



Environmental and Social Assessment of Empower New Energy



ABRIDGED FOR DISCLOSURE

1 June 2022

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Acronyms and Abbreviations

CFM	Climate Fund Managers B.V.
CI1	Climate Investor One
E&S	Environmental and Social (interchangeable with HSSE)
ESAP	Environmental and Social Action Plan
ESMS	Environmental and Social Management System
GIIP	Good International Industry Practice
HSSE	Health and Safety, Social and Environmental (interchangeable with E&S)
IFC PS	International Finance Corporation Performance Standards
ILO	International Labour Organisation
KPI	Key Performance Indicator
SEP	Stakeholder Engagement Plan
C&I	Commercial and Industrial

EPC	Engineering, Procurement and Construction
O&M	Operations and Maintenance
PV	Photovoltaic
IC	Investment Committee
ESG	Environmental and Social Governance
ESS	Environmental and Social Sustainability, a pan-African ESG advisory services firm
UN	United Nations
HR	Human Resources
OHS	Occupational Health and Safety

1. Introduction

1.1 Background

Climate Investor One (CI1) is considering an investment opportunity in Empower New Energy, an impact and investment vehicle for small and medium-sized captive commercial and industrial (C&I) renewable energy projects across Africa (hereafter referred to as Empower or “the Project”). Empower has developed long-term partnerships with local developers and has built a pipeline of rooftop and small ground-mount solar PV C&I projects, some with storage solutions, in several African countries. Current assets in operation and/or under construction are located in Egypt, Ghana and Nigeria (see Figure 1). Empower co-develops the projects with local development partners through Engineering, Procurement and Construction (EPC) and Operations and Maintenance (O&M) contracts.

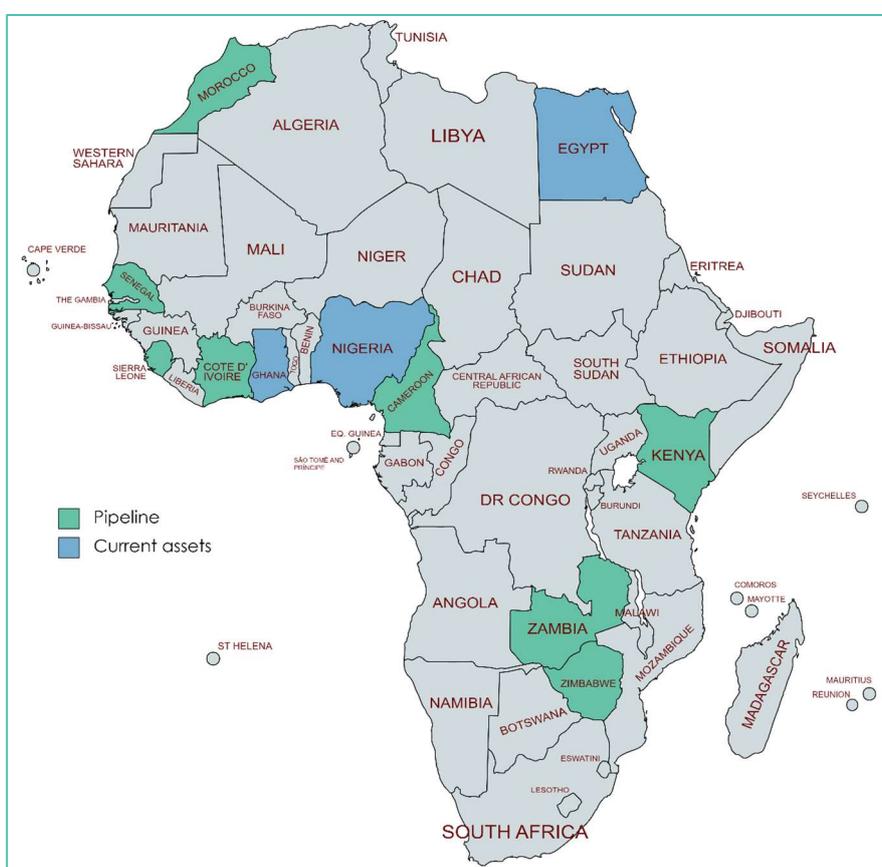


Figure 1: Countries included in the Empower pipeline of assets.

1.2 Purpose of this Document

Climate Fund Managers (CFM), on behalf of CI1 and in accordance with the requirements of the CFM Environmental and Social Management System (ESMS), assess the environmental and social (E&S) risks and impacts associated with a potential investment opportunity as part of its pre-investment due diligence and decision-making process. CFM appointed Environmental and Social Sustainability (ESS), a pan-African advisory services firm, to conduct an external E&S ‘red flag’ due diligence assessment of Empower to inform this assessment and CFM’s pre-investment decision making.

This document presents the results of CFM's E&S assessment of Empower New Energy for public disclosure. The document is based largely on the findings and recommendations of ESS as presented in their confidential report dated 14 January 2022 which was prepared for internal use by CFM. This document is therefore an abridged version of the ESS report.

2. Objective and Methodology

The objective of the E&S risk assessment is to highlight the potential E&S risks and impacts associated with the Project, any gaps that exist with respect to the E&S Reference Framework (see Section 3 below), and identify any fatal flaws or 'red flags' for consideration by CFM in its investment decision-making process.

