

## Monitoring & Evaluation (M&E) Plan and Impact Statement Form

### Objective of the M&E Plan and Impact Statement:

- The M&E Plan and Impact Statement must be designed based on the Technical Assistance Response Plan and must enable the Implementer to complete the Closure Report at the end of the assistance.

### Process for filling in the form:

- The Implementer must identify relevant quantitative and qualitative indicators as specified in the Closure Report. A sub-set of indicators to monitor and assess must be chosen among these.
- The Implementer may also identify other specific, measurable, achievable, relevant, and time-bound indicators suitable to monitor Activities, Outputs and anticipated Outcomes from the technical assistance and add to the M&E Plan and Impact Statement.
- During implementation of the TA or FTA, the Implementer must collect all relevant data as described in the Monitoring & Evaluation Plan. Aggregated data on selected indicators as well as an updated version of the Impact Statement will be presented in the Closure Report at the end of the assistance.

Basic Information	
Title of response plan	National framework for leapfrogging to Energy Efficient Appliances and Equipment in Zambia (Refrigerators and Distribution Transformers) through regulatory and financing mechanism
Technical assistance reference number	2019000005
Country/ countries	Zambia
NDE focal point and organisation	Mr. Ben Makayi Senior Science and Technology Officer Ministry of Higher Education
Sector(s) addressed	Energy Efficiency
Technologies supported	Refrigerators & Distribution Transformers
Implementation period and total duration	January 2021 – June 2022 (18 months)
Total budget for implementation	USD 288,639.70 <sup>1</sup>
Designer of the response plan	UNEP – The Climate Technology Centre and Network

<sup>1</sup> This value is the total budget approved for the implementers, which excludes activity 4.3; the total amount approved for the Readiness proposal is USD 347,838. The remaining value for activity 4.3 is subject to budget allocation from CTCN as the project progresses.

	(CTCN)
Implementer of response plan	BASE / ICA / SACREEE

(A) Outputs and Activities as described in the Response Plan	(B) Indicator	(C) Expected results	(D) Method and frequency for data collection	(F) Comments
Output: Completion of technical assistance	<ul style="list-style-type: none"> <li>Anticipated metric tons of CO2e emissions reduced or avoided as a result of CTCN TA</li> <li>Anticipated number of mitigation beneficiaries as a result of CTCN TA</li> </ul>	<ul style="list-style-type: none"> <li>Estimated metric tons of CO2e emissions reduced or avoided under the project (direct and indirect)</li> <li>Estimated number of mitigation beneficiaries under the project</li> </ul>	<ul style="list-style-type: none"> <li>Market assessment including economic and financial analysis</li> <li>Confirm status of implementation of activities (i.e. MEPS, financing mechanisms, etc.) – interview with NDE, NDA, MOE once a year up to 3 years after the end of the TA</li> </ul>	<ul style="list-style-type: none"> <li>The estimated amounts will be confirmed once the policy recommendations and financing mechanisms to be implemented are identified</li> </ul>
Output 1: Comprehensive market analysis for higher efficiency refrigerators and distribution transformers (DTs) conducted	<ul style="list-style-type: none"> <li>Number of climate technology solutions identified and prioritised in accordance with national strategies and plans</li> </ul>	<ul style="list-style-type: none"> <li>2 most appropriate climate technology solutions have been identified and prioritised in accordance with national strategies and plans, based on a comprehensive analysis of technology options to address specific climate impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Interim and final draft market assessment reports submitted to NDA</li> </ul>	
Activity 1: Conduct detailed market assessment for Refrigerators and Distribution Transformers (DTs)	<ul style="list-style-type: none"> <li>Number of comprehensive market assessment report endorsed by NDE / NDA / MOE</li> <li>Number of household surveys</li> <li>Number of questionnaires</li> <li>Completeness of the</li> </ul>	<ul style="list-style-type: none"> <li>Submission of 1 comprehensive market assessment report endorsed by the NDE / NDA / MOE</li> <li>A minimum of 50-100 household surveys (Feb-Apr)</li> <li>A minimum of 20 questionnaires to stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> <li>Minutes of PWG meetings</li> </ul>	<ul style="list-style-type: none"> <li>It might be challenging to obtain a lot of results from households surveys due to the COVID 19 situation</li> </ul>

