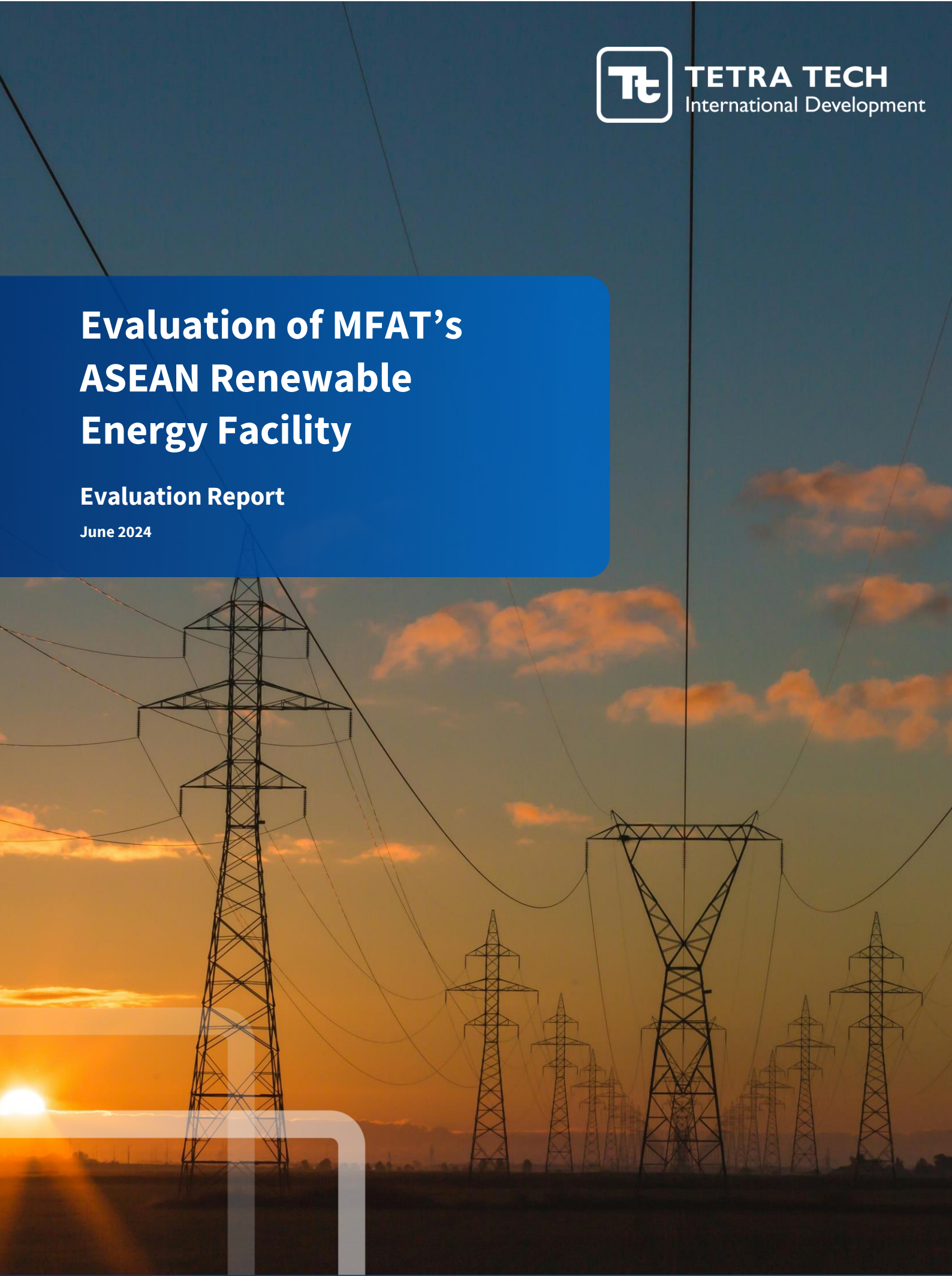
TETRA TECH
International Development

Evaluation of MFAT's ASEAN Renewable Energy Facility

Evaluation Report

June 2024



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Acknowledgements

Commissioned by New Zealand's Ministry of Foreign Affairs and Trade, this evaluation of the ASEAN Renewable Energy Facility was undertaken by Tetra Tech International Development (Tetra Tech). This evaluation is part of a broader Multi-activity Renewable Energy Evaluation, which includes four activity evaluations that provide MFAT with individual activity and cross-activity findings on the relevance, effectiveness, impact and future directions of its RE activities.

The evaluation team for this activity evaluation consisted of Rachel George as Evaluation Director, Johan Haris as Evaluation Team Leader, Ngovveng Chheng as Cambodian and Sector Specialist, Seryang Yengchongva from SNV Laos as Laos Coordinator, and Amanda Mottershead as Evaluation Analyst. The Evaluation was undertaken from December 2023 to June 2024.

The evaluation team would like to thank MFAT's Activity Management Team which oversees the ASEAN Renewable Energy Facility for their collaboration and input, particularly during the inception and sensemaking phases of this evaluation. The Activity Management Team consists of staff from the Infrastructure, Energy and Transport team (within the Development Economy and Prosperity Division); the ASEAN Regional Programme team (within the Global Development and Scholarships Division) in Wellington; and the New Zealand Embassy in Bangkok, Thailand.

We would also like to thank the Facility Management Team, consisting of staff engaged by Pattle Delamore Partners Limited and based in Lao PDR, who supported the coordination of stakeholder consultations, provided key Facility documentation for review and photos for this Report, and participated in sensemaking processes. We would also like to acknowledge the staff of the Government of Lao PDR's Ministry of Energy and Mines, implementing partners in-country and in New Zealand, and other development partners who willingly provided their valuable time and insights for this evaluation through key informant interviews.

Overall, the evaluation team appreciated the high level of engagement of all stakeholders who contributed to this evaluation. Their contributions enabled the evaluation team to verify and triangulate the evaluation findings about MFAT's ASEAN RE Facility and provide MFAT with considerations for future RE programming.

Abbreviations

Association of Southeast Asian Nations	ASEAN
Department of Planning and Cooperation (GoL)	DPC
Department of Energy Business (GoL)	DEB
Department of Energy Management (GoL)	DEM
Department of Energy Efficiency and Promotion (GoL)	DEEP
Department of Energy Policy and Planning (GoL)	DEPP
Department of Energy Industry Safety Management (GoL)	DESM
Development Economy and Prosperity Division (MFAT)	DEVECO
Dam Safety Guidelines	DSG
Electricity Authority of Cambodia	EAC
Emergency Action Plan	EAP
Electricité Du Camboge	EDC
Électricité Du Laos	EDL
Energy Data Management System	EDMS
Energy Efficiency and Conservation	EE&C
Electric vehicle	EV
Global Development and Scholarships Division (MFAT)	GDS
Government of Lao PDR	GoL
Independent Power Producer	IPP
International Commission on Large Dams	ICOLD
International Cooperation for Effective Sustainable Development	ICESD
Key Evaluation Question	KEQ
Lao Association of Dams	LAD
Lao People's Democratic Republic	Lao PDR
Least Developed Country	LDC
Lao Electric Power Technical Standards	LEPTS
Ministry of Energy and Mines (GoL)	MEM
Monitoring, Evaluation, Research and Learning	MERL
Ministry of Foreign Affairs and Trade (New Zealand)	MFAT
Ministry of Mines and Energy (RGC)	MME
Nationally Determined Contributions	NDC
Project Concept Note	PCN
Pattle Delamore Partners Limited	PDP Ltd
Renewable Energy	RE
Royal Government of Cambodia	RGC
State-owned Enterprise	SOE
Short-term Advisory	STA
Technical Assistance	TA

Executive summary

The New Zealand Ministry of Foreign Affairs and Trade (MFAT) engaged Tetra Tech International Development to undertake an evaluation of its ASEAN Renewable Energy Facility (the Facility). This Report sets out the evaluation's findings and future considerations identified.

Background to the Facility

Over its first two phases from 2018 to 2024, the NZD11.85 million Facility has coordinated the design and implementation of 11 technical assistance (TA) and capacity building projects to the Renewable Energy (RE) Sector in Lao People's Democratic Republic (Lao PDR) and Cambodia. Led by a Facility Manager, a team of three Facility staff based within the Government of Lao PDR's (GoL) Ministry of Energy and Mines (MEM) work with a range of implementing suppliers to deliver RE assistance to the MEM and Cambodian organisations, with the majority of projects occurring in Lao PDR to date.

The overall Facility goal and intended outcomes are illustrated in the Facility's Programme Logic (see Figure 1). In broad terms, the Facility aims to:

- Strengthen the enabling policy, regulatory and legal environment for RE development
- Enhance the benefits for Lao PDR from agreements with independent power producers (IPPs) who operate a large proportion of hydropower plants in Lao PDR for energy exports
- Increase the portfolio of distributed RE projects, including diversifying RE sources.

