project’s Safeguards Officer should complete this section of the PIR with support from the UNDP Country Office. The UNDP-GEF RTA should review to ensure it is complete and accurate. For reference, the project's Social and Environmental Screening Procedure (SESP), which was prepared during project design, is available below. If the project began before the SESP was required, then the space below will be empty.

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| **SESP:** [SESP Template NAMA Acceso Universal.docx](https://undpgefpims.org/attachments/4679/213487/1668570/1724825/SESP%20Template%20NAMA%20Acceso%20Universal.docx) |
| **1) Please provide a brief update on the project’s social and environmental risks listed in the SESP. If the project has not prepared an SESP (i.e. if the project began before the SESP was required), then please indicate when that screening will be done (recommended before the Midterm Review and/or Terminal Evaluation, or after a significant change to the project context). If the project has updated its SESP during implementation, then please upload that file to this PIR. If any relevant grievances have arisen during the reporting period please describe them in detail including the status, significance, who was involved and what action was taken.** |
| SES Draft versions are attached |
| **2) Have any new social and/or environmental risks been identified during project implementation?** |
| No |
| **If any new social and/or environmental risks have been identified during project implementation please describe the new risk(s) and the response to it.**  |
| The SES have been carried on , considering that the four NAMAs have been define after the project approval. The new SES analysis will be presented in the next project board, but preliminarily the social environmental risks are low for the four NAMAs worked in the project. |
| **3) Have any existing social and/or environmental risks been escalated during implementation? For example, when a low risk increased to moderate, or a moderate risk increased to high.** |
| No |
| **If any existing social and/or environmental risks have been escalated during implementation please describe the change(s) and the response to it.**  |
| *(not set or not applicable)* |

# Communicating Impact

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| **Tell us the story of the project focusing on how the project has helped to improve people’s lives.** **(This text will be used for UNDP corporate communications, the UNDP-GEF website, and/or other internal and external knowledge and learning efforts.)** |
| The Project focuses on two principal objectives: 1) supporting Peru's international and national commitments to reduce greenhouse gas emissions, mitigating global climate change, which improves lives at the global scale, and 2) co-benefits of the NAMAs which directly improve people's lives in Peru via improved access to work, capacity building, reduced local contamination and improved health, increased income, greater efficiency in the use of natural resources, increased security, and promotion of gender equality and female empowerment in the energy sector. The Project is focusing on transforming the energy sector via greater awareness of the benefits of sustainable energy solutions for electricity, transport, cooking and energy efficiency. It is creating new educational programs for rural women to give them tools to improve their living conditions, access to work and become promoters of sustainable energy solutions. It is helping to develop business models and lines of credit to promote the purchase and continued use of sustainable technologies such as renewable energy systems, electric vehicles and associated infrastructure, and energy efficient equipment. The Project is also promoting normative changes that will result in transformational changes in the energy and transport sectors to support a paradigm shift towards a more sustainable future. As a result of the Project, we expect to see a greater awareness in both urban and rural communities and the public and private sectors regarding the importance of utilizing our natural resources in a more sustainable way and improving the environmental and social conditions for all Peruvians via access to sustainable technologies, green financing, energy efficiency and environmentally and socially responsible regulatory frameworks.  |
| **What is the most significant change that has resulted from the project this reporting period?** **(This text will be used for internal knowledge management in the respective technical team and region.)** |
| The Project has created proposals for Normative Changes regarding the promotion of electric transport and competitive market conditions for renewable energy resources that are being presented within the Ministry of Energy and Mines, as well as by other ministries. With these changes, both the transport and energy sectors will be allowed to develop favorable market conditions that will allow for transformational change of the sectors. Additionally, the Project is implementing pilot projects and additional studies that promote the use and government support for new sustainable energy technologies such as solar electrification systems to help promote distributed generation, clean cooking stoves that will significantly improve the quality of life in rural communities, and pilot projects of electric buses that will help transform the public transport sector via the inclusion of electric buses in public transport planning.  |
| **Describe how the project supported South-South Cooperation and Triangular Cooperation efforts in the reporting year.** **(This text will be used for internal knowledge management within the respective technical team and region.)** |
| *(not set or not applicable)* |