	<p>report, including market trends, policy and regulatory framework and status, quantitative savings estimates</p>	<p>of supply chain and additional questionnaires with other stakeholders, such as policy makers, utilities, etc. (Feb-Apr)</p> <ul style="list-style-type: none"> <li>PWG's decision-making process on MEPS levels and supporting policy measures informed by the comprehensive market assessment report</li> </ul>		
<p>Output 2: Policy Working Group assembling key stakeholders for the design and future implementation of the national policy roadmaps for the promotion of higher efficiency refrigerators and DTs formed and effective</p>	<ul style="list-style-type: none"> <li>All strategic stakeholders are assembled in the PWG, as nominated by the NDA</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholders engaged in consultative processes (governments, private sector, associations, civil society, academia and others).</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> <li>Minutes of PWG meetings (quarterly)</li> </ul>	<ul style="list-style-type: none"> <li>Due to the COVID 19 situation, PWG meetings will be held remotely through Internet</li> </ul>
<p>Activity 2.1: Form Policy Working Group (PWG) with strategic stakeholders</p>	<ul style="list-style-type: none"> <li>Establishment of Policy Working Group</li> </ul>	<ul style="list-style-type: none"> <li>1 Policy Working Group established</li> </ul>	<ul style="list-style-type: none"> <li>List of PWG members</li> <li>TOR of PWG members</li> </ul>	
<p>Activity 2.2: Organize quarterly meetings of the PWG</p>	<ul style="list-style-type: none"> <li>Number of quarterly meetings of the PWG</li> <li>Number of national policy roadmaps informed by the PWG</li> </ul>	<ul style="list-style-type: none"> <li>4 quarterly meetings of the PWG</li> <li>2 national policy roadmaps informed by the PWG</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of meetings - quarterly</li> </ul>	
<p>Output 3.1: Technical</p>	<ul style="list-style-type: none"> <li>Establishment and</li> </ul>	<ul style="list-style-type: none"> <li>1 process for periodic</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with stakeholders</li> </ul>	

Committee for refrigerators (TC-Ref) provides forum for effective adoption of the national testing standard and periodic participatory reviews	implementation of a process for periodic participatory review and updating through the TC-Ref	participatory review and updating through the TC-Ref is established and being implemented.	<ul style="list-style-type: none"> <li>• Consultation of beneficiaries</li> <li>• Finalizing materials and producing working documents</li> </ul>	
Activity 3.1.1: Form refrigerators technical committee (TC -Ref) with strategic stakeholders	<ul style="list-style-type: none"> <li>• Establishment of TC-Ref</li> </ul>	<ul style="list-style-type: none"> <li>• 1 TC-Ref established</li> </ul>	<ul style="list-style-type: none"> <li>• List of TC-Ref members</li> <li>• TOR of TC-Ref members</li> <li>• Minutes of meetings</li> </ul>	
Activity 3.1.2: Organize three (3) meetings of the TC-Ref with support from technical expert	<ul style="list-style-type: none"> <li>• Number of meetings of the TC-Ref</li> <li>• Number of selected national testing standard for refrigerators after detailed review process</li> </ul>	<ul style="list-style-type: none"> <li>• 3 meetings of the TC-Ref held</li> <li>• 1 national testing standard for refrigerators selected after detailed review process</li> </ul>	<ul style="list-style-type: none"> <li>• Minutes of meetings (quarterly)</li> </ul>	
Activity 3.1.3: Organize public consultation on the recommended draft national standard for refrigerators.	<ul style="list-style-type: none"> <li>• Organization of public consultation on the recommended draft national standard for refrigerators</li> <li>• Review of recommended draft national standard for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>• 1 public consultation organized</li> <li>• 1 recommended draft national standard for refrigerators revised addressing inputs and comments from the public consultation</li> </ul>	<ul style="list-style-type: none"> <li>• National consultation workshop</li> <li>• Consultation report</li> <li>• Finalizing materials and producing working documents</li> </ul>	<ul style="list-style-type: none"> <li>• COVID 19 restrictions may affect the effective national consultative workshop</li> </ul>
Activity 3.1.4: Organize one (1) meeting of the TC-Ref to adopt the national standard.	<ul style="list-style-type: none"> <li>• Endorsement of the national standard for refrigerators</li> <li>• Official publication of the endorsed national standard for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>• 1 national standard for refrigerators endorsed by the TC and transmitted for approval and official publication</li> <li>• 1 official publication of the</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting of the TC-Ref held to endorse the national standard for refrigerators</li> <li>• Minutes of meeting</li> <li>• Copy of official publication</li> </ul>	