Evaluation purpose and scope

The objectives of this evaluation were to:

- Assess the **relevance** of the Facility to the priorities of Lao PDR, Cambodia and New Zealand and the **coherence** of the Facility to its own activities and other donor activities
- Examine the **effectiveness** and **impact** of the Facility against its intended goal and outcomes
- Consider whether the Facility modality is **fit for purpose** for achieving intended outcomes and for supporting the overall Activity's **efficiency**
- Identify **future** areas of support for RE to South East Asian countries (particularly Cambodia) and provide preliminary design recommendations for MFAT for a potential future phase.

The evaluation covered both phases of the Facility, encompassing the period from 2018 to 2024 and made assessments at the Facility-level. It did not undertake a detailed review of the individual projects. The evaluation primarily involved a summative assessment of activities in Lao PDR and a formative approach for Cambodia and the ASEAN region. The evaluation utilised a mixed methods approach, involving key informant interviews, a desktop review, literature scan and sensemaking workshops to triangulate and validate the evaluation's findings. In total, the evaluation team conducted 32 interviews with 59 individuals across Lao PDR, Cambodia and remotely.

Summary of key findings

Facility's Relevance

Driven by responsive, flexible and collaborative ways of working, the Facility is highly relevant to GoL's national priorities. The evolution of the Facility's portfolio is reflective of a similar evolution in GoL's priorities. In line with priorities identified in 2020, the Facility's recent projects have focused on energy efficiency and diversifying variable RE sources. The Facility's earlier projects on dam safety and English language training remain relevant and important to MEM for strengthening IPP management and the broader enabling environment for the RE sector.

The Facility's activities in Lao PDR are aligned with priorities identified in MFAT's ASEAN Four Year Plan, the Aid Partnership with Lao PDR, and the Plan of Action to Implement the ASEAN-New Zealand Strategic Partnership (2021-2025). The Facility is strongly aligned with a focus on energy efficiency, increasing RE use, energy reliability and sustainability. The Facility is less aligned to priorities of energy access and affordability, noting that TA for electrification (which support these priorities) was not requested by the GoL from the Facility.

While activities in Cambodia are relatively new, the early indication is that activities are strongly aligned with the energy efficiency and clean energy priorities of the Royal Government of Cambodia (RGC) and with the Plan of Action to Implement the ASEAN-New Zealand Strategic Partnership (2021-2025).

Facility's Coherence

The Facility's projects are diverse, responding to specific requests and filling niche gaps in overall RE support in Lao PDR. While the Facility's broad Programme Logic enables a provision of diverse projects, the resulting breadth of the Facility's projects diluted efforts towards achieving expected medium-term outcomes (MTOs).

The Facility has made a significant contribution to the overall coherence of development partner assistance to the RE sector in Lao PDR. In taking on a lead donor coordination role at various times, the Facility has convened donor coordination meetings, facilitated information sharing, and introduced development partners to government counterparts.

Facility's Modality and Efficiency

The current management arrangements have enabled a demand-driven, flexible and responsive modality which is suitable for delivering TA and capacity building projects in Lao PDR. The Facility's responsiveness and flexibility directly contributed to building trusted relationships with MEM departments, particularly through collaborative approaches to identifying and designing projects that are context-specific. Of note, the Facility's co-location with the MEM, access to suitably skilled implementing suppliers, and partnership-brokering and coordination

skills of the Facility Management Team are key factors that have led the Facility being a flexible and responsive modality that is appreciated by the GoL. While the lean Facility Management Team and resourcing allocated within MFAT have contributed to efficient use of time and resources, efficiency and effectiveness can be improved by having a future Facility Manager (or a Managing Contractor) undertake all management functions and by addressing gaps in Monitoring, Evaluation, Research and Learning (MERL) and inclusion expertise.

Governance mechanisms, involving two Steering Committees for Lao PDR and Cambodia, have been appropriate in terms of its membership. However, the Steering Committee for Lao PDR did not always meet in-person every six months as intended nor did it provide consistent, strategic guidance for project prioritisation. Steering Committee meetings could be better utilised to address more strategic matters, including discussions on GoL responses / actions to the Facility-produced recommendations and options for overcoming implementation barriers, to maximise the Facility's effectiveness, impact and sustainability.

Facility's Effectiveness and Impact

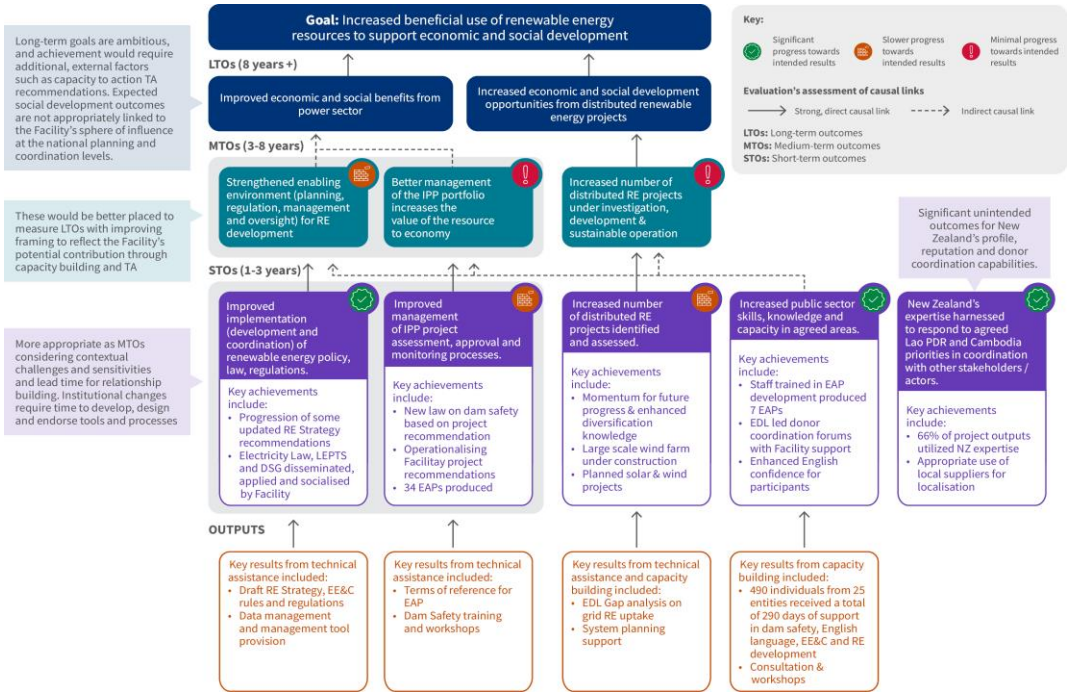
The Facility's responsive and demand-driven model has supported building of a positive bilateral relationship with Lao PDR, and also resulted in a dispersed portfolio of Facility projects. While the projects are relevant to the GoL and have broad alignment to the Facility's intended outcomes, the high number and shorter-term nature of the Facility's projects came at the expense of adequate project length and adequate implementation support.

Overall, the Facility's progress against its MTOs (see Figure 1 which shows the Facility's key results) are minimal due to the broad and ambitious nature of the MTOs and breadth of the Facility's portfolio. While the Facility's broad and ambitious Programme Logic was beneficial for enabling flexibility and responsiveness, it offered limited strategic guidance for the Facility and its governance mechanisms to make decisions about project prioritisation. This contributed to a diverse portfolio of shorter-term TA and capacity building projects that offered limited implementation support to the GoL to implement Facility-produced recommendations. Coupled together with the inappropriate selection of indicators within the Facility's results framework, there were clear challenges with assessing the Facility's effectiveness and impact.

The Facility has, however, made good progress against its short-term outcomes (STOs) by delivering high-quality, context-specific outputs and leveraging New Zealand's niche technical expertise across a range of RE-related areas. The evaluation found that the Facility's outputs / reports produced were unanimously seen to be of a high-quality by the GoL. Despite external barriers (including remote working challenges during COVID-19 and contextual shifts in the RE sector), there is evidence of good progress in responding to public sector capacity needs within MEM, harnessing New Zealand's niche and technical RE expertise, and progressing the update and implementation of Lao PDR's guiding RE Strategy. The GoL and key development partners verified the value of English language training and dam safety projects for building public sector capacity and for building trusted relationships with MEM. However, it is less clear how progress against the STOs have contributed to achieving the Facility's MTOs.

Progress to date has positioned a potential future Facility to achieve its overall longer-term outcomes, but adaptations are necessary to narrow the Facility's intended outcomes and to deliver fewer and longer-term projects with strong implementation support.

Figure 1. Facility Programme Logic and Key Results



Future considerations and priorities

Key considerations for relevance and coherence

The Facility's relevance and coherence could be maintained and/or enhanced by:

- Maintaining a flexible and responsive modality with collaborative and localised approaches, that continues with co-location with the MEM and collaboratively identifying and designing projects with the GoL.
- Continuing to lead or co-lead donor coordination in Lao PDR and maintaining close engagement with development partners in both Lao PDR and Cambodia to ensure external coherence and donor coordination.
- Subject to MFAT's decision on expanding support for Cambodia, deepening the relationship with the RGC to further understand gaps in development partner assistance and whether there is a need for direct TA projects from the Facility.