CFM's approach to and process for E&S risk assessment during pre-investment due diligence is set out in its ESMS. Key steps in the process include:

- High-level screening of potential E&S risks and impacts;
- Assigning an initial overall Risk Categorisation to the Project (see Section 6 for more details);
- Including the E&S screening findings in the first (deal screen) paper submitted to the Investment Committee (IC) for approval;
- Conducting internal E&S due diligence (i.e. assessment by the CFM in-house ESG team) of the Project against the Reference Framework;
- Commissioning a consultant to conduct external E&S due diligence assessment of the Project against the Reference Framework, when required;
- Confirming the overall Risk Categorisation for the Project;
- Including the E&S due diligence findings in the final investment paper submitted to the IC for approval; and
- Preparing an Environmental and Social Action Plan (ESAP) setting out the measures required to address significant E&S risks/impacts and non-compliance with the E&S Reference Framework.

The scope of work of the external E&S due diligence assessment conducted by ESS on behalf of CFM/CI1 entailed the following:

- A review of existing Project documentation, including documents pertaining to Empower's ESMS and their implementation thereof, as well as documents pertaining to E&S management of their current assets;
- Site visits to four of Empower's existing assets in Ghana, Egypt (two sites), and Nigeria;
- Interviews with key internal (Empower) stakeholders;
- Evaluating the Project against the requirements of the E&S Reference Framework to identify compliance gaps;
- Identifying key E&S risks and impacts associated with the Project and assessing the significance (low, medium or high) of each identified risk to identify potential fatal flaws or 'red flags';
- Identifying actions required to address compliance gaps, key identified risks/impacts or 'red flags';
- Confirmation of the overall Risk Categoration; and
- Submitting a report presenting findings and recommendations for CFM's consideration in preparing the final submission to the IC for approval.

3. E&S Reference Framework

CFM is committed to responsible investments, and requires all of the projects in which it invests CI1 Funds to adhere to all applicable national legislative requirements, as well as international best practice standards for E&S risk and impact assessment and management. Specifically, CFM requires all projects receiving CI1 funds to comply with the following Reference Framework:

- National legislation applicable to health and safety, social and environmental (HSSE) issues, including labour and working conditions – see Section 3.1;
- International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability (2012) – see Section 3.2;
- World Bank Group General and any applicable Industry Sector Environmental, Health and Safety (EHS) Guidelines – these are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP) that are referenced in the IFC PS;
- International Labour Organisation (ILO) Core Labour Standards and Basic Terms and Conditions of Work; and
- International Bill of Human Rights and United Nations (UN) Guiding Principles on Business and Human Rights.

3.1 Applicable National Legislation

Empower’s geographic focus is currently the continent of Africa, with eleven countries represented in the pipeline of assets (see Figure 1). As such, providing a detailed list of HSSE-relevant legislation for all countries where Empower assets may be located is beyond the scope of this assessment. A detailed list of HSSE-relevant legislation is provided in the ESS report for the three countries where current Empower assets are located (Ghana, Egypt and Nigeria, as of January 2022).

A legal register should be completed for each country that Empower operates in as part of the due diligence process to ensure that national legislative requirements are considered and addressed as part of each asset-specific risk assessment and management process.

3.2 IFC Performance Standards

In accordance with the CFM/CI1 ESMS, all projects receiving CI1 funds are required to conduct their operations in accordance with the applicable requirements of the IFC Performance Standards (PS). As stated in its E&S Policy Statement, Empower is committed to adhering to the IFC PS in all of its operations, which means that Empower must also ensure adherence to the IFC PS at asset level. Consequently, any of the IFC PS could apply to Project operations, depending on the exact nature and E&S setting of the applicable asset. The eight PS and their applicability to the Project are discussed in Table 1 below.

Table 1: Applicability of the IFC PS to the Project

IFS PS	Summary of Requirements	Applicability to Project
P1: Assessment and Management of Environmental and Social Risks and Impacts	<ul style="list-style-type: none"> • Identify and assess environmental and social risks and impacts; • Develop and implement an appropriate environmental and social management system (ESMS) to integrate E&S standards and management programmes to 	Applicable to all Empower operations, including at asset-level