		endorsed national standard for refrigerators		
Output 3.2: Technical Committee for DTs (TC-DTs) provides forum for effective adoption of the national testing standard and periodic participatory reviews	<ul style="list-style-type: none"> <li>Establishment and implementation of a process for periodic participatory review and updating through the TC-DT</li> </ul>	<ul style="list-style-type: none"> <li>1 process for periodic participatory review and updating through the TC-DT is established and being implemented.</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> </ul>	-
Activity 3.2.1: Form distribution transformers Technical Committee (TC-DT) with strategic stakeholders	<ul style="list-style-type: none"> <li>Establishment of TC-DT</li> </ul>	<ul style="list-style-type: none"> <li>1 TC-DT established</li> </ul>	<ul style="list-style-type: none"> <li>List of TC-DT members</li> <li>TOR of TC-DT members</li> <li>Minutes of meetings</li> </ul>	
Activity 3.2.2: Organize three (3) meetings of the TC-DT with support from technical expert.	<ul style="list-style-type: none"> <li>Number of meetings of the TC-DT</li> <li>Number of selected national testing standard for DTs after detailed review process</li> </ul>	<ul style="list-style-type: none"> <li>3 meetings of the TC-DT held</li> <li>1 national testing standard for DTs selected after detailed review process</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of meetings (quarterly)</li> </ul>	
Activity 3.2.3: Organize public consultation on the recommended draft national standard for DTs	<ul style="list-style-type: none"> <li>Organization of public consultation on the recommended draft national standard for DTs</li> <li>Review of recommended draft national standard for DTs</li> </ul>	<ul style="list-style-type: none"> <li>1 public consultation organized</li> <li>1 recommended draft national standard for DTs revised addressing inputs and comments from the public consultation</li> </ul>	<ul style="list-style-type: none"> <li>National consultation workshop</li> <li>Consultation report</li> <li>Finalizing materials and producing working documents</li> </ul>	<ul style="list-style-type: none"> <li>COVID 19 restrictions may affect the effective national consultative workshop</li> </ul>
Activity 3.2.4: Organize one (1) meeting of the TC-DT to adopt the	<ul style="list-style-type: none"> <li>Endorsement of the national standard for DTs</li> <li>Official publication of the</li> </ul>	<ul style="list-style-type: none"> <li>1 national standard for DTs endorsed by the TC-DT and transmitted for approval and</li> </ul>	<ul style="list-style-type: none"> <li>Meeting of the TC-DT held to endorse the national standard for DTs</li> </ul>	

national standard for DTs	endorsed national standard for DTs	official publication	<ul style="list-style-type: none"> <li>Minutes of meeting</li> <li>Copy of official publication</li> </ul>	
Output 4.1: The national policy roadmap for the promotion of higher efficiency refrigerators, including MEPS-HEPS, labelling scheme, consumer awareness, capacity building for custom officials, and MV&E framework) adopted by the government	<ul style="list-style-type: none"> <li>Development and adoption of a comprehensive national policy roadmap for refrigerators by the government</li> </ul>	<ul style="list-style-type: none"> <li>A comprehensive strategy has been developed and adopted by the government to catalyze investment in the deployment and scale-up of prioritized climate technology solution, including market preparation and business planning</li> </ul>	<ul style="list-style-type: none"> <li>Desk study</li> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> <li>Minutes of meeting</li> </ul>	
Activity 4.1.1: Develop minimum energy performance standards (MEPS) and highest energy performance standards (HEPS) for refrigerators	<ul style="list-style-type: none"> <li>Definition of MEPS and HEPS levels, as well as schedule for increase to help determine supporting policy measures</li> </ul>	<ul style="list-style-type: none"> <li>MEPS and HEPS levels, as well as schedule for increase are defined to help determine supporting policy measures</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of PWG meetings</li> <li>Draft MEPS-HEPS for refrigerators ready for public consultation</li> </ul>	
Activity 4.1.2: Review labeling options for refrigerators	<ul style="list-style-type: none"> <li>Number of training on labelling options</li> <li>Definition of labelling scheme and supporting policy measures to promote label</li> </ul>	<ul style="list-style-type: none"> <li>1 training on labelling options</li> <li>Labelling scheme and supporting policy measures to promote label are defined</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of PWG meetings</li> <li>Proceedings of the training workshop</li> </ul>	
Activity 4.1.3: Review	<ul style="list-style-type: none"> <li>Number of training on</li> </ul>	<ul style="list-style-type: none"> <li>1 training on international</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of PWG meetings</li> </ul>	