Key considerations for effectiveness and impact

The Facility could improve effectiveness and position itself to demonstrate sustainable results by:

- Delivering fewer, higher-value and longer-term projects with adequate implementation support that are aligned to a narrower Programme Logic.
- Regularly reviewing and updating a Menu of Services (in consultation with the GoL through the existing governance mechanisms) to operationalise a narrower Programme Logic and support project prioritisation.
- Incorporating face-to-face implementation support to overcome barriers to implementing project recommendations. This could include working with the MEM departments to develop action plans to progress recommendations. This should happen in parallel with Steering Committee meetings discussing the progress of agreed actions and options for overcoming systemic barriers.
- Revising the Facility's Programme Logic and results framework to ensure outcomes and indicators are realistic and reflect anticipated key priorities in Lao PDR, Cambodia and ASEAN. An additional outcome could be included to measure the partnership outcomes achieved.
- Through ongoing MERL expertise, improving project-specific progress and completion reporting to better capture and communicate the Facility's contributions to intended outcomes.
- Advancing inclusion through mainstreaming and identifying specific opportunities (i.e. for any projects relating to IPP management, concession agreements and local government capacity building).

Key considerations for modality and efficiency

The Facility's efficiency and governance could be maintained and/or enhanced by:

- Through a potential redesign process, considering possible management arrangements for continuing a flexible and responsive modality in Lao PDR that maximises efficiency.
- Ensuring future management arrangements are resourced to undertake all management functions (including those currently undertaken by MFAT).
- Embedding access to and budget for regular MERL and inclusion expertise as part of future management arrangements to support outcomes reporting and achievement of New Zealand's International Development Principles.
- Continuing to ensure a localised approach by engaging locally staff and external consultants for coordination and greater implementation support.
- Maintaining existing governance arrangements for Lao PDR, but ensuring Steering Committee meetings occur regularly, in-person and are focused on strategic matters (i.e., working with GoL to progress action plans and options for overcoming barriers to implementation).
- Subject to MFAT and RGC priorities, scaling up in Cambodia with existing resources and inviting RGC to the Cambodia Steering Committee. Consider an in-country representative if several, high-value projects that involve direct TA.
- Subject to MFAT's priorities and resources, scaling up work at the ASEAN level and engaging with regional bodies to enhance impact.

Future technical priorities for RE Support in Lao PDR, Cambodia and the ASEAN Region

The need for support to advance RE in Lao PDR, Cambodia and the broader ASEAN region remains diverse and significant. Resource permitting, the Facility could assist with:

Lao PDR

- Developing national laws, regulations, policies and guidelines for diversifying RE sources.
- Negotiating good outcomes from concession agreements, including advice for dam safety and options for assets to be returned by IPPs to GoL.
- Energy efficiency, power sector operation and management, and integrated resource planning.

Cambodia

- De-risking innovative energy investments and business models.
- Energy demand and peak management.

ASEAN Regional

- Regional energy integration and RE transition
- Research, handbooks, dialogues and other support to enable equal access to technical knowledge and know-hows for LDCs.

1 Introduction

The New Zealand Ministry of Foreign Affairs and Trade (MFAT) engaged Tetra Tech International Development to undertake an independent evaluation of its ASEAN Renewable Energy Facility (the Facility). This Evaluation Report sets out the evaluation findings and future considerations in accordance with the Evaluation Plan developed collaboratively with MFAT.

1.1 Background and context

The Facility represents MFAT's first renewable energy (RE) assistance to South East Asia, with a focus on Lao People's Democratic Republic (Lao PDR) and Cambodia. The intent of the first phase of the Facility was to understand the nature of RE assistance required by Lao PDR and Cambodia and determine how New Zealand can provide support to advance the countries' RE sector to support broader social and economic development.

New Zealand's Four Year Plan (4YP)[1] for South East Asia clearly communicates its focus on supporting the Least Developed Countries (LDCs) of the Association of South East Asian Nations (ASEAN) region. Lao PDR was prioritised for RE assistance given a greater need identified during the design of the Facility, while Cambodia was earmarked for greater focus in a second phase.

In Lao PDR and Cambodia, limited human resource capacity and a lack of regulatory and planning frameworks have limited RE development potential. Further, in Lao PDR in particular, the distributed RE generation potential for domestic supply is not being realised and the outcomes from the concession agreements with hydropower independent power producers (IPP) are delivering sub-optimal environmental, economic and social outcomes.

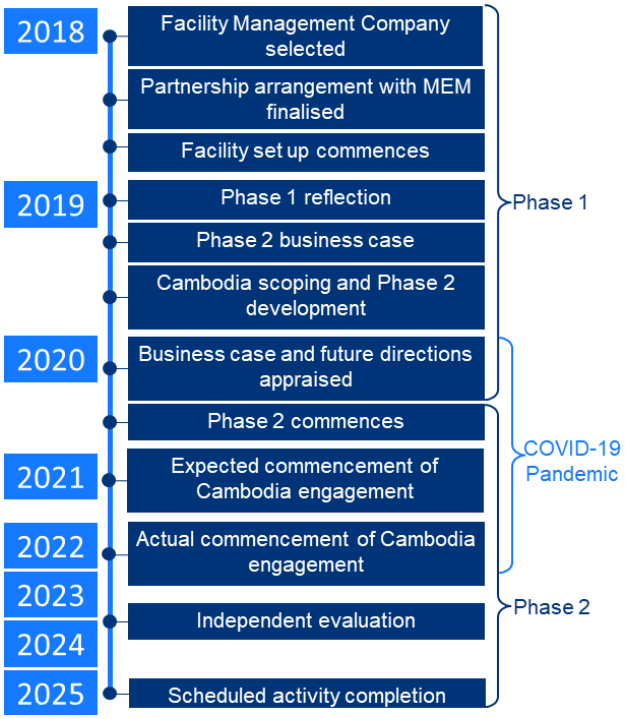
1.2 Focus of the ASEAN RE Facility

With initial funding of NZD4.95 million, the Facility commenced its first phase in Lao PDR from 2018 to 2020. This first phase saw technical assistance (TA) and capacity building projects delivered and the Facility embedded in the Government of Lao PDR (GoL) Ministry of Energy and Mines (MEM). During the commencement of this phase, it became clear that electrification rates in Lao PDR were higher than expected and that the GoL required capital investments to reach its electrification goal of 98 per cent. As TA for electrification was not requested by the GoL, Phase 1 focussed elsewhere and on delivering four TA and capacity building projects relating to: large and small dam safety; English language training to maximise the absorption capacity of TA; and support to refresh of Lao PDR's RE Strategy. Phase 1 also focused on establishing the Facility and building key relationships with the GoL (specifically MEM) to understand the priorities and opportunities, as well as with other development partners working in the RE sector in Lao PDR.

Following MFAT's approval of the business case for a second phase and additional funding of NZD6.9 million, the Facility's second phase commenced in 2020 and is due for completion in 2025. This phase has seen continued engagement with MEM and other key stakeholders as well as three new projects implemented in Lao PDR and a further two approved for implementation in 2023/24.

In Phase 2, the Facility more formally commenced engagement with the Royal Government of Cambodia (RGC) and key development partners in Cambodia. Since 2022, two projects commenced in Cambodia, with one now completed. Figure 2 is a visual overview of the Facility's history.

Figure 2. Timeline of Facility Milestones



Across both phases, the Facility's goal is to increase the beneficial use of RE resources that support economic and social development in Lao PDR and Cambodia. To achieve this and as illustrated in the Facility's Programme Logic (see Figure 1), the Facility intended to strengthen the RE enabling environment, the value of the IPP portfolio to the national economy, and the portfolio of distributed RE projects in the medium-term. In the shorter-term the Facility also aimed to build public sector capacity building and harness the use of New Zealand expertise. The Facility's Programme Logic and results framework remained the same throughout both phases and were not updated, despite contextual shifts and the adaptations that occurred due to the Facility's demand-driven model.

1.3 Modality, management and governance

The Facility modality implemented is characterised by demand-driven, flexible and responsive programming which has been suitable to date for providing TA and capacity building to Lao PDR's RE sector which has undergone notable contextual shifts in recent years.

The management arrangements of the Facility are primarily undertaken by a Facility Manager, Pattle Delamore Partners Ltd (PDP Ltd), who was appointed in 2018 to manage the Facility on behalf of MFAT. The in-country Facility Management Team consists of one international Facility Manager and two local Project Coordinators, with corporate support from PDP Ltd. The Facility Management Team:

- Produces Project Concept Notes (PCNs) in collaboration with GoL, and with support from the Facility's Technical Advisers
- Coordinates and supports implementing suppliers delivering Facility projects
- Provides ad hoc support directly to GoL MEM.

During the Facility's design, it was intended that some management functions including procurement, contracting, contract management and supplier performance monitoring functions would be undertaken by MFAT. As the Facility has matured, the Facility Manager has taken on supplier performance monitoring functions while MFAT have continued to undertake procurement and contracting (noting this shift is not formally documented).

MFAT is responsible for the governance and strategic oversight of the Facility through a multi-disciplinary Activity Management Team and one dedicated Activity Manager. The MFAT Activity Management Team maintain close engagement with the Facility Manager to provide feedback on PCNs (with support from the Facility's Technical Advisers) and make informed decisions about approving projects. In addition to this, MFAT also has overall responsibility for financial / results management of the Facility.