IFS PS	Summary of Requirements	Applicability to Project
	<p>address E&S risks and impacts into business operations.</p> <ul style="list-style-type: none"> • Include provisions for engagement with stakeholders, communicating with affected communities and grievance mechanisms in the ESMS. 	
PS2: Labour and Working Conditions	<ul style="list-style-type: none"> • Treat workers fairly. • Provide safe and healthy working conditions. • Avoid the use of child or forced labour, • Identify risks in the primary supply chain. <p>(Requirements are guided by the ILO and UN Human Rights conventions)</p>	Applicable to all Empower operations, including at asset level.
PS3: Resource Efficiency and Pollution Reduction	<ul style="list-style-type: none"> • Promote more sustainable use of resources, including energy and water; • Integrate practices and technologies to avoid or minimise the potential adverse impacts of pollution from project activities. 	Applicable at asset-level, but Empower must ensure that adequate requirements for asset-level management of risks in this regard are included in its ESMS.
PS4: Community Health, Safety and Security	<ul style="list-style-type: none"> • Adopt responsible practices to reduce risks to local communities through adequate emergency preparedness and response planning, responsible safeguarding of personnel and property, and by incorporating safety measures into design. 	Applicable at asset-level, but Empower must ensure that adequate requirements for asset-level management of risks in this regard are included in its ESMS.
PS5: Land Acquisition and Involuntary Resettlement	<ul style="list-style-type: none"> • Avoid involuntary resettlement wherever possible and, where avoidance is not possible, minimise the impact through mitigation measures such as fair compensation and livelihood improvements. 	Empower assets are located on offtaker premises where no physical or economic displacement is likely to be required. However, this should be confirmed on a case-by-case basis. Should any future Project pipeline assets involve activities that necessitate physical or economic displacement, the Empower ESMS should be updated to include requirements for asset-level management of risks and impacts in this regard.
PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	<ul style="list-style-type: none"> • Protect and conserve biodiversity. • Maintain the benefits from ecosystem services. • Promote the sustainable management of living natural resources through the adoption of practices that integrates conservation needs and development priorities. 	Empower assets are unlikely to pose risks to biodiversity or living natural resources. However, this should be confirmed on a case-by-case basis. Should any future Project pipeline assets pose risks in this regard, the Empower ESMS should be updated to include requirements for asset-level management of such risks.

IFS PS	Summary of Requirements	Applicability to Project
PS7: Indigenous Peoples (IP)	<ul style="list-style-type: none"> Anticipate and avoid adverse impacts on communities of IP, or where avoidance is not possible, minimise adverse impact. Foster respect for the human rights, dignity and culture of IP. Promote sustainable development benefits for IP in culturally appropriate manner. Promote informed consultation and participation of IP communities. In certain circumstances, Free, Prior, and Informed Consent (FPIC) is required. 	Empower assets are unlikely to pose risks to communities of IP. However, this should be confirmed on a case-by-case basis. Should any future Project pipeline assets pose risks in this regard, the Empower ESMS should be updated to include requirements for asset-level management of such risks.
PS8: Cultural Heritage	<ul style="list-style-type: none"> Protect cultural heritage from the adverse impacts of project activities and support its preservation. Promote the equitable sharing of benefits from the use of cultural heritage. 	Empower assets are unlikely to pose risks to cultural heritage. However, this should be confirmed on a case-by-case basis. Should any future Project pipeline assets pose risks in this regard, the Empower ESMS should be updated to include requirements for asset-level management of such risks.

4. Project Overview

Empower is headquartered in Oslo (Norway) with representative offices in London (England), Accra (Ghana) and Nairobi (Kenya). Empower works with local development partners to identify and develop local C&I assets through long-term Development Partnership Agreements (DPAs). Each DPA contains a pipeline of assets being developed by the local partner to be owned (fully or partially) and financed by Empower through a project-specific Special Purpose Vehicle (SPV). Assets are constructed and operated through Engineering, Procurement and Construction (EPC) and Operation and Maintenance (O&M) contracts. In some cases, the local developer is also contracted as the EPC and/or O&M contractors. Empower monitors each asset remotely during construction and once operational.

At the time of ESS's assessment of the Project, Empower's portfolio comprised of ~3MW of current assets (executed projects in operation or under construction) as set out in Table 2 below, as well as a secured pipeline of another ~47MW, with the potential to scale up to 100MW. Assets comprise captive rooftop or ground-mounted solar PV installations, all located on offtaker premises, some of which are hybrid assets (PV and storage).

Table 2: Status of Empowers current assets as of January 2022.

Offtaker	Location	Technology	Size	Developer/ EPC/O&M	Status at time of site visit
Miniplast	Accra, Ghana	Rooftop PV	0.7 MW	Stella Futura	Operation
Intercairo (Aluminium)	Cairo, Egypt	Rooftop PV	0.5 MW	GreeSolar	Operation
Intercairo (Extrusion)	Cairo, Egypt	Rooftop PV	0.5 MW	GreeSolar	Commissioning
Intercairo (Metal)	Cairo, Egypt	Rooftop PV	0.5 MW	GreeSolar	Construction
Premium Poultry	Abuja, Nigeria	Groundmount PV	0.7 MW	Rensource	Operation



Figure 2: Empower assets at (from left to right) Miniplast Ghana, Intercairo (Aluminium) Egypt and Premium Poultry Nigeria.

Empower has developed and implements an ESMS that sets out specific requirements for local development partners to conduct asset-specific E&S risk assessments and develop ESMS documentation specific to each asset in accordance with the guidance and standards specified in the Empower ESMS. Asset-specific ESMS documentation must be prepared and approved by Empower prior to approval by the Empower IC to invest in any asset.

Empower uses an online platform, the “Empower Gateway”, to share information and to receive, review and approve asset-specific documentation remotely. Empower monitors asset progress and performance remotely, by engaging trusted local advisors to conduct ongoing construction monitoring site visits, and submit monitoring audit reports to Empower. Empower’s EPC partners are also required to provide reports during both the construction and operational phase.

