Supporting Energy Transition for Remote Settlements in Turkmenistan (SET)

Review CEO Approval and Make a recommendation

Basic project information

GEF ID
11838
Countries
Turkmenistan
Project Name
Supporting Energy Transition for Remote Settlements in Turkmenistan (SET)
Agencies
UNDP
Date received by PM
2/27/2026
Review completed by PM

Program Manager
Wenxin Li
Focal Area
Climate Change
Project Type
MSP

PIF

CEO

Part I - General Project Information

1. a) Is the Project Information table correctly filled, including specifying adequate executing partners?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response

b) Are the Rio Markers for CCM, CCA, BD and LD correctly selected, if applicable?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response

2. Project Summary.
a) Does the project summary concisely describe the problem to be addressed, the project objective and the strategies to deliver the GEBs or adaptation benefits and other key expected outcomes?
b) Does the summary capture the essence of the project and is it within the max. of 250 words?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response

3. Project Description Overview
a) Is the project objective statement concise, clear and measurable?
b) Are the components, outcomes, and outputs sound, appropriate and sufficiently clear to achieve the project objective and the core indicators per the stated Theory of Change?
c) Are gender dimensions, knowledge management, and M&E included within the project components and budgeted for?
d) Are the GEF Project Financing and Co-Financing contributions to PMC proportional?
e) Is the PMC equal to or below 10% (for MSP) or 5% (for FSP)? If above, is the justification acceptable?

Secretariat comment at CEO Endorsement Request
OP 5/26/2026: cleared.

WL 4/27/2026: cleared.

WL 3/2026: Please clarify the institutionalization of the capital subsidies in outcome 3 "Use of capital subsidies for renewable energy expanded into a government to support replication; and local capacity to operate RE system established".

OP 3/27/2026: The budget for M&E ($198,744) in this section does not match the figure in the Budget Table ($115,010). Please correct.

Agency Response

UNDP 4/21/2026: Technical assistance will be provided to the Government to support the institutionalization and expansion of capital expenditure subsidies for small-scale distributed solar PV systems. Building on lessons learned from pilot projects implemented under Component 2, the project will assist the Ministry of Energy (MoE) and other relevant government stakeholders in developing a structured subsidy framework to support replication and scale-up of distributed renewable energy systems across the country.

The support will include analysis of pilot project results and consultations with key stakeholders?including the Ministry of Energy, Ministry of Finance, financial institutions, bankers, and other relevant actors?to design an appropriate subsidy structure, define eligibility criteria, and establish transparent procedures for subsidy allocation and monitoring. The activity will also support the integration of the subsidy mechanism into relevant government policies, regulatory frameworks, and budgetary processes to ensure long-term sustainability beyond the lifetime of the project.

Through these efforts, the project will help establish a government-led program that uses capital subsidies as a policy instrument to catalyse investment in distributed solar PV and enable large-scale replication.

This activity will be implemented during the third and fourth years of the project and will incorporate inputs from Activity 1.2.2 as well as lessons learned from the pilot projects under Component 2. This text is now added.

Further, please see added description under activity under 3.1.1 and 3.1.2.

UNDP 4/21/2026:

M&E and KM outputs are now separated as Component 4 and Component 5. Budget allocation is as below:

Component 4 - KM - $83,734

Component 5 - M&E - $115,010

The M&E budget table in Additional Annex K: Monitoring and Evaluation Plan is updated to reflect the number in budget table, that is $115,010.

4. Project Outline
A. Project Rationale
a) Is the current situation (including global environmental problems, key drivers of environmental degradation, climate vulnerability) clearly and adequately described from a systems perspective and adequately addressed by the project design?
b) Have the role of stakeholders, incl. the private sector and local actors in the system been described and how they will contribute to GEBs and/or adaptation benefits and other project outcomes? Is the private sector seen mainly as a stakeholder or as financier?
c) If this is an NGI project, is there a description of how the project and its financial structure are addressing financial barriers?

Secretariat comment at CEO Endorsement Request
WL 4/27/2026: cleared.

WL 3/2026:

Please include the "Bankers and finance professionals" as part of the project stakeholders, as they are expected to participate in the training under activity 1.3.2. In addition, they may provide inputs for the financial regulation and incentive aspects of Activity 1.2.2 and 1.2.3 and 3.1.3.

Agency Response
UNDP 4/21/2026:

This has been incorporated in the relevant activities? description ? 1.2.2, 1.2.3 and 3.1.3. Bankers and finance professionals added as project stakeholders in CEO ER and the Stakeholder Engagement Plan (Annex N of CEO ER / Annex 7 of Prodoc).