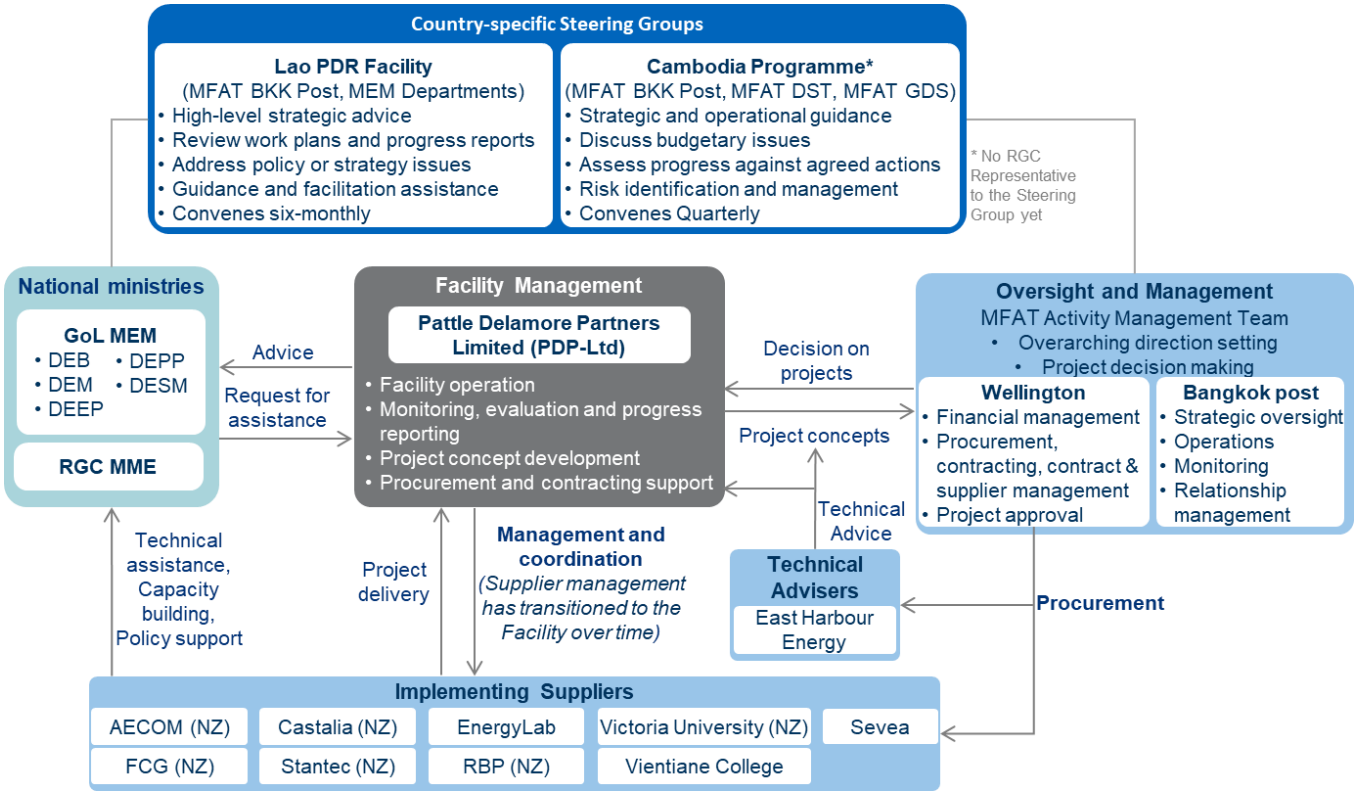
The Facility Manager and MFAT both engage with:

- the Ministries responsible for the energy portfolio in Lao PDR and Cambodia through day-to-day operations (Facility Manager) and/or Steering Groups (MFAT)
- Implementing suppliers through facilitating and coordinating the provision of TA in-country (Facility Manager) and executing and managing contracts (MFAT)
- Other development partners through various informal and formal mechanisms.

The Facility's projects are delivered by implementing suppliers through individual procurement processes and contracts managed by MFAT, with the majority of suppliers being New Zealand-based suppliers. In recent years, Lao-based suppliers have also been engaged to deliver projects.

Figure 3 illustrates the governance, management and implementation arrangements of the Facility, including the key responsibilities of the various parties. The governance and management arrangements are described further in Chapter 6 Modality and efficiency.

Figure 3. Facility Governance and Management Arrangements



1.4 The Facility's projects

Project development, in response to requests for TA, is the responsibility of the Facility Manager with input from the GoL and with engagement and approval of MFAT's Activity Management Team. Mechanisms to guide the development of projects have adjusted over the Facility period. Initially, project concept approval criteria were developed, which set out the criteria to appraise and guide the development of PCNs. However, this was not actively used or updated. Subsequently, a Menu of Services was developed to provide guidance on the prioritisation of potential projects with the intention to narrow the Facility's focus, but this was also utilised infrequently.

The following outputs / activities were deemed to be out of scope for the Facility:

- Undertaking power generation projects
- Direct investment to hydropower infrastructure
- Engaging in activities not directly related to RE or energy efficiency.

The Facility has coordinated the design and implementation of 11 discrete TA projects, each of which are at various stages of delivery, with five projects completed (see Table 1). Five other projects were considered and underwent significant project development but were ultimately cancelled for a range of reasons including the identification of duplicative activities by other development partners and shifts in MFAT's strategic focus. Additional details for each project are available in Annex A.

Table 1. ASEAN Facility Projects

Project (# and name)	Overview	Status
1. RE Strategy Update	Assistance to update the national Renewable Energy Strategy and Roadmap in Lao PDR as a basis for future RE development.	Completed
2. Small Dam Safety Improvement	TA to support the review of 35 small (<15 megawatts) dams in Lao PDR. Technical input to the Department of Energy Management (DEM) to fulfil their regulatory functions, inputs and training to enable the operationalisation of the new Dam Safety Guidelines.	Completed
3. Large Dam Safety Improvement	TA to review all large (>15 megawatts) dams in Lao PDR. The project contributed hydrologist and geologist support to a World Bank-led team of experts.	Completed
4. English Language	Two English language training engagements for GoL staff in the RE sector to enable them to engage effectively with development partners and the private sector.	Completed
5. Energy Efficiency and Conservation	Two phases of TA and training to support GoL understanding, development, prioritisation and implementation of the current energy efficiency and conservation (EE&C) Roadmap, and a strategic action plan.	Completed
6. Dam Safety Technical Assistance to EDL and EDL-GEN	Provision of training to increase the knowledge and capacity in dam safety management to ultimately improve the safety of hydropower plant dams in Lao PDR. Support will be aimed at Électricité du Laos (EDL, a state-owned enterprise that will take on ownership/management of dams once the GoL approves their completion).	In progress
8. Wind Power Technical Assistance	TA to MEM's various departments on Wind Power including development of technical standards and guidelines, training and support for review of feasibility studies, guidance for project documentation preparation processes, awareness raising and capacity building for safeguards and assistance to deliver and apply a Power Procurement Policy.	In progress
9. Strengthening Power System Operation	TA, training and staff mentoring to GoL for power system planning and operation including needs and gap analysis, detailed implementation planning, data collection, developing system modelling tools and on-going training and mentoring of staff.	In progress
13. Hydropower Concession Negotiation / Hydro End of Concession Agreement	TA and training to support end of concession negotiations for Lao PDR's hydropower schemes and assist GoL assess the medium and long-term options for ownership and operation of hydropower assets and aims to assist GoL staff to achieve optimal outcomes from upcoming hydropower concession negotiations.	In progress
C1. Clean Energy Support	Capacity building and awareness raising on clean energy in Cambodia including support to specific events, a Clean Energy Fellowship Programme and policy dialogue sessions.	In progress
C2. Energy efficiency competitions	Awareness raising and engagement project that supports the implementation of the RGC's National Energy Efficiency Policy 2022 to 2023, including administration of an energy efficiency competition involving the private sector in Cambodia.	Approved