5. Assessment of E&S Risks / Impacts

Table 3 below presents an assessment of the HSSE risks and potential impacts associated with Empower’s activities and that of its local development partners, contractors and key suppliers. Specifically, the assessment evaluates the Empower ESMS and its compliance with the Reference Framework (the IFC PS specifically), as well as its adequacy to ensure IFC-compliant HSSE management at asset level. The assessment considers risks/impacts that would ordinarily be associated with Empower assets and associated infrastructure, and which could be expected given the E&S setting which Empower assets are likely to be situated.

Risks/impacts are also assessed at asset-level for Empower’s current assets (as at January 2022). These assets were also reviewed as examples of how Empower’s ESMS requirements are implemented at asset-level, and the adequacy of asset-level HSSE arrangements against the Reference Framework in general. A photo log of observations made by ESS during site visits to the current assets (as at January 2022) is provided in an Annexure to this document.

Table 3: Assessment of E&S Risks/Impacts

Reference Framework	Risk/Impact and Description	Risk Assessment Findings	
		Empower (Corporate level)	Current Assets (SPV-level)
IFC PS1	<p>Non-compliance with the Reference Framework</p> <p>The requirements of the Reference Framework are key metrics by which investors and other stakeholders judge the environmental and social sustainability of a given Project. Non-conformity with these requirements may result in risks and impacts not being adequately addressed, Project delays / conflict, which could affect the financing entity.</p>	<p>High risk</p> <p>The Empower ESMS document (manual) includes commitments to adhere to the IFC PS and sets out requirements for the development and implementation of asset-level ESMS documentation, including E&S risk assessments, policies and procedures.</p> <p>The Empower Gateway Platform provides more detailed guidance and requirements for asset-level E&S management documentation than the ESMS document itself. The Empower ESMS document should be strengthened to provide a comprehensive set of requirements in this regard, with the Gateway Platform to be used as a tool for its implementation.</p>	<p>High risk</p> <p>ESMS documentation for the current assets are broadly aligned with the Reference Framework, but some areas for improvement were identified:</p> <ul style="list-style-type: none"> • Lack of clarity on roles and responsibilities for E&S management at asset level • Incomplete risk assessments/registers • Limited emergency response plans
IFC PS1 Local legislation	<p>Approvals and Permits</p> <p>Absence of valid approvals and permits and/or non-compliance with permit conditions by local developers and/or offtakers could be a financial liability for Empower.</p>	<p>High risk</p> <p>The Empower ESMS contains requirements for local development partners to ensure all required permits/approvals are obtained and Empower reviews this during their due diligence of pipeline assets.</p> <p>Monitoring audits should include auditing of ongoing compliance with any permit conditions.</p>	<p>Low risk</p> <p>None of the existing assets required any permits/approvals. However the offtaker for Empower's Ghana asset holds an Environmental Permit for its operations that had expired at the time of the site visit. The offtaker has since initiated the renewal process.</p>
IFC PS1	<p>Inadequate E&S resources, responsibilities and organisational structure</p> <p>Lack of adequate and clearly defined E&S roles and responsibilities increases the risk of non-compliance with the Reference Framework.</p>	<p>High risk</p> <p>Empower's current resources (staffing), including E&S, is insufficient to cover the large volume of work related to the planned growth in investment activity. Additional competencies are also needed to effectively manage HSSE risks and impacts associated with the Empower pipeline of assets.</p>	<p>Low risk</p> <p>Local partners have adequate resources in place to manage E&S risks, but organisational structures and responsibilities (especially with regard to environmental issues) were not always clearly defined in asset-level ESMS documentation.</p>

Reference Framework	Risk/Impact and Description	Risk Assessment Findings	
		Empower (Corporate level)	Current Assets (SPV-level)
IFC PS1	<p>ESMS not addressing all potential E&S risks</p> <p>This could result in E&S risks and impacts not being identified, assessed and mitigated.</p>	<p>High risk</p> <p>The Empower ESMS does not sufficiently address how Empower integrates E&S considerations in its due diligence and decision-making processes.</p> <p>The Empower ESMS should address more adequately requirements for procedures to ensure adequate management of asset-level E&S risks, e.g.:</p> <ul style="list-style-type: none"> • HSSE performance monitoring and audit procedure • Change management procedure • Permit-to-work and lockout/tagout procedures • HSSE performance reporting 	<p>High risk</p> <p>In general, the site-specific ESMSs for current assets are to a large extent replications of the Empower ESMS, raising concern about a lack of consideration of the site-specific context.</p> <p>Nevertheless, a few gaps in compliance with Empower's ESMS requirements were noted, e.g.:</p> <ul style="list-style-type: none"> • Emergency response plans include only the highest probability risk scenarios in the given context (such as fires) and not all potential scenarios. • Lack of records of emergency drills. • Lack of records of training of asset workers on ESMS requirements.
IFC PS1	<p>Inadequate compliance auditing</p> <p>Lack of a clearly documented approach to ongoing compliance monitoring and data collection is a potential liability in the event of non-conformance.</p>	<p>High risk</p> <p>There is no HSSE monitoring and auditing procedure documented in Empower's ESMS manual. Empower engages local advisors to conduct monitoring audits and submit reports to Empower for review, but the advisors' competency for identifying, assessing and reporting on HSSE risks is unclear.</p>	<p>High risk</p> <p>Monitoring audits conducted by local advisors to date have failed to identify the gaps in compliance with the Empower ESMS noted above and the HSSE risks identified elsewhere in this document.</p>
IFC PS1	<p>Ineffective change management</p> <p>It is important that changes to organisational structures, engineering and design consider potential HSSE risks and legislative requirements and that HSSE requirements are captured in the design and fully budgeted for</p>	<p>High risk</p> <p>Empower's ESMS lacks a change management procedure or requirements for such a procedure at asset-level.</p>	<p>High risk</p> <p>Current asset ESMSs lack provisions for change management.</p>