5 B. Project Description

5.1 a) Is there a concise theory of change (narrative and an optional schematic) that describes the project logic, including how the project design elements are contributing to the objective, the identified causal pathways, the focus and basis (including scientific) of the proposed solutions, how they provide a robust approach? Are underlying key assumptions listed?

b) Is there a description of how the GEF alternative will build on ongoing/previous investments (GEF and non-GEF), lessons and experiences in the country/region?

c) Are the project components (interventions and activities) described and proposed solutions and critical assumptions and risks properly justified? Is there an indication of why the project approach has been selected over other potential options?

d) Incremental/additional cost reasoning: Is the incremental/additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12? Has the baseline scenario and/or associated baseline projects been described? Is the project incremental reasoning provisioned (including the role of the GEF)? Are the global environmental benefits and/or adaptation benefits identified?

e) Other Benefits: Are the socioeconomic benefits resulting from the project at the national and local levels sufficiently described?

f) Is the financing presented in the annexed financing table adequate and demonstrate a cost-effective approach to meet the project objectives? Are items charged to the PMC reasonable according to the GEF guidelines?

g) How does the project design ensure resilience to future changes in the drivers and adaptive management needs and options (as applicable for this FSP/MSP)?

h) Are the relevant stakeholders (including women, private sector, CSO, e.g.) and their roles adequately described within the components?

i) Gender: Does the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities and have these been taken up in component design and description/s?

j) Are the proposed elements to capture and disseminate knowledge and learning outputs and strategic communication adequately described?

k) Policy Coherence: Have any policies, regulations or subsidies been identified that could counteract the intended project outcomes and how will that be addressed?

l) Transformation and/or innovation: Is the project going to be transformative or innovative? Does it explain scaling up opportunities?

Secretariat comment at CEO Endorsement Request

OP 5/26/2026: cleared.

WL 4/27/2026: cleared.

WL 3/2026:

- Baseline: The data provided in Table 1 is well noted to underpin the project design of the pilot programs. Please also clarify the current ownership and business/financing models of operating the diesel gensets powering these and other remote settlements in the country and ensure that the relevant stakeholders are consulted during project design and implementation. Please also clarify how tariff is set for these minigrids and whether this would be updated as part of the project.

- Output 1.2. Please clarify whether the objective and scope of the activities under this output are limited to solar or applicable to RE broadly. Where only solar RE is covered, please provide justification.

- Activities 1.2.2 and 1.2.3. Please clarify whether/how "Financial regulations" would be linked to the subsidies to be developed under Activity 3.1.1 (incorrected labeled as 3.1.3).

- Output 2.1. Please clarify the target solutions of this output: distributed vs large scale PV installations. C&I rooftop solar tend to be of small scale and designed to provide power to the consumers directly, while solar farms tend to be designed to provide power to the grid at the utility level.

- Output 2.3 and 2.4. Please clarify the context, objective and stakeholders for the MRV system and the GHG system, and the rationale of developing separate MRV system under Output 2.3 and GHG monitoring system under Output 2.4.

- Output 2.5. Please clarify if there's any linkage/dependency between output 2.5 and other outputs under Outcome 2 and those under Outcome 1. Please confirm if/how the existing gensets will be disposed of or kept as a hybrid solution to complement the solar energy generation. Please clarify the role of the civil society as referred to in Activity 2.5.5, and if they will have a similar role for Component 3, as well as the roles of the private sector or end users (including financing).

- Table 8, please clarify whether energy storage (batteries) will be part of the mini-grid design. Elsewhere for other components and outputs, please clarify where energy storage is part of the scope.

OP 3/27/2026:

- The project mentions a role for NGOs and CSOs to ?provide support for on-ground implementation of the project.? Please specify which NGOs/CSOs youintend to engage and also elaborate on what on-ground implementation is expected. In addition, it is noted that the Stakeholder Engagement Plan does not provide any specific description on consultations with rural settlers and additional information should be provided on project means and timing of engagement and consultation with this important stakeholder group.

- Please clarify the rationale for responding ?Yes? to Closing gender gaps in access to and control over natural resources, as we do not see specific activities in the project design that address this issue.

Agency Response

UNDP 4/21/2026:

- Additional clarification on the ownership and financing arrangements of the existing diesel-based power systems in remote settlements has now been incorporated into the baseline section of CEO ER.

In Turkmenistan, diesel generators serving remote settlements are typically deployed and owned by the Government through capital grant mechanisms. The diesel fuel required for these generators is supplied by the Government, and transportation costs are also covered by the state. Land ownership in these settlements is state-owned. As a result, the current ownership and financing model is fully public and centrally managed, with limited scope for structural reform.

Relevant stakeholders, including national and local government authorities responsible for energy supply and rural service provision, will be consulted during project design and implementation to ensure alignment with national policies and operational practices.