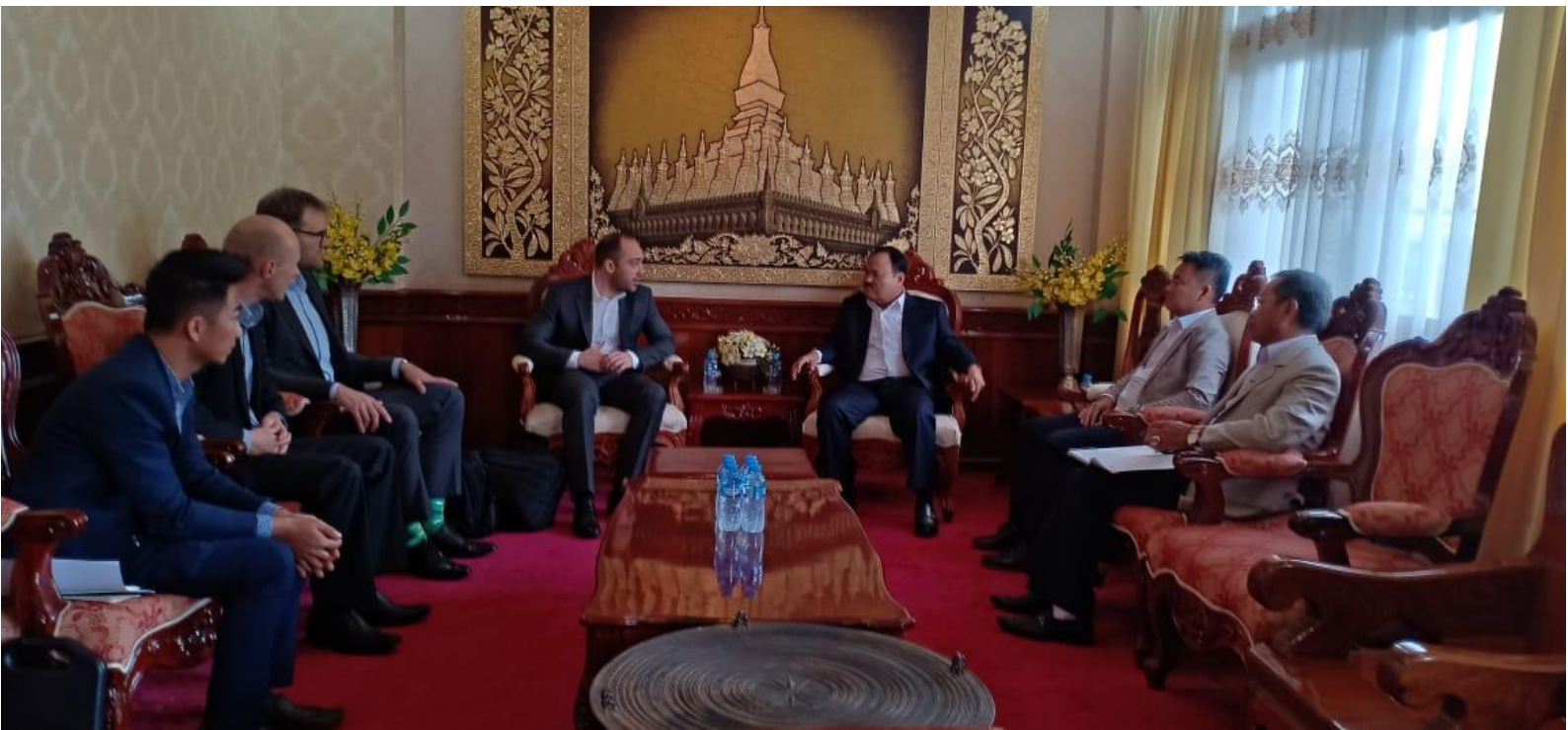
Note: Project numbering is not in numerical order as projects 7, 10, 11, 12 and 14 were cancelled. Source: Project Concept Notes (PCNs)

1.5 Structure of this Report

This Evaluation Report is primarily structured to present the key findings against the Key Evaluation Questions (KEQ) (see Table 2) as illustrated below:

- Chapter One presents an overview of the Facility, including background to its establishment, its arrangement and processes, and its activities and projects
- Chapter Two provides additional detail about this evaluation, including outlining what is within and outside of the scope of this evaluation as well as the data collection tools and processes and specific evaluation questions
- Chapter Three details the energy context for: Lao PDR; Cambodia; and the ASEAN Region including the energy mix, key policy milestones and energy challenges.
- Chapters Four to Six present this evaluation's findings against the evaluation criteria of relevance and coherence, effectiveness and impact, and modality and efficiency based on assessment and analysis from various sources including a desktop review, stakeholder consultations and sensemaking workshops
- Chapter Seven presents future considerations for MFAT based on the evaluation findings and criteria. This chapter also presents a list of current and future RE priorities for Lao PDR, Cambodia and the ASEAN region
- Chapter Eight presents the conclusions of this evaluation.

Photo: Facility Meeting with Minister of Mines and Energy for Renewable Energy Strategy Refresh Project.
Source: Facility Team



2 The evaluation of the ASEAN RE Facility

This evaluation was commissioned by MFAT's Development Economy and Prosperity Division (DEVECO) which has responsibility for MFAT's Energy Programme, delivered across the Pacific, South East Asia, Africa and the Caribbean. The evaluation was undertaken from December 2023 to June 2024, and was conducted in four phases:

- Evaluation planning and desktop review
- Primary data collection
- Analysis, sensemaking and draft reporting
- Final reporting.

During the primary data collection phase, in-country travel to Lao PDR and Cambodia was undertaken in January 2024 for stakeholder interviews and remote stakeholder interviews were conducted up until February 2024. Sensemaking workshops with MFAT's Activity Management Team and the Facility Manager were held remotely in May 2024 before drafting this Evaluation Report.

The objectives of this evaluation were to:

- Assess the **relevance** of the Facility to the priorities of Lao PDR, Cambodia and New Zealand and the **coherence** of the Facility to its own activities and other donor activities
- Examine the **effectiveness** and **impact** of the Facility against its intended goal and outcomes
- Consider whether the Facility modality is **fit for purpose** for achieving intended outcomes and for supporting the overall Activity's **efficiency**
- Identify **future** areas of support for RE to South East Asian countries (particularly Cambodia) and provide preliminary design recommendations for MFAT for a potential future phase.

2.1 Scope of the evaluation

The evaluation covered both phases of the Facility, encompassing the period from 2018 to 2024. The evaluation focused on assessments at the Facility-level and did not include a detailed review of the individual projects. However, individual projects were assessed for their alignment to each other and their overall contributions to the Facility's relevance, coherence, effectiveness and impact.

The evaluation primarily involved a summative assessment of activities in Lao PDR and a formative approach for activities in Cambodia and the ASEAN region. The evaluation utilised a mixed methods approach, involving key informant interviews, a desktop review, literature scan and sensemaking workshops to triangulate and validate findings and to inform future considerations.

Documents reviewed by the evaluation team included documents produced by the Facility and its implementing suppliers, Facility design / business case documents, MFAT's strategic documents and plans, and publications by other stakeholders including development partners, regional and research institutions.

The evaluation team conducted a total of 32 consultations across Lao PDR, Cambodia and remotely. In total, the evaluation team met with over 59 individuals from the following stakeholder groups:

- GoL MEM departments
- State-owned Enterprises (SOEs) in Lao PDR
- Development partners
- International and local implementing suppliers
- MFAT Activity Management Team
- The Facility Management Team.

Refer to Annex E for further details on the evaluation's approach and methodology, and a list of stakeholders consulted, documents reviewed, and literature scanned.

2.2 Key Evaluation Questions

To respond to the evaluation objectives, the evaluation answers 12 KEQs (see Table 2). A full list of KEQs and sub-questions is available in Annex B. As agreed with MFAT during the evaluation's inception phase, the evaluation had a primary focus on the first two evaluation criteria (relevance and coherence followed by effectiveness and impact), and a secondary focus on assessing the modality and efficiency of the Facility and developing future considerations.

It should be noted that the future considerations identified in this Report are derived from the evaluation findings and stakeholder consultations. They do not constitute a design process nor substitute the need for a comprehensive redesign process for a potential future phase of the Facility.

Table 2. Key Evaluation Questions

Criteria	Key Evaluation Questions
Relevance and coherence	1. To what extent is the Facility relevant to New Zealand's bilateral and regional priorities?
	2. To what extent is the Facility relevant to the renewable energy priorities of Lao PDR, Cambodia and ASEAN?
	3. How are the Facility's activities / projects aligned and coherent to each other and harmonised to the activities of other like-minded donors in Lao PDR, Cambodia and ASEAN?

Criteria	Key Evaluation Questions
Effectiveness and impact	4. What intended and unintended outcomes have the Facility and its projects led or contributed to?
	5. Did the Facility contribute to economic and social impacts in Lao PDR that are inclusive, resilient and sustainable?
Modality and efficiency	6. To what extent is the Facility's modality fit for purpose to achieve the intended outcomes?
	7. To what extent has the Facility demonstrated / supported efficient management?
	8. Has MFAT utilised time and resources well to support the effectiveness of the Facility?
Future directions	9. What are the lessons learned from the Facility that could inform future programming and/or a future phase of support?
	10. What are the key priority areas of renewable energy support in Lao PDR, Cambodia and the broader ASEAN?
	11. What are the key considerations for a future phase of renewable energy support for Lao PDR and Cambodia?
	12. What actions can be taken to build capabilities to sustain the Facility's impacts into the long-term?

2.3 Limitations

This evaluation is subject to some limitations given its scope and the Facility's progress to date (see Table 3).