**Project Links and Social Media**

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| **Please include: project's website, project page on the UNDP website, Adaptation Learning Mechanism (UNDP-ALM) platform, Facebook, Twitter, Flickr, YouTube, as well as hyperlinks to any media coverage of the project, for example, stories written by an outside source. Please upload any supporting files, including photos, videos, stories, and other documents using the 'file upload' button in the top right of the PIR.** |
| The Project has a website: http://namasenergia.minem.gob.pe/  Additionally, the Project is recognized on the website of the website of the Ministry of Energy and Mines: http://eficienciaenergetica.minem.gob.pe/  The following publications show various publicized articles related to the implementation of the NAMAs and evidence of their public diffusion:  Knowing the NAMA Project https://www.youtube.com/watch?v=kRqEoVfY14w  TV Interview the NAMA GHG Specialist (Alfonso Cordova) talking about the benefits of clean cooking stoves in Peru, and the initial results of the NAMA Project's studies and pre-pilot project to promote new clean cooking stove technologies. https://www.youtube.com/watch?v=xXfvVw6cDNU  TV Interview of a representative of DGEE (Claudia Espinoza) talking about the results of the diagnostic studies conducted by the project, and initiatives of the DGEE to promote Electric Transport in Peru https://www.youtube.com/watch?v=DD9ifObQ1aQ  Promotion of Renewable Energy in February - June 2018:  1. MEM shows in Peru the advances of Peru in the field of renewable energies http://mineriaenergia.com/minem-muestra-en-alemania-los-avances-del-peru-en-materia-de-energias-renovables/  2. Peru evaluates regulations to promote renewable energies https://www.pv-magazine-latam.com/2018/06/29/peru-estudia-aprobar-regulaciones-para-fomentar-las-renovables/  3. MEM to redesign regulatory framework to promote greater generation with renewable energies https://gestion.pe/economia/mem-redisenaria-marco-normativo-generar-energias-renovables-233837  4. MEM: Renewable energies are in a position to compete with conventional technologies http://www.minem.gob.pe/\_detallenoticia.php?idSector=9&idTitular=8543  5. Renewable energies are in a position to compete with conventional technologies. Mining and Energy Magazine, Energiminas Magazine, ProActive Portal, Mining Horizon http://mineriaenergia.com/energias-renovables-estan-en-condiciones-de-competir-con-tecnologias-convencionales-estima-viceministro-de-electricidad/ https://www.energiminas.com/minem-energias-renovables-estan-en-condiciones-de-competir-con-tecnologias-convencionales/ https://proactivo.com.pe/mem-energias-renovables-estan-en-condiciones-de-competir-con-tecnologias-convencionales/ http://www.horizonteminero.com/2018/06/28/mem-energias-renovables-ya-pueden-competir/  6. MEM prepares new renewable energy promotion scheme by the end of the year https://gestion.pe/economia/mem-alista-nuevo-esquema-promocion-energias-renovables-ano-227895?href=tepuedeinteresar  Promotion of electric vehicles at the Efficiency Technology Fair - March 2018  1. Vice Minister of Energy, Raúl García Carpio, inaugurates the International Forum and Conference on Energy Efficiency organized by MEM. Twitter MEM https://twitter.com/MemPeru/status/970674839940976642  2. MEM announces incentives for electric vehicles. TV Perú https://www.facebook.com/noticias.tvperu/videos/1890622314294977/  3. Did you know that there are transport options that take care of the environment. FanPage MEM https://www.facebook.com/MEMPeruOficial/videos/795261977341922/  4. Know the costs and performances of electric vehicles in Peru. Agencia