Reference Framework	Risk/Impact and Description	Risk Assessment Findings	
		Empower (Corporate level)	Current Assets (SPV-level)
IFC PS1	<p>Inadequate stakeholder engagement and grievance mechanisms</p> <p>The absence of a documented stakeholder engagement plan could result in stakeholder grievances and opposition.</p>	<p>Medium risk</p> <p>Empower's ESMS documents identify key stakeholders relevant to its operations, but no engagement mechanisms or commitments.</p> <p>Empower has not developed a documented Stakeholder Engagement Plan or External Grievance Mechanism.</p> <p>The assessment could not find evidence of the whistleblowing channel referred to in the Empower ESMS documentation.</p> <p>Empower's ESMS requirements for asset-level stakeholder engagement and grievance management should also be strengthened to align with IFC requirements in this regard.</p>	<p>Medium risk</p> <p>Current asset ESMSs make no provision for stakeholder engagement; key stakeholders identified in the ESMS documentation appeared to be a replication of the stakeholders listed in the Empower ESMS documentation. Key asset-level stakeholders such as adjacent property owners are not identified in asset-level ESMSs.</p>
IFC PS2 Local legislation	<p>Inadequate labour and working conditions</p> <p>A lack of compliance with legislative and IFC PS2 requirements with regard to labour and working conditions increases the risk of labour disputes, strikes or fines.</p>	<p>Low risk</p> <p>Empower's ESMS document includes a human resources (HR) policy with requirements for asset-level HR management, and Empower requires policies and plans to be in place in this regard during due diligence, but there is limited evidence of Empower conducting ongoing compliance with requirements in this regard during construction and/or operations.</p>	<p>Medium risk</p> <p>Workers confirmed that they had signed contracts of employment, but none were available for review. A template contract for one current asset lacked an adequate explanation of working conditions, e.g. overtime arrangements.</p> <p>Projects should be readily able to provide contracts for auditing purposes. Contracts should further be clear as to overtime requirements.</p>

Reference Framework	Risk/Impact and Description	Risk Assessment Findings	
		Empower (Corporate level)	Current Assets (SPV-level)
IFC PS2	<p>Inadequate OHS requirements and monitoring/enforcement</p> <p>OHS requirements that do not adequately address all OHS risks, and lack of enforcement monitoring, exposes workers to potential for injury/death.</p>	<p>High risk</p> <p>Although the Empower Gateway specifies clear, detailed OHS requirements, inadequate detail of the OHS requirements in the Empower ESMS may result in OHS risks not being adequately identified, assessed and addressed at asset-level. Empower's ESMS manual should be strengthened to provide more detailed requirements for procedures in asset-level ESMSs with regard to:</p> <ul style="list-style-type: none"> OHS rules, e.g. safe rooftop access, fall protection, permit-to-work, lockout/tagout, etc. Incident investigations Record keeping, e.g. on HSSE awareness draining and emergency drills. 	<p>High risk</p> <p>Risk assessments for current assets are not being updated following incidents/accidents.</p> <p>Several HSSE non-compliances were noted at current assets in Ghana and Nigeria, e.g. uncontrolled access to electrical panels, lack of safe rooftop access and fall protection measures, unsafe storage of harmful material at height, workers having to pay for replacement PPE, lack of training records, etc.</p> <p>No HSSE non-compliance issues were noted for the current assets in Egypt.</p>
IFC PS2	<p>Lack of local content and gender mainstreaming</p> <p>Increased risk of non-compliance with Reference Framework</p>	<p>Low risk</p> <p>The Empower ESMS should be strengthened to include policy statements and commitments, as well as asset-level requirements for, promoting local content and gender mainstreaming at asset level.</p>	<p>Low risk</p> <p>Current assets have no provisions for local content or gender mainstreaming, however, the scale of the current projects limit opportunities in this regard.</p>
IFC PS2	<p>Inadequate supply chain HSSE risk monitoring</p> <p>Suppliers of solar panels, specifically suppliers in China, have been linked to forced labour and other human rights violations</p>	<p>Medium risk</p> <p>Empower's ESMS lacks a policy statement regarding human rights risks in the solar supply chain and requirements for asset-level procurement procedures that include verification of supplier human rights policies</p>	<p>Medium risk</p> <p>Empower employs a risk-based approach to mitigating forced labour risks in the supply chain for each asset during due diligence. However, there are no documented policies or procedures regarding human rights risks in the supply chain included in the ESMS documentation of current assets.</p>