Table 3. Evaluation challenges and limitations

Challenge / Limitation	Details
Significantly varied implementation across Lao PDR and Cambodia	To account for this, a summative assessment of the Facility's progress in Lao PDR was undertaken, while only an early view of progress for Cambodia is available and so a more formative lens was adopted.
This evaluation did not undertake any consultations with stakeholders from RGC	Given the early phase of implementation in Cambodia, and the infancy of relationship between the Facility and RGC, it was determined that consultations with RGC were too early and not appropriate at this stage. Any needs or priorities identified in this Report are drawn from consultations with development partners in the country and desktop research.
Limited engagement from some stakeholders	The Evaluation Team were able to meet with representatives of all intended stakeholder groups, however, scheduling conflicts and limited response in a few instances meant that deeper engagement with some stakeholders was limited. It should be noted that despite attempts to engage with civil society organisations in Lao PDR, they did not have availability or were not based in Vientiane.
Contribution vs attribution	The Facility is one of many actors supporting RE development in Lao PDR, Cambodia and the ASEAN region. Therefore, the ASEAN Facility's effectiveness and impact should be understood in the context that the Facility's activities and outputs can contribute to outcomes, but outcomes (especially higher-level outcomes) cannot be solely attributed to the Facility.
Facility externalities	The Facility's performance must be considered in the broader context in which it operates. This includes a challenging environment for RE development, significant focus from government stakeholders which dictate potential areas for support and political and economic sensitivities relating to RE. Additionally, as MFAT's first RE assistance to Lao PDR, the Facility had limited to no pre-existing connections on which the Facility could build on. Further, the Facility also had to respond to COVID-19 challenges which limited face-to-face engagement in the early stages of Phase 2.
Evaluation is not a substitute of a future design	While the evaluation contains both summative and formative analysis, the formative elements are not a substitute for a redesign process. Should MFAT decide to pursue a new phase of the ASEAN Facility, the future considerations presented in this report are best explored in-depth as a part of MFAT's business case / design process and in consultation with stakeholders such as the GoL, RGC, regional bodies (i.e. ASEAN Center for Energy) and/or key development partners.

3 The energy context in Lao PDR and Cambodia

Energy demand throughout the ASEAN region is increasing, driven by economic and demographic growth. Between 2021 and 2024, energy demand was expected to increase by 21 per cent. Increased electrification of some activities including cooking, electric vehicle (EV) rollouts and biofuel mandates as well as improved energy efficiency across sectors could all impact on energy demand levels.

Across the region, fossil fuels are expected to account for 45.8 per cent of energy consumption. Increasing RE is a common theme across ASEAN member states leading to a forecasted increase in renewables share.[2] Regional policies and strategies are summarised in Annex C.

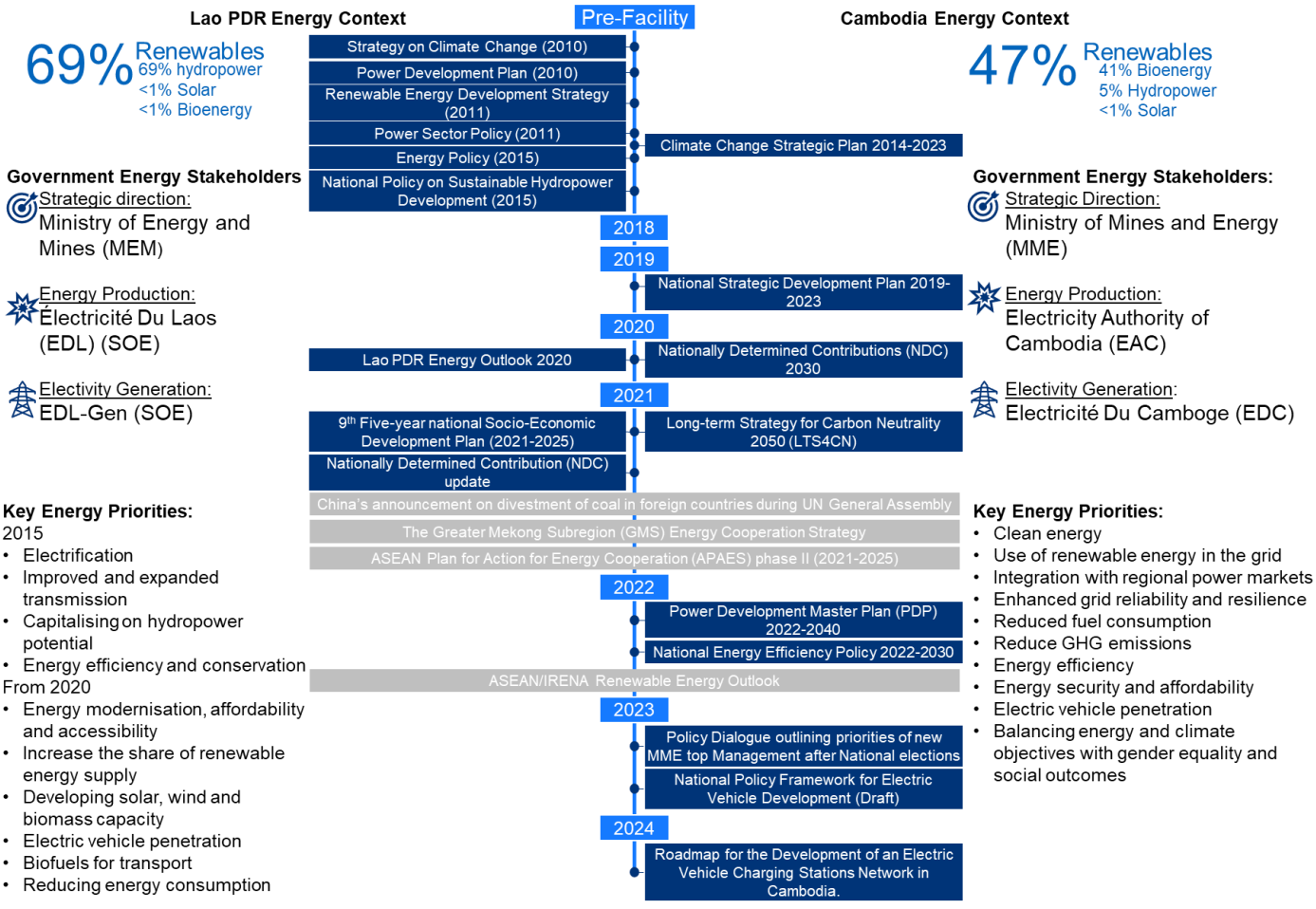
Regional energy market integration is becoming increasingly important across ASEAN to meet growing energy demand and to manage increasing regional trade. The large gaps in development and energy outcomes between the ASEAN countries, especially certain groups within these LDCs, means some countries are in a particularly vulnerable position during energy transitions. Appropriate management of energy transitions can be a significant driver of economic and social progress.

LDCs face difficulties in implementing their energy ambitions in the context of limited recourses and fiscal constraints, particularly after the COVID-19 pandemic. Accordingly, targeted support to strengthen capacities to ensure appropriate management of the energy transition that balances economic, environmental and social outcomes is required. Given the shared journey for many LDCs in ASEAN, there is a need for sharing knowledge and resources towards appropriate outcomes for energy transition. Some regional forums such as the ASEAN Centre for Energy already exist to facilitate this.

In 2022, 12.3 per cent of global energy supply was from RE sources including solar, wind, hydropower, geothermal, ocean and bioenergy.[3] In Lao PDR and Cambodia, the proportion of total energy accounted for by RE is well above the global average (Figure 4). The policy contexts for both Lao PDR and Cambodia as well as some key regional context changes in the ASEAN region are illustrated in Figure 4 with more detail available in Annex C.

Generally, these policies place great importance on the energy sector and identify the significant potential of the sector towards future economic diversification and development. Figure 4 shows that the energy-related policy environment in Cambodia has been more dynamic and regularly updated than in Lao PDR.

Figure 4. Policy and Context history



3.1 Lao PDR

The energy sector, particularly RE generated through hydropower, is an important asset and is a critical aspect of Lao PDR's planned social and economic development. The hydropower sector particularly has undergone intensive development and growth in recent years in a bid by Lao PDR to fulfil both domestic energy needs and produce enough energy to meet regional energy demands and Lao PDR's economic ambitions. At the beginning of 2024, the GoL stakeholders consulted reported that there were approximately 100 hydropower dams in operation.

Between 2015 and 2020, Lao PDR increased energy exports from 41,612TJ to 108,788TJ constituting 36 per cent of total energy production.[4] Between 2018 and 2023, the value of Lao PDR's energy exports increased from USD 1.45 billion to USD2.38 billion, largely accounted for by hydropower.[5] The energy sector is a major source of foreign direct investment, and the government profits from energy projects, particularly hydropower projects, through taxes, royalties and dividends from EDL and IPPs.[6] However, the agreements with IPPs are complicated, creating fiscal costs and risks. Initial attraction of foreign direct investment to the hydropower sector in Lao PDR was supported by lease periods of up to 75 years among other incentives.

In 2015, 87 per cent of electricity generation capacity was generated by IPPs. Most energy produced through these agreements is earmarked for export. Due to the seasonality of energy production, there is often a shortfall in supply to meet domestic needs, which is then imported from neighbouring countries. This complicated context makes balancing the potential economic benefit of energy exports with meeting domestic energy needs difficult.