experience of other countries.	<ul style="list-style-type: none"> <li>international experience in consumer awareness campaigns</li> <li>• Definition of supporting policy measures by PWG</li> </ul>	<ul style="list-style-type: none"> <li>experience in consumer awareness campaigns</li> <li>• Supporting policy measures are defined by PWG</li> </ul>	<ul style="list-style-type: none"> <li>• Proceedings of the training workshop</li> </ul>	
Activity 4.1.4: Design consumer awareness campaign for refrigerators	<ul style="list-style-type: none"> <li>• Design of national consumer awareness campaign</li> <li>• Provision of an action plan for the government to implement national consumer awareness campaign once the MEPS regulation is adopted</li> </ul>	<ul style="list-style-type: none"> <li>• 1 national consumer awareness campaign designed</li> <li>• 1 action plan for the government to implement national consumer awareness campaign once the MEPS regulation is adopted provided</li> </ul>	<ul style="list-style-type: none"> <li>• Minutes of PWG meetings</li> </ul>	
Activity 4.1.5: Organize public consultation on the recommended national policy roadmap (including recommended levels of MEPS and HEPS, labeling scheme, and consumer awareness campaign) for refrigerators.	<ul style="list-style-type: none"> <li>• Organization of public consultation on the recommended draft national policy roadmap for refrigerators</li> <li>• Review of the recommended draft national policy roadmap for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>• 1 public consultation organized</li> <li>• 1 recommended draft national policy roadmap for refrigerators revised addressing inputs and comments from the public consultation</li> </ul>	<ul style="list-style-type: none"> <li>• National consultation workshop</li> <li>• Consultation report</li> <li>• Finalizing materials and producing working documents</li> </ul>	<ul style="list-style-type: none"> <li>• COVID 19 restrictions may affect the effective national consultative workshop</li> </ul>
Activity 4.1.6: Finalization of the national policy roadmap for refrigerators by the PWG.	<ul style="list-style-type: none"> <li>• Finalization of the national policy roadmap for refrigerators</li> <li>• Provision of action plans for the government for the implementation of</li> </ul>	<ul style="list-style-type: none"> <li>• 1 national policy roadmap for refrigerators finalized</li> <li>• Action plans for the government for the implementation of supporting policy measures for the</li> </ul>	<ul style="list-style-type: none"> <li>• Finalizing materials and producing working documents</li> <li>• Minutes of Meetings of PWG</li> <li>• Official announcement by the government</li> </ul>	

	supporting policy measures for the promotion of higher efficiency refrigerators	promotion of higher efficiency refrigerators provided		
Activity 4.1.7: Development of national MV&E plan for refrigerators	<ul style="list-style-type: none"> <li>Development of national MV&amp;E plan for refrigerators</li> <li>Provision of an action plan to establish MV&amp;E framework and processes to the government</li> </ul>	<ul style="list-style-type: none"> <li>1 national MV&amp;E plan for refrigerators developed</li> <li>Action plan to establish MV&amp;E framework and processes provided to the government</li> </ul>	<ul style="list-style-type: none"> <li>National MV&amp;E report</li> </ul>	
Activity 4.1.8: Design training curriculum and materials on MEPS for refrigerators for custom officials.	<ul style="list-style-type: none"> <li>Design of training curriculum and training materials on MEPS for refrigerators for custom officials and retail market inspectors</li> <li>Endorsement of training curriculum by PWG</li> </ul>	<ul style="list-style-type: none"> <li>1 training curriculum and training materials on MEPS for refrigerators for custom officials and retail market inspectors designed to build capacity of custom officials on MV&amp;E process</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of PWG meeting</li> <li>Finalizing materials and producing working documents</li> </ul>	
Activity 4.1.9: Organize training of trainers	<ul style="list-style-type: none"> <li>Number of training of trainers on MEPS for refrigerators to build capacity of local trainers for nationwide training of custom officials</li> <li>Number of local trainers trained on MEPS for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>1 training of trainers on MEPS for refrigerators held</li> <li>15 local trainers trained on MEPS for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>Proceedings of the training workshop</li> <li>Training evaluation report</li> <li>List of participants</li> </ul>	<ul style="list-style-type: none"> <li>COVID 19 restrictions may affect the effective training of trainers</li> </ul>
Output 4.2: The national policy roadmap for the promotion of higher	<ul style="list-style-type: none"> <li>Development and adoption of a comprehensive national policy roadmap for DTs by the government</li> </ul>	<ul style="list-style-type: none"> <li>National policy roadmap for DTs adopted by the government</li> <li>A comprehensive strategy has</li> </ul>	<ul style="list-style-type: none"> <li>Desk study</li> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing</li> </ul>	