Reference Framework	Risk/Impact and Description	Risk Assessment Findings	
		Empower (Corporate level)	Current Assets (SPV-level)
IFC PS3	<p>Inadequate management of environmental risks/impacts</p> <p>Due to the small-scale nature of the assets and short duration of construction activities, risks in this regard at asset-level are generally low, but ESMS provisions in this regard should nevertheless be in line with IFC PS3 requirements.</p>	<p>Low risk</p> <p>Requirements for asset-level management of risks and impacts associated with air quality, noise and vibration, water quality, etc. during construction should be strengthened to align with IFC PS3 requirements in this regard.</p>	<p>Low risk</p> <p>Based on the lack of nearby sensitive receptors, risks in this regard are low for current assets.</p>
IFC PS3	<p>Lack of water and energy efficiency</p> <p>While of limited risk, water conservation and energy efficiency requirements should be in line with IFC PS3 requirements.</p>	<p>Low risk</p> <p>The Empower ESMS document should be strengthened to include policies and requirements for water conservation and energy efficiency measures, as well as water and energy consumption monitoring.</p>	<p>Low risk</p> <p>Current asset ESMSs do not include adequate provisions regarding resource use or energy efficiency, and no monitoring of consumption is currently conducted.</p>
IFC PS3	<p>Lack of adequate waste and hazardous materials management</p> <p>Poor management can result in human health issues / death, fines and/or action taken by government bodies as well as wide-spread environmental pollution.</p>	<p>Medium risk</p> <p>Although these items are covered in detail on the Empower Gateway for every asset, the Empower ESMS document should be strengthened to include policies and detailed requirements for waste management, monitoring waste generation, the use of alternatives to hazardous materials and hazardous materials storage and use.</p> <p>A documented policy and requirements for treatment/disposal of damaged or end-of-life solar panels and electrical equipment is also required.</p>	<p>Medium risk</p> <p>No documented waste management plans were available on site at any of the current assets. Waste is stored and designated storage facilities and reported to be either reused, recycled, or disposed of through local authorised waste contractors. However, no records of waste transfer and disposal/tracking were available.</p> <p>Empower requires all assets to have a plan in place for disposal of damaged or end-life solar panels and electrical equipment during due diligence. However, during the site visits, only the assets in Egypt could confirm that procedures were in place in this regard (returned to the supplier).</p>

Reference Framework	Risk/Impact and Description	Risk Assessment Findings	
		Empower (Corporate level)	Current Assets (SPV-level)
IFC PS4	<p>Increased community health and safety risks</p> <p>Host communities and adjacent land users may be exposed to health and safety risks from Empower assets, e.g. increased traffic risks, electrocution or fire risks from poor installation of electrical, etc.</p>	<p>Medium risk</p> <p>Although all of these items are covered in detail on the Empower Gateway for every asset, the requirements for asset-level management of risks to community health and safety as documented in the Empower ESMS manual should be strengthened to ensure greater detail on the alignment with IFC PS4 requirements. This should ensure consideration of:</p> <ul style="list-style-type: none"> • Structural safety of asset infrastructure • Fire safety • Traffic safety • Transport and storage of hazardous materials • Emergency preparedness and response • Communicable diseases 	<p>Medium risk</p> <p>Limited information on asset-specific assessment of risks to community health and safety could be found in current asset ESMS, but Empower ensures consideration of this during the due diligence process on the Empower Gateway. Asset-level risks assessments should be updated regularly and emergency preparedness and response plans strengthened in line with IFC PS4 requirements.</p>

6. Project Risk Category

An overall E&S risk rating (Risk Category) is assigned to the Project, based on the description of the categories presented in Table 4, as per the CFM/CI1 ESMS.

Table 4: Risk Category Definition

Risk Category	Description
Category A (High risk)	Projects that could (i) have potential significant adverse E&S impacts which are diverse, irreversible or unprecedented; and/or (ii) trigger one or more of a subset of key requirements of IFC PS 5, 6, 7 or 8; and/or (iii) demonstrate a context of social/political conflict or severe security issues that pose a significant potential risk to the project.
Category B+ (Medium high risk)	Projects with potential adverse E&S impacts that are generally beyond the site boundaries, largely reversible and can be addressed through relevant mitigation measures
Category B (Medium low risk)	Projects with limited potential adverse E&S impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures.
Category C (Low risk)	Projects with minimal or no adverse social or environmental impact.

Based on these definitions and assessment of E&S risks and impacts presented in Section 5, the Project has been categorised as a **Category B** project. While some potentially significant risks/impacts have been identified, these are generally limited, relatively few in number, site-specific (at asset level), largely reversible and readily addressed through identified mitigation measures.

7. Mitigation Measures

Table 5 below sets out the proposed actions to be taken by the Project to mitigate the potential risks/impacts and ensure compliance by the Project with the E&S Reference Framework requirements. The proposed mitigation measures will form the basis of the Project ESAP to be agreed upon between CI1 and Empower to detail the required E&S actions, timelines, deliverables and responsibilities to be implemented by the Project.