Andina. https://andina.pe/agencia/noticia-conoce-los-costos-y-rendimientos-los-vehiculos-100-electricos-el-peru-702273.aspx  5. From Monday electric vehicles in Lima. Publimetro. https://publimetro.pe/actualidad/noticia-desde-este-lunes-vehiculos-electricos-y-solares-lima-71382  6. Ministry of Energy and Mines organizes fair of efficient technologies. La República http://larepublica.pe/tecnologia/1203930-ministerio-de-energia-y-minas-organiza-feria-de-tecnologias-eficientes  7. MEM will exhibit first 100% electric car that will enter Peru. Gestión https://gestion.pe/tecnologia/mem-exhibira-primer-auto-100-electrico-ingresara-peru-228538  8. They present electric vehicles in an international forum for energy efficiency. Diario Correo https://diariocorreo.pe/economia/vehiculos-electricos-foro-internacional-eficiencia-energetica-805317/  9. Government will exhibit the first 100% electric vehicle that will arrive in Peru. Diario La República, El Gas, Gas y Energía. http://larepublica.pe/economia/1205964-gobierno-exhibira-el-primer-vehiculo-100-electrico-que-llegara-al-peru https://elgasnoticias.com/mem-exhibira-primer-vehiculo-100-electrico/ https://www.connuestroperu.com/economia/gas-y-energia/56232-mem-se-evalua-la-entrega-de-bonos-para-impulsar-la-adquisicion-de-vehiculos-electricos  10. Electric cars: Government prepares voucher to buy this type of vehicles: Canal N, América TV, Diario El Comercio, Diario El Peruano, Radio Nacional, Diario Extra, Diario El Men. http://canaln.pe/actualidad/autos-electricos-gobierno-prepara-bono-comprar-este-tipo-vehiculos-n312976 http://www.americatv.com.pe/noticias/actualidad/autos-electricos-gobierno-prepara-bono-comprar-este-tipo-vehiculos-n312977 https://elcomercio.pe/lima/transporte/gobierno-evalua-otorgar-subsidio-compra-autos-electricos-noticia-502214 http://elperuano.pe/noticia-bonos-para-vehiculos-electricos-64483.aspx http://www.radionacional.com.pe/informa/politica/gobierno-evalua-otorgar-bonos-para-adquirir-vehiculos-electricos http://www.extra.pe/actualidad/bonazo-para-comprar-tu-auto/ http://elmen.pe/2018/03/06/gobierno-dara-bono-de-3-y-5-mil-dolares-para-tu-auto-electrico/  11. What is the Executive planning to boost the circulation of electric cars? https://gestion.pe/economia/planea-ejecutivo-impulsar-circulacion-autos-electricos-228667  12. Peru celebrates the Efficiency Technologies Fair 2018. PV Magazine, Continente News, Revista Energía y Negocios. https://www.pv-magazine-latam.com/2018/03/05/peru-celebra-la-feria-de-tecnologias-eficientes-2018/ https://www.continentenews.com/mem-celebrara-la-feria-tecnologias-eficientes-2018-peru/ http://revistaenergiaynegocios.com/2018/03/01/foro-internacional-sobre-eficiencia-energetica-organizado-por-el-mem/  MEM announces plans to promote electric cars in Peru - February 2018  1. Before June it will go out norm to promote electric cars in the country. Diario Gestión, Febrero de 2018 https://gestion.pe/economia/autos-electricos-ejecutivo-presentara-proyecto-congreso-seis-meses-227859  2. They will promote the use of electric cars to remove old vehicles, Exitos, Febrero 2018. https://exitosanoticias.pe/promoveran-uso-autos-electricos-retirar-los-vehiculos-antiguos-industria/  3. MEM enlists standard to promote electric cars in Peruú. Diario El Comercio, Febrero 2018 https://elcomercio.pe/economia/peru/energia-renovable-mem-promoveria-autos-electricos-pais-noticia-499261  Analysis on the subject of electric transport  1. Electric mobility in Peru, Revista Energía y Negocios, Febrero 2018 (Se hace mención a la NAMA) https://es.calameo.com/read/0038363273ee6df1be0ca  2. Considering the over offer of electricity in Peru, Electromobility? Revista Energía y Negocios, Noviembre 2017 https://es.calameo.com/read/004425024957caa674250   |