efficiency DTs, including MEPS-HEPS, end-users education, capacity building on TCO, and MV&E framework) adopted by the government		been developed and is being implemented to catalyze investment in the deployment and scale-up of prioritized climate technology solution, including market preparation and business planning	working documents <ul style="list-style-type: none"> <li>Minutes of meeting</li> </ul>	
Activity 4.2.1: Develop MEPS and HEPS for DTs.	<ul style="list-style-type: none"> <li>Definition of MEPS and HEPS levels, as well as schedule for increase</li> </ul>	<ul style="list-style-type: none"> <li>1 MEPS and HEPS levels, as well as schedule for increase defined to help determine supporting policy measures</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of PWG meetings</li> </ul>	
Activity 4.2.2: Conduct training workshop for procurement officers on Total Cost of Ownership (TCO)	<ul style="list-style-type: none"> <li>Number of training workshop for procurement officers on TCO</li> <li>Number of participants trained</li> </ul>	<ul style="list-style-type: none"> <li>1 training workshop for procurement officers on TCO held to build capacity of procurement officers on TCO</li> <li>Number of participants trained (to be determined)<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Proceedings of the training workshop</li> <li>Training evaluation report</li> <li>List of participants</li> </ul>	<ul style="list-style-type: none"> <li>COVID 19 restrictions may affect the effective training workshop</li> </ul>
Activity 4.2.3: Organize public consultation on the recommended national policy roadmap (including recommended levels of MEPS and HEPS)	<ul style="list-style-type: none"> <li>Organization of public consultation on the recommended draft national policy roadmap for DTs</li> <li>Review of the recommended draft national policy roadmap for DTs</li> </ul>	<ul style="list-style-type: none"> <li>1 public consultation organized</li> <li>1 recommended draft national policy roadmap for DTs revised addressing inputs and comments from the public consultation</li> </ul>	<ul style="list-style-type: none"> <li>National consultation workshop</li> <li>Consultation report</li> <li>Finalizing materials and producing working documents</li> </ul>	<ul style="list-style-type: none"> <li>COVID 19 restrictions may affect the effective national consultative workshop</li> </ul>
Activity 4.2.4: Finalization of the national policy	<ul style="list-style-type: none"> <li>Finalization of the national policy roadmap for DTs</li> <li>Provision of action plans for</li> </ul>	<ul style="list-style-type: none"> <li>1 national policy roadmap for DTs finalized</li> <li>Action plans for the</li> </ul>	<ul style="list-style-type: none"> <li>Finalizing materials and producing working documents</li> <li>Minutes of Meetings of PWG</li> </ul>	

<sup>2</sup> Number of participants trained will be determined once activity 1 is completed

roadmap by the PWG for DTs	the government for the implementation of supporting policy measures for the promotion of higher efficiency DTs	government for the implementation of supporting policy measures for the promotion of higher efficiency DTs provided	<ul style="list-style-type: none"> <li>Official announcement by the government</li> </ul>	
Activity 4.2.5: Development of national MV&E plan for DTs	<ul style="list-style-type: none"> <li>Development of national MV&amp;E plan for DTs</li> <li>Provision of an action plan to establish MV&amp;E framework and processes for DTs to the government</li> </ul>	<ul style="list-style-type: none"> <li>1 national MV&amp;E plan for DTs developed</li> <li>Action plan to establish MV&amp;E framework and processes provided to the government</li> </ul>	<ul style="list-style-type: none"> <li>National MV&amp;E report</li> </ul>	
Activity 4.3.1: Conduct site visit at DT manufacturers to assess technology improvement needs and capacity building needs <sup>3</sup>	<ul style="list-style-type: none"> <li>Total number of tools, technical reports and information material supported by the assistance (excluding mission, progress and internal reports)</li> </ul>	<ul style="list-style-type: none"> <li>1 Report on technology and capacity building needs analysis for DTs technology upgrade</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> </ul>	<ul style="list-style-type: none"> <li>COVID 19 restrictions may affect the effective site visit at DT manufacturers</li> <li>Budget still not secure to deliver this activity</li> </ul>
Activity 4.3.2: Develop training program and conduct feasibility study for technology improvement <sup>4</sup>	<ul style="list-style-type: none"> <li>Total number of tools, technical reports and information material supported by the assistance (excluding mission, progress and internal reports)</li> </ul>	<ul style="list-style-type: none"> <li>1 Training program, training materials; feasibility study for DT technology upgrade</li> </ul>	<ul style="list-style-type: none"> <li>Desk study</li> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> </ul>	<ul style="list-style-type: none"> <li>Budget still not secure to deliver this activity</li> </ul>
Activity 4.3.3: Conduct capacity building training workshop for local DT manufacturers <sup>5</sup>	<ul style="list-style-type: none"> <li>Number of training sessions and capacity strengthening activities</li> </ul>	<ul style="list-style-type: none"> <li>1 Training (on-site) for engineers and designers of DT manufacturers held</li> </ul>	<ul style="list-style-type: none"> <li>Training evaluation report</li> <li>List of participants</li> </ul>	<ul style="list-style-type: none"> <li>Budget still not secure to deliver this activity</li> </ul>