Table 5: E&S Risk/Impact Mitigation Measures

#	Reference	Requirements
1.	IFC PS1	<p>HSSE Staffing:</p> <p>Project capacity and competency for HSSE management and asset-level oversight should be strengthened to ensure the necessary qualifications and competency are in place, subject to CFM approval, with responsibilities including, among other things, (i) ESAP implementation; (ii) implementation of IFC-compliant HSSE Management System (ESMS); (iii) conducting E&S due diligence of proposed projects; (iv) ensuring development and implementation of IFC-compliant project-level ESMSs and enforcing compliance; (v) monitoring of project and contractor HSSE performance during construction and operation; and (vi) HSSE reporting to investors.</p> <p>Project HSSE management capacity and approach should also utilise persons based in Africa and/or who have the ability to travel to/within Africa to visit project sites.</p>
2.	IFC PS1	<p>HSSE Policy:</p> <p>Update the Empower HSSE policy statements to align with CIO requirements, including but not limited to statements on commitments with regard to:</p> <ul style="list-style-type: none"> • HSSE governance and organisation • Climate change • Human rights • Gender equality • Community development • Monitoring and reporting
3.1	IFC PS1	<p>ESMS:</p> <p>Update and/or strengthen the Empower ESMS to include more detailed requirements and/or guidance for project-level ESMSs include:</p> <ul style="list-style-type: none"> • Legal registers and compliance • Site-specific HSSE risk assessments (to include air quality, noise and vibration, waste management, water resources, OHS and community health and safety) • Stakeholder engagement plans, where appropriate and necessary • Supplier procurement, including risk assessment of primary supplier human rights and labour policies • Labour management plans • Occupational health and safety procedures • Resource use and pollution prevent procedures, including procedures for waste management and hazardous substances. • Change management procedures • Community health and safety plans (where site-specific HSSE risk assessments identifies risks to community health and safety) • Covid-19 risk management strategies
3.2	IFC PS1	<p>E&S Monitoring Audits:</p> <p>Upgrade/develop and implement a monitoring and auditing procedure that ensures ongoing monitoring and enforcement of project-level ESMSs in accordance with Empower's ESMS requirements and international best practice. Monitoring and auditing can be conducted by in-house staff or external consultants with the necessary expertise and qualifications to conduct HSSE performance monitoring audits.</p>

#	Reference	Requirements
4.1	IFC PS1 National legislation	<p>Legal Compliance:</p> <ul style="list-style-type: none"> • Require all development partners to prepare and maintain country-level legal registers of all applicable environmental, health and safety, security and well-being legislative requirements and standards. • Require all development partners to conduct project-specific permitting reviews to ensure all approvals/permits are in place and any relevant conditions (including from ESIA) are adopted (including ESIA). • Confirm in all relevant contractual documentation that offtakers and/or development partners (as appropriate) are responsible for obtaining and maintaining the validity of any required environmental approvals/permits.
5.1	IFC PS1 Stakeholder engagement	<p>Stakeholder Engagement:</p> <ul style="list-style-type: none"> • Develop and implement a standalone Stakeholder Engagement Plan for projects where such engagement is deemed appropriate / necessary, comprising measures to track and document stakeholder engagement, a communications plan for each stakeholder group. • Establish an external grievance mechanism (including website access to the whistleblowing channel). • Provide guidance for and ensure development and implementation of project-level SEPs appropriate to the nature and scale of each project, where project context necessitates this.
6.	IFC PS1, PS2	<p>Solar Supply Chain Human Rights:</p> <p>Develop and implement a documented policy on human rights, including child and forced labour, in the supply chain. Implementation of this policy must include:</p> <ul style="list-style-type: none"> • Obtaining labour policies from suppliers of solar PV panels and evaluating these against the Empower policy. • Tracking publicly available information on the issue of human rights abuses in the solar industry supply chain and, wherever possible, participating in the industry's response to the issue.
7.	IFC PS2 National legislation	<p>Labour and Working Conditions:</p> <p>Ensure project-level labour management plans are developed and implemented that comply with applicable national legislative requirements as well as international best practice (i.e. IFC PS2, ILO Core Labour Standards). The plans should include provisions for local content and gender mainstreaming in any project-specific recruitment.</p>
8.	IFC PS2	<p>OHS:</p> <p>Update Empower occupational health and safety requirements to provide stronger guidelines for, and ensure project-level OHS management includes the following site-specific arrangements:</p> <ul style="list-style-type: none"> • Safe rooftop access and working and height procedures • Lockout/Tag out procedures • Permit to work procedures • Incident investigation procedures • Procedures for implementing and reporting on corrective action plans • Traffic safety management plans • Emergency preparedness and response plans • PPE use rules and procedures

#	Reference	Requirements
9.1	IFC PS3 Waste	<p>Waste Management:</p> <ul style="list-style-type: none"> Develop and implement a documented policy with requirements regarding damaged and end-of-life solar panels, batteries, etc., and require waste management procedures in this regard for each project. Provide more detailed guidance for, and ensure the development and implementation of, detailed waste management plans (WMPs) for each project, incorporating the principles of the waste management hierarchy. Ensure that the WMPs address designated waste (including hazardous waste) storage areas, methods of disposal, use of authorised waste services providers and retaining waste transfer and disposal records, as well as damaged and end-of-life solar panels, batteries, etc.
10.	CI1 ESMS	<p>Community Development:</p> <p>Develop and implement a Community Development Programme (CDP) in accordance with CI1's Community Development Framework, including annual review and development and implementation of an Implementation Plan for community development initiatives on an annual basis.</p>
11.	CI1 ESMS	<p>Gender Mainstreaming:</p> <p>Develop and implement a Gender Action Plan (GAP) in accordance with CI1's gender mainstreaming requirements.</p>
12.	CI1 ESMS	<p>HSSE Performance Reporting:</p> <p>Put in place a process for complying with requirements for ongoing performance reporting as detailed below:</p> <ul style="list-style-type: none"> Compile and submit monthly HSSE KPI data and quarterly reports to CFM Report accidents and incidents to CFM Report on contractor HSSE performance to CFM as requested.