Electricity tariffs for the residential sector in Turkmenistan are highly subsidized and therefore remain very low. Consistent with national policy, tariffs for the proposed mini-grids are also expected to be subsidized by the Government. The project will follow the existing national tariff framework; any potential tariff adjustments would be determined by the Government in accordance with national regulations and policies.

- The objective and scope of the project will be too wide if it covers all RE technology, small-scale and large-scale in all the outputs. Although in Output 1.1, all RE technologies are covered (baseline assessment, development of technical standards and guidelines, university-industry collaboration, inputs to update Law of Turkmenistan ?On Renewable Energy sources?); Output 1.2 focuses mainly on solar energy (National roadmap for solar energy adoption, development of secondary regulation/legislation/policies relating to solar deployment). This was decided based on consultation with the government stakeholders where it was specifically requested to scale and implement solar energy as it has the highest potential among RE technologies in Turkmenistan.
Activities 1.2.2 and 1.2.3 focus on developing the financial and regulatory framework required to enable renewable energy deployment in Turkmenistan. The financial regulations prepared under these activities will establish the principles and mechanisms for supporting renewable energy investments, including provisions related to incentives, subsidies, and public financing mechanisms. These regulatory provisions will provide the policy foundation for the subsidy scheme envisaged under Output 3.1. In particular, the work under Component 1 will assess existing fossil-fuel subsidies and develop recommendations for repurposing or complementing them with targeted financial support mechanisms for renewable energy. Based on this framework, Output 3.1.1 will support the Government in designing practical plans to operationalize capital subsidies for renewable energy investments, including distributed solar PV systems in remote settlements. Thus, the financial regulations developed under Activities 1.2.2 and 1.2.3 will create the enabling policy environment, while Output 3.1.1 will focus on the implementation and scaling of the subsidy mechanism to support replication of renewable energy projects.
- The target of output 2.1 will be to develop standardized templates for feasibility assessments, tender mechanisms for contracting/procurement (Activity 2.1.1) and organise training programmes for national stakeholders (Activity 2.1.2) for both large-scale solar investments and C&I rooftop solar projects. The output description is updated for clarity. Number of standardized templates of tender documents will be one-set each for small-scale and large-scale solar grids. Tender document for C&I rooftop solar grids will be developed under this output and will be applicable for other similar C&I installations.
- Turkmenistan is a fossil fuel driven economy with a nascent renewable energy market. Government stakeholders are yet to recognize the full transformative potential of renewable energy. The MRV system developed under Output 2.3 will act as proof of concept for government to scale solar deployment across the country. The objective of output 2.3 is to develop an MRV system for renewable energy sector, particularly to measure the performance, reliability and impact of pilot solar mini-grids deployed under the project interventions (Output 2.5), given the limited solar mini-grid deployment and operations experience in the country. This will demonstrate the efficiency of solar deployment in the rural settlements of Turkmenistan. Ministry of Energy and Turkmenenergo will be the key stakeholders involved to implement the MRV systems envisaged under this output. The country is also taking its initial steps towards low emission economy. Output 2.4 aims to quantify the avoided emissions and pollutants in pilot sites (Output 2.5) and to measure emission reductions achieved through renewable-based mini-grids. GHG emissions tracking system will be developed and implemented together with Ministry of Environmental Protection, and this tracking system will be utilized beyond the scope of the project (through government grants) to measure the impact of climate mitigation projects implemented across the country. GHG tracking system is kept as a separate output as suggested by Ministry of Environmental Protection during the stakeholder consultations. This also follows the structure of the approved PIF, which has MRV and GHG systems in two different outputs. Stakeholder consultations conducted at PPG stage also strongly suggested the same structure.