<sup>3</sup> To be confirmed after the conduct of Market assessment.

<sup>4</sup> To be confirmed after the conduct of Market assessment.

<sup>5</sup> To be confirmed after the conduct of Market assessment.

	<ul style="list-style-type: none"> <li>Number of DT manufacturers trained</li> </ul>	<ul style="list-style-type: none"> <li>Number of DT manufacturers trained (to be determined)<sup>6</sup></li> </ul>		
Output 5.1: Financing mechanisms and options identified and developed for the promotion of higher efficiency refrigerators	<ul style="list-style-type: none"> <li>Identification of policy recommendations on financing mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>1 climate finance strategy identified to define efforts to access a range of financing instruments for prioritized climate action.</li> </ul>	<ul style="list-style-type: none"> <li>Desk study</li> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> </ul>	
Activity 5.1.1: Review international experience, analyze national conditions and prepare recommendations in terms of finance mechanisms for refrigerators.	<ul style="list-style-type: none"> <li>Total number of tools, technical reports and information material supported by the assistance (excluding mission, progress and internal reports)</li> </ul>	<ul style="list-style-type: none"> <li>1 Report on financial mechanisms and strategies for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>Desk study</li> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> </ul>	
Activity 5.1.2: Organize capacity building workshop on finance mechanisms and options for refrigerators	<ul style="list-style-type: none"> <li>Number of training sessions and capacity strengthening activities</li> <li>Number of participants trained</li> </ul>	<ul style="list-style-type: none"> <li>1 training workshop on financial mechanisms and strategies for refrigerators held</li> <li>Number of participants trained (to be determined)</li> </ul>	<ul style="list-style-type: none"> <li>Training report</li> <li>List of participants</li> </ul>	<ul style="list-style-type: none"> <li>COVID 19 restrictions may affect the effective workshop</li> </ul>
Activity 5.1.3: Preparation of recommendations for finance mechanisms and options for refrigerators.	<ul style="list-style-type: none"> <li>Total number of tools, technical reports and information material supported by the assistance (excluding mission, progress and internal reports)</li> </ul>	<ul style="list-style-type: none"> <li>1 Detailed implementation plan for selected financial mechanisms and strategies for refrigerators</li> </ul>	<ul style="list-style-type: none"> <li>Desk study</li> <li>Discussions with stakeholders</li> <li>Consultation of beneficiaries</li> <li>Finalizing materials and producing working documents</li> </ul>	

<sup>6</sup> Number of participants trained will be determined once activity 1 is completed