8. Conclusion

The pioneering business idea of Empower New Energy is to work with local developers and EPC companies in scaling up distributed solar energy in the C&I sector across Africa, mainly investing in high-impact carbon abating projects that otherwise would not have been implemented, while at the same time reducing energy costs and securing jobs. In doing so, Empower contributes not only to the implementation of the United Nations Sustainable Development Goals, but also to raising the HSSE awareness and performance of Empower's local partners.

This assessment identified the key HSSE risks and impacts associated with the Project in relation to the applicable E&S Reference Framework, specifically the IFC PS. The assessment was informed largely by an external E&S 'red flag' due diligence assessment commissioned by CFM (on behalf of CI1) and conducted by pan-African advisory services firm, ESS. ESS's assessment involved review of available Project documentation, site visits to the current Empower assets (as at January 2022) and stakeholder interviews.

The assessment did not identify any fatal flaw or 'red flag' issues that would preclude investment by CI1 in Empower. The express commitment and efforts already made by Empower and their local developers with regard to addressing HSSE issues at asset level, and towards putting in place systems and planning to mitigate HSSE impacts, should be commended. However, the assessment has identified E&S risks and impacts associated with E&S management system planning, HSSE management capacity, health and safety implementation and monitoring of asset-level HSSE performance, that will need to be addressed to ensure alignment of the Project with the E&S Reference Framework.

The following has been identified as key issues in this regard:

- Environmental and Social Management System (ESMS): The Empower ESMS should be strengthened to ensure alignment with the Reference Framework, including strengthening of the requirements for asset-level ESMSs. A number of actions in this regard have been identified to mitigate risks in this regard and align the ESMS with the requirements of the Reference Framework.
- HSSE Staffing: Empower’s HSSE capacity must be strengthened to ensure qualified HSSE resources is allocated to ensure HSSE compliance at asset level.
- Auditing, monitoring and record-keeping: Compliance auditing and monitoring by Empower of asset-level HSSE compliance and performance must be strengthened.
- Health and Safety: Several areas for improvement were noted in the Empower and asset-level ESMS arrangements with regard to health and safety. Key issues observed at current assets relate to safe access to rooftops, safe rooftop work environments, permit to work systems and lock-out tag-out procedures.
- Resource efficiency and waste management: Resource efficiency and waste management measures must be improved at asset level, especially regarding hazardous waste disposal for broken and end-of-life solar panels and inverters.
- Stakeholder engagement: The proposed stakeholder engagement approach in the Empower ESMS must be improved in line with the Reference Framework. This should include improved mechanisms to track, document and communicate stakeholder engagement., where such engagement is deemed needed.

Mitigation measures have been proposed to address the key E&S risks and impacts identified in this assessment, and will form the basis of the ESAP to be agreed between Empower and CI1 for implementation.

Annexure: Current Asset Photo Log

All photos courtesy of ESS.



No anchors for safety harnesses on rooftop, Miniplast, Ghana



Unsafe storage of material at a height, Miniplast, Ghana



Fire extinguisher was found placed on the ground, Premium Poultry Farm, Nigeria



Uncontrolled access to electrical panels, Premium Poultry Farm, Nigeria



Uncontrolled access to electrical panels, Miniplast, Ghana



HSE signage, Premium Poultry Farm, Nigeria



Workers wearing PPE, Premium Poultry Farm, Nigeria



Safe roof access, Intercairo, Egypt



Roof with fall protection anchors, Intercairo, Egypt



Roof with delimitation of working zone, Intercairo, Egypt



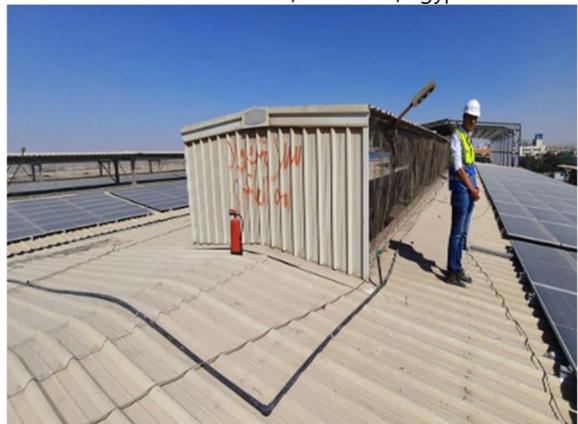
Fire extinguisher on rooftop, Intercairo, Egypt



Safe Roof access, Intercairo, Egypt



Roof with fall protection anchor, Intercairo, Egypt



Fire extinguisher on rooftop, Intercairo, Egypt