- Output 2.5 is focused on implementation of pilot solar mini-grids in the selected remote rural settlements of Turkmenistan. The outputs under Outcome 1 & 2 will create the necessary enabling environment in the country through policy interventions (Output 1.1 & 1.2), develop capacity of key stakeholders (Output 1.3) and develop standardized tender packages for feasibility assessments, installations, contracting / procurement of solar projects (output 2.1 & 2.2) ? all of which will aid to the implementation of pilot under output 2.5, creating demonstration effect for further scaling of solar projects in the country. During the project timeline, the existing gensets will be kept as hybrid solution to compliment the solar mini-grids. Diesel gensets could be replaced by the government, once the benefits of solar mini-grids are established through project pilot initiatives. This will be subject to investments from the government for scale-up of solar projects. This is footnoted under the description of output 2.5 for clarity. The role of CSO/NGOs is to provide support for on-ground implementation of the project, such as operationalization and maintenance of mini-grids envisaged under component 2 & also under component 3. This is added under the description of component 3.
- Due to availability of limited funds for setting up the solar mini grids under this project, solar mini grids with battery storage cannot be set up in all sites. Thus, in this project, two settlements, Yalkym and Murzachyrla, with the lowest number of households and electrical consumption, have been selected to have a solar mini grid with battery storage that will fulfil the total electricity demand of the settlements. The same is mentioned in the report ? ?9811_Add Annex_E_Financial Pre-Feasibility Study_Mar2026?. For clarity, this is now added as a footnote under the description of activity 2.5.5, that is, Installation, operationalization and maintenance of pilot solar PV systems in remote settlements.
As mentioned above, footnote added to clarify the scope of energy storage.
UNDP 4/21/2026: The organisation consulted during stakeholder consultations at PPG stage - Yas Tebigatchy (Young Naturalist) is intended to be engaged during the project implementation. The role of CSO/NGOs is to provide support for on-ground implementation of the project, such as operationalization and maintenance of mini-grids envisaged under component 2 & also under component 3. This is added in the SEP and stakeholder table in the CEO ER. (The details of the consultations conducted with rural settlers at Ataguyy, Bukri and Churchule are added in the Stakeholder Engagement Plan, as well as the planned consultations with local communities in the remote settlements during implementation phase.)
UNDP 4/21/2026: The project responded ?Yes? to this question as it aims to improve equitable access to modern energy services, including renewable energy solutions, in remote settlements where women are among the primary users and beneficiaries of household energy. Improved access to reliable and clean electricity is expected to reduce the burden associated with energy access constraints, which often disproportionately affects women. Women in these rural settlements are dependent on men for firewood and for fetching water from deep wells. Access to reliable electricity will increase their ability to access clean water for cooking and drinking. The provision of reliable supply of electricity will reduce need of firewood for lighting, heating and cooking. In addition, the project will promote inclusive stakeholder engagement and capacity-building activities that encourage the participation of women in consultations, training programmes, and local decision-making processes related to the deployment and management of renewable energy systems. These measures are intended to help ensure that women benefit from improved access to energy resources and have opportunities to contribute to local energy planning and implementation. The relevant text will be further clarified in the gender section of the CEO request to better reflect these aspects.

5.2 Institutional Arrangements and Coordination with Ongoing Initiatives and Project
a) Are the institutional arrangements, including potential executing partners, outlined on regional, national/local levels and a rationale provided? Has an organogram and/or funds flow diagram been included?
b) Comment on proposed agency execution support (if agency expects to request exception). Is GEF in

support of the request?
c) Is there a description of coordination and cooperation with ongoing GEF and non-GEF financed projects/programs (such as government and/or other bilateral/multilateral supported initiatives in the project area, e.g.).

Secretariat comment at CEO Endorsement Request

OP 5/26/2026: The reference to UNDP?s capacity in the Project Board or Project Steering Committee still indicates UNDP?s seemingly veto voting power as highlighted below:

> The Project will have a Project Board (also called Project Steering Committee), which will be the highest-level body, and will provide support and guidance for the implementation of the project and will ensure that its findings are disseminated and validated by all relevant stakeholders in Turkmenistan. The Board will be made up of representatives from the Ministry of Environmental Protection, Ministry of Energy, Ministry of Finance, Ministry of Construction and Architecture, Ahal Province Municipality, Mejlis (Parliament), Turkmenenergo, the State Concern "Turkmengaz", Union of Industrialists Entrepreneurs of Turkmenistan, UNOPS, UNDP (as a non-voting member) and representatives of communities, NGOs and CSOs. The Project Board will be responsible for the supervision and selection of the project coordinator, who will be responsible for the management unit. UNOPS will provide administrative services to hire the Project team.
>
> In the event that consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

Please revise the section, following the recently agreed language between UNDP and GEFSEC as referenced below:

?The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP?s Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member."

OP 5/11/2026: Both UNDP and UNOPS will participate in the Project Board or Project Steering Committee as non-voting members. But UNDP Resident Representative will have the final say if there is no consensus within the Board, which contradicts the nature of the non-voting member - please remove that sentence.