Output 5.2: Financing mechanisms and options identified and developed for the promotion of higher efficiency DTs	<ul style="list-style-type: none"> <li>• Identification of financing mechanisms and options for the promotion of higher efficiency DTs</li> </ul>	<ul style="list-style-type: none"> <li>• 1 climate finance strategy identified to define efforts to access a range of financing instruments for prioritized climate action.</li> </ul>	<ul style="list-style-type: none"> <li>• Desk study</li> <li>• Discussions with stakeholders</li> <li>• Consultation of beneficiaries</li> <li>• Finalizing materials and producing working documents</li> </ul>	
Activity 5.2.1: Review international experience, analyze national conditions and prepare recommendations in terms of finance mechanisms for DTs	<ul style="list-style-type: none"> <li>• Total number of tools, technical reports and information material supported by the assistance (excluding mission, progress and internal reports)</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Report on financial mechanisms and strategies for DTs</li> </ul>	<ul style="list-style-type: none"> <li>• Desk study</li> <li>• Discussions with stakeholders</li> <li>• Consultation of beneficiaries</li> <li>• Finalizing materials and producing working documents</li> </ul>	
Activity 5.2.2: Organize capacity building workshop on finance mechanisms and options for DTs	<ul style="list-style-type: none"> <li>• Number of training sessions and capacity strengthening activities</li> <li>• Number of participants trained</li> </ul>	<ul style="list-style-type: none"> <li>• 1 training workshop on financial mechanisms and strategies for DTs held</li> <li>• Number of participants trained (to be determined)<sup>7</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Training report</li> <li>• List of participants</li> </ul>	<ul style="list-style-type: none"> <li>• COVID 19 restrictions may affect the effective workshop</li> </ul>
Activity 5.2.3: preparation of recommendations for finance mechanisms and options for DTs	<ul style="list-style-type: none"> <li>• Total number of tools, technical reports and information material supported by the assistance (excluding mission, progress and internal reports)</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Detailed implementation plan for selected financial mechanisms and strategies for DTs</li> </ul>	<ul style="list-style-type: none"> <li>• Desk study</li> <li>• Discussions with stakeholders</li> <li>• Consultation of beneficiaries</li> <li>• Finalizing materials and producing working documents</li> </ul>	
Output 6: Effective coordination between NDE and NDA for the implementation of the	<ul style="list-style-type: none"> <li>• Establishment of effective coordination between NDE, NDA, MOE, and other climate finance focal points</li> </ul>	<ul style="list-style-type: none"> <li>• 1 effective coordination between NDA, NDE, MOE, and other climate finance focal points established</li> </ul>	<ul style="list-style-type: none"> <li>• Discussions with stakeholders</li> <li>• Consultation of beneficiaries;</li> <li>• List of focal points from NDE, NDA, MOE, and other key</li> </ul>	

<sup>7</sup> Number of participants trained will be determined once activity 1 is completed

project and for future GCF projects			institutions	
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*Note: The Response Plan may contain information useful for the section below. The information in the table below will be used by the CTCN for public communication of the achieved and expected results of the Technical Assistance through the CTCN website [www.ctc-n.org](http://www.ctc-n.org) and other communication channels. See for example: [https://www.ctc-n.org/sites/www.ctc-n.org/files/benin\\_a\\_ag\\_forestry.final\\_.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/benin_a_ag_forestry.final_.pdf)*



<b>Impact Statement</b>	
Challenge	<p>Low efficient appliances and electricity-using equipment result in huge losses, which bring a heavy burden on the government's budget (electricity is subsidized) and hampers the country's electrification potential. The lack of information and awareness, lack of dedicated policies for energy efficient products and appliances including absence of minimum energy performance standards prevents Zambia from inducing a sustainable market transformation in favor of higher efficiency products. With improvement of the economic situation, demand for domestic refrigerators is increasing rapidly, and may already account for over 25% of domestic electricity consumption. Without the development of energy-efficient policies, inefficient products will continue to enter the market and remain strained on the grid for their useful life.</p>
CTCN assistance	<p>In coordination and harmonization with similar CTCN projects in neighboring countries, CTCN will:</p> <ul style="list-style-type: none"> <li>• Validate the data collected by the CTCN from stakeholders on the existing initiatives and use of refrigerators and DTs</li> <li>• Undertake detailed market assessments and feasibility of implementation of technologies with highest efficiency</li> <li>• Develop a technology roadmap and action plan for promoting and adoption of efficient appliance in the country.</li> <li>• Propose draft MEPS-HEPS, and labeling for refrigerators and procurement specifications for DTs.</li> <li>• Assist decision makers and stakeholders to put the draft MEPS-HE for refrigerators and procurement specification for DTs into practice.</li> <li>• Gather information on financing lines and business models for financing energy-efficient refrigerators and/or DTs.</li> <li>• Develop proposal for financial/market-based mechanism on energy-efficient refrigerators and/or DTs.</li> </ul>
Anticipated impact	<p>Strengthen the existing policies and regulatory frameworks through (i) the adoption of national testing standards for refrigerators and DTs, (ii) the adoption of mandatory Minimum Energy Performance Standards (MEPS), as well as adoption of High Energy Performance Standards (HEPS) and (iii) labelling scheme, (iv) the design of consumer awareness campaigns, and (v) capacity building on finance mechanisms.</p>
Anticipated co-benefits from the TA	<p>This readiness proposal through notification of MEPS and labelling scheme will create an enabling policy and regulatory environment for refrigerators and distribution transformers to support market transformation. The project will reduce strain on the electricity grid and ability to extend the electricity grid, increase disposable income for households (reduced electricity bill), and potentially reduce GHG emissions, since it is anticipated that the planned increase in grid connections and electrification would move Zambia towards the use of fossil fuels for electricity generation.</p>
Gender aspects of the TA	<p>The TA will pursue thorough and gender responsive integration and ensure stakeholder involvement at all levels. Energy efficiency policies and financing mechanisms will be designed based on a gender-differentiated understanding of opportunities and constraints to optimize their social and climate impact. The market assessment will include an assessment of the gender considerations related to refrigerators and distribution transformers and gender considerations will be considered in the analysis of and choice of</p>