Further to the entities included in Figure 4, the individual departments within MEM play distinct roles in the energy transition:

- Department of Energy Efficiency and Promotion (DEEP): Focusses on clean energy, innovation and energy provision in rural areas and is included in IPP processes.
- Department of Energy Industry Safety Management (DESM): Established in 2023 is solely responsible for safety (i.e., dam safety)
- Department of Energy Policy and Planning (DEPP): Contains five divisions, including power generation planning. Recent focus on solar and wind represents an expansion beyond previous focus on hydropower.
- Department of Energy Business (DEB): responsible for energy trading and grid-to-grid exchanges with neighbouring countries. Also included in IPP process.
- Department of Planning and Cooperation (DPC): included in IPP process and publishes key energy statistics.

The private sector is an important actor in Lao PDR's energy transition to harness RE potential.

There are social, economic and environmental concerns with the current state of the energy sector in Lao PDR. Previously high levels of public investment in large power infrastructure projects have contributed to a high and unsustainable debt burden in Lao PDR.[7] EDL and EDL-GEN, the SOEs responsible for energy production and electricity generation, represent ongoing fiscal risks for the GoL due to high debt levels and large operating costs resulting in EDL accounting for 40 per cent of public and publicly guaranteed debt. Debt in the energy sector accounts for approximately 45 per cent of GDP.

The rapid expansion of hydropower plants along the Mekong has environmental impacts on the waterways and economic impacts for those who rely on them for their livelihoods.[8] In addition, there are increased risks for downstream communities in the event of dam failures. In 2017, a small dam broke in Lao PDR and in 2018, an auxiliary dam of the Xi Pian-Xe Namnoy Hydropower Project collapsed killing more than 70 people and impacting 22,000 people across Lao PDR and Cambodia who were displaced or lost property or livestock.[9] These events led to an urgent and high priority request for international assistance from the GoL.

3.2 Cambodia

The energy needs of Cambodia are expected to increase significantly in coming years. Long term planning documents estimate that power demand could reach 24,184 GWh in 2025 under a medium growth scenario.[10] Current energy capacity is 14,960 GWh. Cambodia will need an additional 24,384 megawatts (MW) of electricity generation capacity by 2050, mainly from:

- Liquified natural gas (9,600 MW)
- hydropower (5,927 MW)
- coal (5,140 MW).[11]

By 2030, the main sources of power will be:

- coal (1,558 MW, 27.7% of total mix)
- fuel oils (490 MW, 8.7%)
- solar (1,005 MW, 17.9%).[12]

Cambodia faces challenges in meeting the growing demand for electricity, especially in rural areas, and in diversifying its energy sources to include more RE. The government and the private sector are working together to improve energy efficiency, access, and security, as well as to reduce the environmental and social impacts of the energy sector. Key stakeholders in Cambodia's energy sector are listed in Figure 4.

4 Relevance to New Zealand, Lao PDR and Cambodia's priorities

The first part of this chapter presents the evaluation's findings on relevance and alignment of the Facility to the priorities of Lao PDR, Cambodia and New Zealand. The second part of the chapter considers the internal coherence of the Facility's activities and harmonisation of the Facility's activities with other RE activities in Lao PDR.

Key findings

- Driven by responsive, flexible and collaborative ways of working, the Facility is highly relevant to GoL's national priorities. The evolution of the Facility's portfolio is reflective of a similar evolution in GoL's priorities.
- Collaborative project identification and development processes and co-location of the Facility within MEM contributed to a high degree of relevance.
- Early Facility activities in Cambodia demonstrate a moderate level of alignment to national priorities, noting this has not been verified by RGC partners.
- The Facility has filled a valuable space for donor coordination which has minimised duplication and maximised synergies, greatly contributing to overall coherence of RE assistance in Lao PDR.
- While there is some evidence of internal coherence and broad alignment to the Facility's Programme Logic, the resulting diverse portfolio of projects affected the Facility's effectiveness and impact.

4.1 Facility's relevance

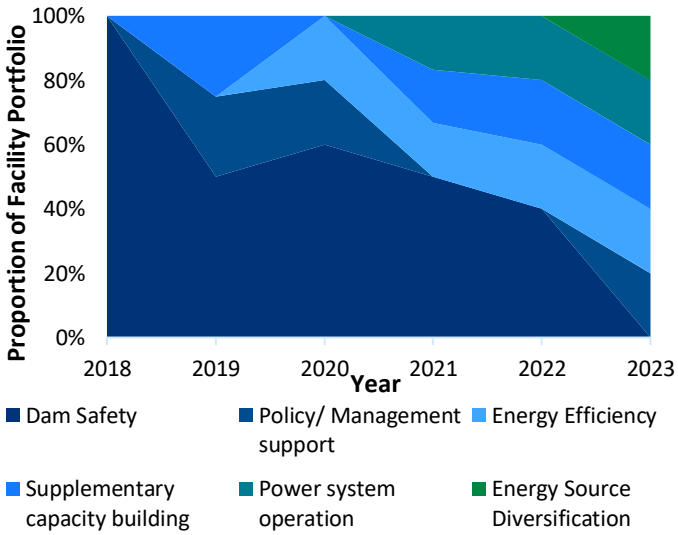
The Facility has successfully responded to GoL's priorities and changing demands, leading to strong and ongoing relevance. The responsiveness of the Facility to the GoL's priority areas and needs was greatly appreciated by all MEM partners that the Facility has worked with to date. The collaborative way in which projects are identified and developed, including through both formal and less formal avenues, facilitates strong alignment to strategic national priorities as well as emergent areas of demand. Alignment and relevance are further enabled by the Facility's co-location with MEM to proactively understand emerging priorities.

> *"The programme decides based on the need of the Lao government. Of course, they have more general goals. But when we implement - where can we focus and where the government needs the project, we can update the programme from time to time."*
> - Government Partner

GoL's energy-related policies and priorities have shifted over the course of Facility implementation (see Figure 4). The Facility's implementation has similarly evolved (as per the composition of projects in the Facility's portfolio in Figure 5). Stakeholder consultations with the GoL verified that all projects were relevant for building an enabling environment for them to achieve their current RE-related objectives.

In response to changing GoL priorities, the Facility's project portfolio has diversified from an initial focus on providing TA and capacity building on dam safety, to energy efficiency and broader RE support for policy and regulatory environments (Figure 5). This expansion has enhanced the Facility's relevance to Lao PDR's energy policies and priorities.

Figure 5. Thematic Areas of Facility Portfolio in Lao PDR



The initial sole focus on dam safety was not explicitly aligned with documented GoL policies and priorities at the time, or the Facility's Programme Logic. However, stakeholders reported that the focus on dam safety responded to explicit requests and needs for TA targeting urgent safety concerns with hydropower operations, following the 2017 and 2018 dam collapses. This was noted by multiple stakeholders as a demonstration of the Facility's responsiveness to urgent needs and the adaptability of the Facility approach to respond to emergent areas of demand. Almost all MEM departments consulted verified that dam safety remained a high priority given the number of existing and planned hydropower plants in Lao PDR and the low but growing capacity of MEM staff to negotiate with IPPs on matters of safety, Emergency Action Plans (EAPs) and to rectify major issues.

> *"We have very good collaboration with the Facility. They develop the Project Concept Notes based on the Ministry's needs. They are very fitting to national needs, to this department and other departments."*
> - Government Partner

Over the two phases, the Facility has built a high degree of trust with GoL to support initial thinking around the diversification of RE sources and upgrading of power systems to enable this. The inclusion of newer, more diverse projects was relevant to GoL priorities, including:

- Energy efficiency and energy source diversification projects are aligned to GoL's priorities to increase RE share and reduce energy consumption as updated in 2020
- The Wind Power Technical Assistance Project realises GoL intent to have variable RE sources
- Hydropower Concession Negotiations provides options to the GoL for optimal outcomes from upcoming hydropower concession negotiations.

Stakeholder consultations with senior MEM staff confirmed the importance and alignment of these projects to current needs, and commended the Facility for doing what it can (with notably smaller budgets than some partners) to provide trusted support and advice for larger capital projects (i.e., the actual power system upgrade). Other key development and implementing partners also commended MFAT for the relevance of the Facility's projects and for steering other development partners in the right direction to ensure the relevance of their projects to GoL priorities also.

Early Facility activities in Cambodia demonstrate a moderate level of alignment with national and MFAT priorities. Implementation to date in Cambodia has shown the flexibility of the Facility to focus on shared areas of focus for the RGC to build rapport. It is not possible to rigorously assess the relevance of the Facility's implementation in Cambodia, given that implementation is still in the very early stages and that this evaluation did not directly consult the RGC. However, consultations with key development and implementing partners that currently service the RGC and MME indicate a moderate level of alignment between the Facility and the RGC's priorities.

At a high-level, the projects pursued to date are aligned with national priorities related to energy efficiency, training and skills development. The recent expansion of Cambodian policies and plans around energy efficiency and harnessing emerging technologies (e.g., EVs) for improved energy outcomes suggests that these are priority areas for RGC (Figure 4). Of the RGC's priorities, energy efficiency has been a focus of the Facility's early implementation in Cambodia with the two current projects being the 'Energy Efficiency Competitions' and 'Grant funding to EnergyLab for renewable energy support'. This demonstrates the Facility's researched and strategic approach to entry into Cambodia, evidenced through the development of a Cambodia Entry Paper.