> [1] Implementing Partner in UNDP terminology.
>
> UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Executing Agency to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.
>
> The Executing Agency (GEF terminology), UNOPS, is the entity to which the UNDP Administrator has entrusted the implementation of the UNDP assistance specified in the signed project document together with the assumption of full responsibility and accountability for the effective use of UNDP resources and delivery of products, as established in the work plans approved by the Project Board.
>
> The Project will have a Project Board (also called Project Steering Committee), which will be the highest-level body, and will provide support and guidance for the implementation of the project and will ensure that its findings are disseminated and validated by all relevant stakeholders in Turkmenistan. The Board will be made up of representatives from the Ministry of Environmental Protection, Ministry of Energy, Ministry of Finance, Ministry of Construction and Architecture, Ahal Province Municipality, Mejlis (Parliament), Turkmenenergo, the State Concern "Turkmengaz", Union of Industrialists Entrepreneurs of Turkmenistan, UNOPS, UNDP (as a non-voting member) and representatives of communities, NGOs and CSOs. The Project Board will be responsible for the supervision and selection of the project coordinator, who will be responsible for the management unit. UNOPS will provide administrative services to hire the Project team.
>
> In the event that consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

WL 3/2026: Please remove reference to Mexico. Please ensure consistency in the description of the composition of the Project Board, e.g. the inclusion of the Ministry of Finance.

Agency Response

UNDP 4/21/2026:

The reference to Mexico is removed. The composition of the project board is now uniform throughout the section.

UNDP 5/20/2026

UNDP confirms that the project quality assurance function is an oversight function that is independently exercised and reports to the board. The person(s) performing this quality assurance function will therefore participate in the project board meetings in a non-voting capacity.

As per UNDP policies and procedures, the project board shall be constituted with senior representation from UNDP (Resident Representative) as well as senior representation from the Government and CSO and shall periodically (annually) assess progress of implementation and provide strategic guidance to the project. Decisions in this project board are taken by consensus by all board members.

This high-level project board is fully separate from the project management unit which is instituted by and exclusively operates under the authority of the Government and ensures the day-to-day management of the project. UNDP is not involved in the execution of the project and is therefore also not represented in the project management unit and has no voting rights in this respect.

UNDP 6/9/2026:

As stated in the previous response sheet, UNDP hereby confirms that the project quality assurance function is an oversight function that is independently exercised and reports to the Project Board. The person(s) performing this quality assurance function will therefore participate in the project board meetings in a non-voting capacity.

As per UNDP policies and procedures, the Project Board shall be constituted with senior representation from UNDP (Resident Representative) as well as senior representation from the Government and CSO and shall periodically (annually) assess progress of implementation and provide strategic guidance to the project. Decisions in this project board are taken by consensus by all board members.

This high-level project board is fully separate from the project management unit, which is instituted by and exclusively operates under the authority of the Government and ensures the day-to-day management of the project. UNDP is not involved in the execution of the project and is therefore also not represented in the project management unit and has no voting rights in this respect.

5.3 Core indicators
a) Are the identified core indicators calculated using the methodology and adhering to the overarching principles included in the corresponding Guidelines (GEF/C.62/Inf.12/Rev.01)?
b) Are the project's targeted contributions to GEBs (measured through core indicators and additional listed outcome indicators) /adaptation benefits reasonable and achievable?
Are the GEF Climate Change adaptation indicators and sub-indicators for LDCF and SCCF properly documented?

Secretariat comment at CEO Endorsement Request

WL 5/8/2026: cleared.

WL 4/27/2026: please embed the calculations and formulas for Column U of sheet "Electricity demand". Please clarify the difference and the relationship between column D and column P, both are related to lamp and lighting. Please ensure that the LED lamp savings are not not double counted, through the solar minigrid emission reductions and through the LED emission reductions. Please provide the reference to the diesel generator emission factor used.

Please clarify the inputs and assumptions for some parameters in the calculation of the indirect emission factors in Cell AA19, ((6.3-2.1)/48)*120*2.46*20*1000*10%; specifically the part of "(6.3-2.1)/48".

WL 3/2026: Please indicate which Excel file and which sheet contains the calculations of the three values for CI6: 66,005 tCO2e, 9,848 tCO2e, 516,600 tCO2e.

Agency Response

UNDP 4/21/2026:

Kindly refer to the annex ? ?9811_Add Annex_B_Electricity_Demand_v3_Mar2026?. The file name is now referenced under the core indicator section.

UNDP 05/05/2026:

Column U has been linked to individual financial model excel files for each settlement.

Column D represents the amount of electricity consumed because of lighting lamps/bulbs in Watt-hours. Column P represents the number of lamps (#) in households, healthcare centres, schools and community centres in each settlement. It is calculated as: the number of lamps per household*number of households + number of lamps in healthcare centre, school and community centre. These are 60W lamps currently used in the settlements as per data received from UNDP country office and the technical consultant?s field visit.

Annual savings from the replacement of these 60W bulbs with 7W LED lamps is calculated in Column R. The emission reduction from and savings due to the replacement is not double counted. This is because the solar mini grid capacity only takes into consideration the electricity consumed by the replaced 7W bulbs. This results in a reduced solar mini grid capacity optimal only for lighting with reduced electricity demand, in turn resulting in reduced emission reduction and not double counting.