	financing mechanisms selected.
Anticipated contribution to NDC	Contribute to Zambia's INDC submitted in 2015 which aims to promote the switching from conventional and traditional energy sources to energy efficiency and renewable sources and practices including energy-efficient grid extension to non-electrified rural areas.
The narrative story	<p>With only 31.4% of the Zambian population that has access to electricity (2015), electrification is a priority for the Government. With financial constraints and subsidized electricity, reducing electricity losses is the first and most economical measure to be adopted. Low efficient appliances and electricity-using equipment result in huge losses, which bring a heavy burden on the government's budget and hampers the country's electrification potential. The lack of information and awareness, lack of dedicated policies for energy efficient products and appliances including absence of minimum energy performance standards prevents Zambia from inducing a sustainable market transformation in favor of higher efficiency products. With improvement of the economic situation, demand for domestic refrigerators is increasing rapidly, and may already account for over 25% of domestic electricity consumption. Without the development of energy-efficient policies, inefficient products will continue to enter the market and remain strained on the grid for their useful life.</p> <p>In this context, Zambia has requested the support of CTCN through UNEP to implement a GCF Readiness proposal that aims to develop a national framework for leapfrogging to energy-efficient refrigerators and distribution transformers through regulatory and financing mechanism. CTCN assistance will result in Zambia having:</p> <ul style="list-style-type: none"> <li>• Mandatory Minimum Energy Performance Standards (MEPS), High Energy Performance Standards (HEPS), and labeling schemes for refrigerators and distribution transformers</li> <li>• National policy roadmap and enabling environment for implementation of standards and label for refrigerators and distribution transformers</li> <li>• Appropriate financing mechanisms to accelerate deployment of energy efficient refrigerators and distribution transformers.</li> <li>• Strengthened national capacity to develop standards and labels for other appliances in future.</li> </ul> <p>The CTCN assistance will contribute to improve the country programming process through the identification and prioritization of appropriate climate technology solutions in accordance with national strategies and plans for climate adaptation and mitigation, periodic participatory review and updating of the climate finance country programme, while strengthening the stakeholder engagement consultative processes. Finally, CTCN assistance will strengthen climate finance strategies and project pipeline through market preparation and business planning for deployment and scale-up of prioritized climate technology solutions Climate finance strategy defines</p>
Contribution to SDGs	<ul style="list-style-type: none"> <li>• SDG 1: End poverty in all its forms everywhere: Energy efficiency is a major contributor in the reduction of fuel poverty.</li> <li>• SDG 7: Ensure access to affordable reliable, sustainable and modern energy for all: By 2030, double the global rate of improvement in energy efficiency: Energy efficiency will be improved in the buildings sector through energy efficient appliances.</li> <li>• SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation: The standard and labelling programmes will promote product innovation among local</li> </ul>

	<p>manufacturers to improve the performance and sustainability of refrigerators and DTs.</p> <ul style="list-style-type: none"> <li>• SDG 13: Take urgent action to combat climate change and its impacts: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries: The long-term impact of reduced electricity consumption mitigates dependency on climate sensitive electricity. Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning: Future awareness raising, in accordance with the strategy developed in this TA, informs consumers and manufacturers about the benefits of energy efficient appliances.</li> </ul>
Reference to knowledge products	<p>Tools and resources from other initiatives such as United for Efficiency (U4E) initiative, Montreal protocol, Kigali Cooling Efficiency programme and Stockholm convention (for PCBs in transformers), will be used as a starting point for development of the policy framework at the national level. This includes: adapting the U4E Model Regulations for refrigerators and for distribution transformers to national specificities, and using the U4E policy guides and other tools for capacity building and guidance to develop amongst others the national policy roadmap.</p>