# Partnerships

Give the name of the partner(s), and describe the partnership, recent notable activities and any innovative aspects of the work. Please do not use any acronyms. (limit = 2000 characters).This information is used to get a better understanding of the work GEF-funded projects are doing with key partners, including the GEF Small Grants Programme, indigenous peoples, the private sector, and other partners. Please list the full names of the partners (no acronyms please) and summarize what they are doing to help the project achieve its objectives. The data may be used for reporting to GEF Secretariat, the UNDP-GEF Annual Performance Report, UNDP Corporate Communications, posted on the UNDP-GEF website, and for other internal and external knowledge and learning efforts. The RTA should view and edit/elaborate on the information entered here. All projects must complete this section. Please enter "N/A" in cells that are not applicable to your project.

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| **Civil Society Organisations/NGOs** |
| German development agency (GIZ) - Formal agreement to provide technical assistance to the Universal Access to Sustainable Energy NAMA Practical Solutions (Soluciones Practicas) - Provided consulting services to design the Sustainable Energy School for Women and the Diagnostic Study for Rural Electrification. Also prepared a proposal for the NAMA Facility to support the promotion of local market development and micro-financing institutions for rural electrification to support the Universal Access to Sustainable Energy NAMA National Renewable Energy Laboratory - Providing continuous technical assistance regarding the four NAMAs, energy modeling, proposed regulatory proposals and technical evaluations of renewable energy participation in the grid and off-grid Servicio nacional de capacitación para la Industria de la Construcción (SENCICO) - Providing services for the evaluation of clean cooking stoves World Wildlife Fund (WWF) - Searching for funding to support the Sustainable Energy School for Women in communities in the Jungle World Vision Peru - Provided consulting services to implement the second pre-pilot for the clean cooking stove evaluation (solar, gasifier and ventilator stoves) Inter-American Institute for Cooperation on Agriculture (IICA) - Developed a proposal for the NAMA Facility to support capacity building and local services related to the sustainability of clean cooking stoves to support the Universal Access to Sustainable Energy NAMA Gerencia de Transporte Urbano (GTU) - Providing data for the first electric bus pilot to incorporate in the MRV protocol for the Electric Transport NAMA |
| **Indigenous Peoples** |
| *(not set or not applicable)* |
| **Private Sector** |
| Inter-American Development Bank (IDB) - Providing formal technical assistance to the NAMA Project regarding the promotion of electric buses (financial and technical evaluations and proposals) Development bank of Latin America (CAF) - Interest in financing green credit line to promote electric transport, energy efficiency and renewable energy NAMAs Federación Peruana de Cajas Municipales de Ahorro y Crédito (FPCMAC) - Agreement to promote energy efficiency via green financing from first tier banks Caja Sullana - Developing a energy efficiency fair in Piura to promote financing of energy efficiency equipment in the private sector Asociacion Automotriz del Peru (AAP) - Supporting the Electric Transport NAMA via the development of a committee focused on electric transport and providing contacts and support for the electric transport fair Sociedad Peruano para las Energia Renovables (SPR) - Provides data, studies, and technical assistance to support the Grid-Connected Renewable Energy NAMA Ergon / Tozzi Green - Providing data regarding the installation of off-grid renewable energy systems as part of the massive rural electrification program Enel - Providing technical information, studies and international benchmarking regarding electric transport vehicles and infraestructure, distributed generation, smart metering, inductions stoves and renewable energy. Engie - Providing technical information and data regarding electric vehicle charging stations, electric mototaxis, and renewable energy systems (grid connected and off-grid) Global Sustainable Energy Partnership (GSEP) - Collaboration in developing the electric bus pilot project in two public transport corridors Hidro Quebec - Collaboration in developing the electric bus pilot project in two public transport corridors Build Your Dreams (BYD) - Providing data for the MRV of the first pilot and providing buses for the electric bus pilot project in two public transport corridors GoSun - Providing solar stoves (and prototypes) for the pre-pilots of clean stoves Tereo - Providing gasifier stoves (and prototypes) for the pre-pilots of clean stoves Biolite - Providing ventilator stoves (and prototypes) for the pre-pilots of clean stoves QEnergy - Providing technical services for the photovoltaic pilot study in public universities  |
| **GEF Small Grants Programme** |
| *(not set or not applicable)* |
| **Other Partners** |
| Corporación Financiera de Desarrollo S.A. (Cofide) - Providing financial evaluation assistance to develop pilots and green financing lines to support electric transport, renewable energy and energy efficiency ProTransporte - Support and collaboration in developing the electric bus pilot project and providing data for the replicability study Fondo de Cooperación para el Desarrollo Social (Foncodes) - Collaboration in developing the clean cooking component of the Universal Access to Sustainable Energy NAMA Fondo de Inclusion Social Energetica (FISE) - National funding mechanism for clean cooking stoves and rural electrification included in the Universal Access to Sustainable Energy NAMA Fondo de Compensación Social Eléctrica (FOSE) - National funding mechanism for rural electrification included in the Universal Access to Sustainable Energy NAMA Fondo Nacional del Ambiente (FONAM) - Support in developing FOFEE (Fund to finance energy efficiency) Global Green Growth Initiative (GGGI) - Technical and financial evaluation support in programs to promote energy efficiency in the industrial and commercial sectors, e.g. ISO 50001  |