These calculations are available in the individual financial model excel files for each settlement: Sheet ?Demand_Estimation? for electricity demand calculation and solar mini grid capacity; the emission reduction from these mini grids is calculated in the sheet titled ?Solar_PV_Hybrid_MG_CO2 Savings?. These are the numbers used in ?Electricity demand? file in column U.

Diesel generator emission factor used is from the UNFCCC Methodology for emission reduction calculation ? ?Electrification of communities through grid extension or construction of new mini-grids? (AMS-III.BB. - https://cdm.unfccc.int/UserManagement/FileStorage/PC1WKORVI7DGMFS84L5N03JTXZBY9U)

For Indirect emissions, the calculation is now described with inputs in ?Electricity Demand? file.

5.4 Risks
a) Is there a well-articulated assessment of risk to outcomes and identification of mitigation measures under each relevant risk category? Are mitigation measures clearly identified and realistic? Is there any omission?
b) Is the rating provided reflecting the residual risk to the likely achievement of intended outcomes after accounting for the expected implementation of mitigation measures?
c) Are environmental and social risks, impacts and management measures adequately assessed and rated and consistent with requirements set out in SD/PL/03?

Secretariat comment at CEO Endorsement Request

OP 5/11/2026: cleared.

OP 3/27/2026: Under the Innovation risk dimension, Institutional and Policy risk category, the risk description focuses on government priorities, which is more of a governance risk. Suggest reframing around the risk linked to the institutional novelty introduced by the new National Solar Roadmap and related unit in the Ministry of Energy.

OP 4/27/2026: It's noted that the agency has attached Environmental and Social Safeguard Screening document, ESMF and stakeholder engagement plan. An overall ESS risk is classified as Substantial.

1. Please clarify how the project?s surface or ground water use and potential land and water contamination risks were communicated with local communities, and how the results of the consultations with them and relevant mitigation measures were integrated into the project design.
2. Please clarify how local communities are going to get involved in project activities, particularly related to Component 2 and 3.

Agency Response

UNDP 4/21/2026:

Agreed. The institutional and policy risk category is updated to reflect the risk related to setting-up of technical unit and introduction of National Solar Roadmap.

UNDP 05/05/2026:

1. ?Surface or ground water use risks? was identified during the Social and Environmental Screening Procedure (SESP), considering the fact that pilot locations are located in the desert and the water demand is related, besides to drinking and other domestic use, also to communities? reliance on livestock. Issue of water availability was confirmed during the field visit to pilot settlements, where the communities informed that the drinking water is usually delivered by tracks (across treacherous sand dunes that frequently trap 4x4 vehicles), and water for the other use is captured and transported from the seasonal lakes, filled in only during a few rainy days a year (the lakes were dry during the filed visits).

As the response, the project commits to support: (i) the waterless cleaning of the solar panels from the accumulated dust, which blocks the sunlight, thus reduces power output, and (ii) the use modern LFP battery technology field tested to operate even in very high temperature settings, and also, potentially house battery packs in a small indoor casing to reduce impact of temperate, in order to eliminate a need to use water for batteries cooling.

As for the fire hazard due to overheating, soil, groundwater and air contamination due to toxic chemicals release and leaks, the project commits to use latest LFP battery technologies that do not contain hazardous materials and are widely regarded as a robust and largely leak-proof approach that is suitable for high-safety operations. To address chemical / hazardous waste contamination risks related to end-of-life LFP batteries, the project includes an output (Output 1.5) where e-waste management, recycling, disposal plans and guidelines for end-of-life batteries and solar panels will be developed and applied. Clarifying text explaining these design parameters was added to the description of Activities 2.5.4 and 2.5.5.

Project commits to ensure that the respective technical requirements are included in the tendering documents (Project Activity 2.5.5).

2. Scoped ESIA will be conducted in pilot settlements (Project Activity 2.5.2), and the affected communities will be consulted, as required by Turkmenistan's environmental regulations and UNDP SES standards. Clarifying text was added to the description of Activity 2.5.2. Under component 2, local communities will be involved in training and capacity building activities (Output 2.3 & 2.4). For more details see clarification the Stakeholder Engagement Process and a small revision in the Table 3.2.7 in the Streamlined ESMF (Annex 8 to the Project Document) which firmly commits the project to these ESIAs.

Under component 3, local communities will take an active role in the oversight of RE installations. Within Outputs 3.1 and 3.2, communities will be trained in O&M of solar systems, in order to be engaged in activities, like solar panels cleaning, applying waterless technology.