# Annex - Ratings Definitions

**Development Objective Progress Ratings Definitions**

(HS) Highly Satisfactory: Project is on track to exceed its end-of-project targets, and is likely to achieve transformational change by project closure. The project can be presented as 'outstanding practice'.

(S) Satisfactory: Project is on track to fully achieve its end-of-project targets by project closure. The project can be presented as 'good practice'.

(MS) Moderately Satisfactory: Project is on track to achieve its end-of-project targets by project closure with minor shortcomings only.

(MU) Moderately Unsatisfactory: Project is off track and is expected to partially achieve its end-of-project targets by project closure with significant shortcomings. Project results might be fully achieved by project closure if adaptive management is undertaken immediately.

(U) Unsatisfactory: Project is off track and is not expected to achieve its end-of-project targets by project closure. Project results might be partially achieved by project closure if major adaptive management is undertaken immediately.

(HU) Highly Unsatisfactory: Project is off track and is not expected to achieve its end-of-project targets without major restructuring.

**Implementation Progress Ratings Definitions**

(HS) Highly Satisfactory: Implementation is exceeding expectations. Cumulative financial delivery, timing of key implementation milestones, and risk management are fully on track. The project is managed extremely efficiently and effectively. The implementation of the project can be presented as 'outstanding practice'.

(S) Satisfactory: Implementation is proceeding as planned. Cumulative financial delivery, timing of key implementation milestones, and risk management are on track. The project is managed efficiently and effectively. The implementation of the project can be presented as 'good practice'.

(MS) Moderately Satisfactory: Implementation is proceeding as planned with minor deviations. Cumulative financial delivery and management of risks are mostly on track, with minor delays. The project is managed well.

(MU) Moderately Unsatisfactory: Implementation is not proceeding as planned and faces significant implementation issues. Implementation progress could be improved if adaptive management is undertaken immediately. Cumulative financial delivery, timing of key implementation milestones, and/or management of critical risks are significantly off track. The project is not fully or well supported.

(U) Unsatisfactory: Implementation is not proceeding as planned and faces major implementation issues and restructuring may be necessary. Cumulative financial delivery, timing of key implementation milestones, and/or management of critical risks are off track with major issues and/or concerns. The project is not fully or well supported.

(HU) Highly Unsatisfactory: Implementation is seriously under performing and major restructuring is required. Cumulative financial delivery, timing of key implementation milestones (e.g. start of activities), and management of critical risks are severely off track with severe issues and/or concerns. The project is not effectively or efficiently supported.