5.5 For NGI Only: Is there a justification of the financial structure and of the use of financial instrument with concessionality levels?

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response

6 C. Alignment with GEF-8 Programming Strategies and Country/Regional Priorities

6.1 a) Is the project adequately aligned with Focal Area objectives, and/or the LDCF/SCCF strategy?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response

6.2 Is the project alignment/coherent with country and regional priorities, policies, strategies and plans (including those related to the MEAs and to relevant sectors).

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response

6.3 For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), does the project clearly identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and how it contributes to the identified target(s)?

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response

7 D. Policy Requirements

7.1 Are the Policy Requirement sections completed?

Secretariat comment at CEO Endorsement RequestWL 3/2026: yes.

Agency Response

7.2 Is the Gender Action Plan uploaded?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response

7.3 Is the stakeholder engagement plan uploaded?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
7.4 Have the required applicable safeguards documents been uploaded?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
8 Annexes
Annex A: Financing Tables
8.1 GEF Financing Table and Focal Area Elements: Is the proposed GEF financing (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):
STAR allocation?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
Focal Area allocation?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
LDCF under the principle of equitable access?

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response
SCCF A (SIDS)?

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response
SCCF B (Tech Transfer, Innovation, Private Sector)?

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response
Focal Area Set Aside?

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response
8.2 Project Preparation Grant (PPG)
a) Is the use of PPG attached in Annex: Status of Utilization of Project Preparation Grant (PPG) properly itemized according to the guidelines?

Secretariat comment at CEO Endorsement Request

OP 5/26/2026: cleared.

OP 5/11/2026: Status of utilization of PPG: For Component A and B, please specify the technical studies performed and the types of discussions held. For reference, there is an indicative list of eligible PPG activities listed in the Guidelines (p. 9-11).

OP 3/27/2026: Please be precise when describing the PPG activities and avoid using terms like ?etc.? in such descriptions. For Component A, please specify the technical studies performed and the types of discussions held. For reference, there is an indicative list of eligible PPG activities listed in the Guidelines (p. 9-11).

Agency Response

UNDP 4/21/2026:

?etc.? has been removed from the PPG budget table. The complete titles of the activities (components A, B and C) are now listed.(Annex D of CEO ER)

UNDP 5/20/2026

Technical studies performed and the types of discussions held have been specified with additional details for Components A and B.

8.3 Source of Funds
Does the sources of funds table match with the amounts in the OFP's LOE?
Note: the table only captures sources of funds from the country's STAR allocation

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
8.4 Confirmed co-financing for the project, by name and type: Are the amounts, sources, and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines?
e.g. Have letters of co-finance been submitted, correctly classified as investment mobilized or in-kind/recurring expenditures? If investment mobilized: is there an explanation below the table to describe the nature of co-finance? If letters are not in English, is a translation provided?

Secretariat comment at CEO Endorsement Request
OP 5/11/2026: Cleared.

OP 3/27/2026: The co-financing letter, translated from Russian into English, indicates a total co-financing amount of USD 29.7 million, while the form includes two entries under different financial instruments: public investment and in-kind contribution. The letter should clarify the breakdown, including the respective amounts and financial instruments.

Agency Response
UNDP 4/21/2026:

Please refer to the additional clarification email received by UNDP on 9 April 2026 from the Ministry of Energy of Turkmenistan?.

Annex B: Endorsements
8.5 a) If ? and only if - this is a global or regional project for which not all country-based interventions were known at PIF stage and, therefore, not all LOEs provided:
Has the project been endorsed by the GEF OFP/s of all GEF eligible participating countries and has the OFP name and position been checked against the GEF database at the time of submission?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
b) Are the OFP endorsement letters uploaded to the GEF Portal (compiled as a single document, if applicable)?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
c) Do the letters follow the correct format and are the endorsed amounts consistent with the amounts included in the Portal?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
Annex C: Project Results Framework
8.6 a) Have the GEF core indicators been included?
b) Have SMART indicators been used; are means of verification well thought out; do the targets correspond/are appropriate in view of total project financing (too high? Too low?)
c) Are all relevant indicators sex disaggregated?
d) Is the Project Results Framework included in the Project Document pasted in the Template?

Secretariat comment at CEO Endorsement RequestWL 3/2026: Yes.

Agency Response
Annex E: Project map and coordinates
8.7 Have geographic coordinates of project locations been entered in the dedicated table? Are relevant illustrative maps included?

Secretariat comment at CEO Endorsement Request
OP 5/26/2026: cleared.

OP 3/27/2026: Please enter the coordinates through the dedicated data entry table in the GEF Portal under the Annex E section in decimal degree format. Kindly add Geo-name IDs as well.

Agency Response
UNDP 4/21/2026:

The table under Annex E, coordinates is changed to decimal degree format. Geo-name IDs added for the settlements, except for one (Churchuri settlement) which was not available.
Annex G: GEF Budget template
8.8 a) Is the GEF budget template attached and appropriately filled out incl. items such as the executing partner for each budget line?
b) Are the activities / expenditures reasonably and accurately charged to the three identified sources (Components, M&E and PMC)?
c) Are TORs for key project staff funded by GEF grant and/or co-finance attached?

Secretariat comment at CEO Endorsement Request

OP 5/26/2026: Please remove the outdated budget table and only keep the latest version under annex G:

OP 5/11/2026:

1. Please follow the budget template as stipulated in the GEF Guidelines, e.g. adding a sub-total line for each expenditure category as applicable.
2. Please include a title or brief description for each consultant position as well as contractual services to individual instead of just listing output numbers.
3. Please include a brief description for each contractual services to company instead of just listing output numbers.
4. A Project Manager and a Chief Technical Advisor are being charged 100% to project components and 0% to PMC. The TORs for these two positions include many management and administrative tasks. Please revise the budget table or the TORs accordingly.

OP 3/27/2026: Please include a TOR for the entire PMU as listed in Table 10; currently only the PM, PS and PA are included. Please note that it is generally discouraged to have potential redundancy in three roles (Project Manager, Project Specialist and Chief Technical Advisor) - please have only one Managerial-technical position. We will review the TORs and budget in the resubmission and advise accordingly.

Please aggregate budget lines by cost item. For example: the Project Manager cost should not be spread out across multiple lines of the budget table. GEF budgets are not organized by outcome/output. Please check all expenditure categories for such instances and consolidate where necessary, noting that it appears the same mistake may have occurred for the Contractual Services ? Company entries.

Once we have a resubmitted budget table along with complete list of TORs, we may provide additional comments - as is, we can't review issues like the percentage of project staff vis-a-vis the GEF financing.

Agency Response

UNDP 4/21/2026:
The PMU consists of Project Manager, Project Assistant, Chief Technical Advisor and Project Social and Environmental Safeguards / Gender Officer. Project Specialist (PS) has been removed, and this has been reflected in Table 10, along with Additional Annex L of CEO ER. The functions of PS have been allotted to PM. Also, the TOR has been updated to include the entire PMU. (Role of chief technical advisor is deemed crucial.)

Please refer to the revised version.

UNDP 5/20/2026:

1. Sub-total line for each expenditure category has been added in the TBWP

2. Brief description for each consultant position and contractual services to individuals has been added.

3. Brief description for each contractual services to company has been added

4. The budget allocations have been revised accordingly. A portion of the Project Manager?s time has now been allocated under Project Management Costs (PMC), reflecting the Project Manager?s primary role in the day-to-day management, coordination, administration, and overall implementation oversight of the project, in addition to contributing to technical delivery under the project outcomes and components.

At the same time, the Chief Technical Advisor will remain fully involved in providing technical leadership and substantive expert support across the different project components and outcomes. The CTA?s responsibilities will focus on technical guidance, quality assurance, and specialized advisory support rather than routine project management and administrative functions.

UNDP 6/9/2026:

The outdated budget table (dated 22 April) has been removed, as requested.

Annex H: NGI Relevant Annexes
8.9 a) Does the project provide sufficient detail (indicative term sheet) to assess the following criteria: co-financing ratios, financial terms and conditions, and financial additionality? If not, please provide comments.
b) Does the project provide a detailed reflow table to assess the project capacity of generating reflows? If not, please provide comments.
c) Is the Agency eligible to administer concessional finance? If not, please provide comments.

Secretariat comment at CEO Endorsement RequestWL 3/2026: NA

Agency Response
Additional Annexes
9. GEFSEC DECISION

9.1.GEFSEC Recommendation
Is the project recommended for approval

Secretariat comment at CEO Endorsement Request
WL 3/2026: Not yet, the agency needs to address the technical and policy comments.

WL 4/27/2026: Not yet, the agency needs to address the remaining technical comment on CI6 and an additional comment on E&S.

WL 5/26/2026: Not yet, the agency needs to address two remaining policy comments.

9.2 Additional Comments to be considered by the Agency during the inception and implementation phase

Secretariat comment at CEO Endorsement Request

9.3 Review Dates

	CEO Approval	Response to Secretariat comments
First Review	**3/27/2026**	**4/21/2026**
Additional Review (as necessary)	**4/27/2026**	**5/5/2026**
Additional Review (as necessary)	**5/12/2026**	**5/21/2026**
Additional Review (as necessary)	**5/26/2026**	**6/9/2026**
Additional Review (as necessary)		