New Zealand's Aid Partnership with Cambodia focuses on provision of post-graduate and short-term training scholarships and collaboration with the RGC and local partners. Given that Facility activities are only commencing in Cambodia, alignment of Facility design is considered as articulated in the Facility's Cambodia Entry Paper. The Facility's Cambodia Entry Paper identifies several shared challenges for Cambodia and Lao PDR including intermittency and policy impediments to RE development. Specifically, the paper identifies that the Facility could support:

- Improving hydropower outcomes
- Enabling distributed and centralised grid connected solar power
- Solar mini grid TA
- Energy efficiency and conservation improvements
- RE and climate policy support.

There is a moderate degree of relevance of these focus areas with RGC priorities. The integrated focus on building strong, collaborative relationships with existing organisations and the RGC is also aligned with New Zealand's bilateral priorities.

The Facility is largely aligned with New Zealand's bilateral and regional priorities, and international climate priorities. The Facility's activities in Lao PDR are broadly aligned with priorities identified in MFAT's Strategic Intentions 2021-2025, ASEAN Four Year Plan, the Plan of Action to Implement the ASEAN-New Zealand Strategic Partnership (2021-2025) and the Aid Partnership with Lao PDR. As illustrated in Figure 6, the Facility is most strongly aligned with priorities related to energy efficiency, reliability and sustainability. These aspects are core focus areas for the Facility, and feature in the Facility's Programme Logic and/or are addressed by several projects within the Facility's portfolio.

The Facility is also aligned, but to a lesser extent, with priorities within the ASEAN Four Year Plan and New Zealand's International Climate Finance Strategy that relate to energy modernisation and reducing greenhouse gas emissions. These are not mainstreamed in the Facility's work at a portfolio level, but rather indirectly addressed by specific individual Facility projects. The Facility has limited alignment to priorities of energy access and affordability, noting that TA for electrification was not requested from MFAT in the Lao PDR. There is still some potential for results in these areas, but they are not the sole focus of any Facility projects.

Figure 6 demonstrates the alignment of the Facility to the relevant bilateral, regional and international priorities of New Zealand.

Figure 6. Facility Alignment with MFAT's Priorities

New Zealand Priority	Relevant New Zealand Energy Policies	Assessment of Facility Alignment	
Energy Efficiency and Conservation	• MFAT Strategic Intentions 2021-2025	• Increasing focus during implementation. Specific projects pursued in both Lao PDR and Cambodia.	Strong alignment
Energy Reliability	• ASEAN Four Year Plan • Plan of Action to implement the ASEAN-New Zealand Strategic Partnership • Aid partnership with Lao PDR	• Energy source diversification is a focus through RE development. • 'Strengthening Power System Operation' project focuses on modelling an optimal energy dispatch schedule and RE grid integration.	Strong alignment
Energy Sustainability	• ASEAN Four Year Plan • MFAT Strategic Intentions 2021-2025	• Multiple projects targeting more sustainable operation of hydropower infrastructure pursued.	Strong alignment
Energy Modernisation	• ASEAN Four Year Plan	• 'Strengthening Power System Operation' and 'Hydropower Concession Negotiation / Hydro End of Concession Agreement' projects relate to modernisation	Moderate-strong alignment
Reduced greenhouse gas emissions	• ASEAN Four Year Plan • Plan of Action to implement the ASEAN-New Zealand Strategic Partnership • International Climate Finance Strategy • MFAT Strategic Intentions 2021-2025 • Aid Partnership with Lao PDR	• Not an explicit focus of portfolio but several projects contribute, including the 'Energy Efficiency and Conservation' project which includes energy audit training and factory walkthroughs providing comments on reducing energy consumption. • Facility monitoring of own greenhouse gas emissions	Moderate-strong alignment
Energy Access	• ASEAN Four Year Plan • Plan of Action to implement the ASEAN-New Zealand Strategic Partnership • Aid partnership with Lao PDR	• No activities exclusively targeting electrification or energy access have been pursued. • Deprioritised during implementation due to high electrification levels and understanding not a priority for MEM.	Moderate alignment
Affordability of energy	• ASEAN Four Year Plan • Aid partnership with Lao PDR	• No specific projects pursued targeting energy generation although some results form general support. • Not an appropriate area for action as high sensitivity from MEM.	Weak alignment

Key: Strong alignment | Moderate to strong alignment | Moderate alignment | Weak alignment

Based on stakeholder consultations with MEM and EDL, it is clear that assistance is required to diversify RE sources to respond to climate impacts and ensure the Lao people have energy stability and reliability. Providing a shared area of alignment between MFAT and GoL priorities into the future, the Facility's focus on IPP management and on energy diversification both respond well to this and have the potential to contribute to these overarching focus areas.

The Facility is aligned to the ASEAN Four Year Plan and bilateral cooperation focus areas, providing the targeted types of activities in the ASEAN region. The ASEAN 4YP identifies capacity building, advocacy, policy development and technical expertise as priority activities for MFAT. Almost all of the Facility's projects have been centred on TA provision, and multiple projects had a core focus on building capacity, including the Dam Safety technical assistance project and the Renewable Energy Strategy Refresh project. Several projects pursued targeted policy instruments and implementation. Overall, the Facility has generated strong and trusted relationships to enable advocacy for environmental, social and economic outcomes.

The Facility has not explicitly addressed alignment with New Zealand's International Development Principles but is integrating these in its approach. The Facility's alignment to the individual principles outlined in MFAT's statement on International Cooperation for Effective Sustainable Development (ICESD) is illustrated in Table 4. The Facility's approach has integrated sustainability as mentioned below but the GoL stakeholders and suppliers interviewed indicate that current support is inconsistent and additional support is needed. Technical RE matters are complex and English language skills can prohibit staff from progressing work during implementation. It was requested that presentations of findings and follow-up support be provided face-to-face rather than remotely to increase the uptake of recommendations and build the capacity of GoL staff to negotiate for better environmental and social outcomes.

Table 4. Facility Alignment to New Zealand's International Development Principles

ICESD Principle	Facility Alignment
Effective – values driven, partnership focused, adaptive, outcomes-focused, and evidence-based.	**High** – The Facility has a core partnerships focus, built through responsiveness, strong partnership-brokering and collaborative ways of working. The Facility has integrated values of trust, respect and localisation into its overall activities and this was verified by GoL stakeholders. Progress is being made to improve the evidence base and focus on outcomes, noting additional expertise is required to support this. A narrower focus for the Facility could further enhance alignment with this principle.
Inclusive – addressing exclusions and inequality, promoting human rights, and equitable participation in the benefits of development.	**Low** – Activities to date have focused on building foundational capacity and understanding to pursue future RE development that could provide these benefits. The Facility's dam safety work has brought to the forefront considerations of community safety, including vulnerable groups, and enhanced community engagement in dam safety processes such as EAPs and EAP drills. The Facility has collected gender-disaggregated data for most activities. The Facility's mandate to provide TA and capacity building projects, largely to the national government means there are limited opportunities for addressing inclusion at a community-level. Stakeholder consultations, including with other development partners, indicated that advancing inclusion was challenging in the RE sector where the focus is on economic and energy outcomes. Some stakeholders argued that improved economic and energy outcomes benefit all, but empirical research shows that this may not all benefit equally or proportionately.
Resilient – strengthens environment, economy, and societies to withstand shocks and manage crises.	**Medium** – The Facility has integrated a targeted consideration of resilience. Resilience of energy supply has been a focus through addressing seasonality and variability with energy source diversification and grid capability through power system operation strengthening. In the longer-term, this is expected to provide benefits to society through reduced brown and black outs.
Sustained – enables lasting progress and is locally owned to uphold results in the long term.	**Medium** – The Facility's approach, particularly with a growing focus on localisation and including train-the-trainer approaches, has built local capacity and ownership. Some implementation support has occurred, whereby the Suppliers provided avenues (i.e., via WhatsApp for Power Strengthening systems) to ask questions and resolve issues. However, this has not been systematic and could be improved. Longer-term projects with adequate implementation support are necessary for seeing sustained benefits from the Facility's projects. *"It's good when the person can do their own work, rather than technical experts. Sustainability looks like staff being able to do the work. The Facility has helped with this. But more capacity development is necessary for local government." – Government partner*

The types of Facility activities and projects are less conducive for directly meeting the needs of local communities; however, some projects have considered local communities as indirect beneficiaries. The Facility's goal (reflecting the Lao PDR National Development Plan) and long-term outcomes (LTOs) identify economic and social development benefits as targeted results. Many of the Facility's projects (five of the six approved PCNs available) identified the general Lao PDR public as indirect beneficiaries with a range of expected indirect benefits such as improved safety and less reliance on imported energy and fossil fuels. Given the Facility's work to provide capacity building and TA primarily to the GoL, community-level impact is not evident (nor was it expected). However, a few stakeholders raised the opportunity for enhancing community impact through building the capacity of local governments involved in RE development.

4.2 Facility's coherence

The Facility has made significant contributions to donor coordination in Lao PDR, greatly contributing to external coherence. Over certain periods, the Facility has taken a leadership role in donor coordination, restarting the Lao PDR energy sector development partner coordination meetings, regularly convening and actively participating in development partner meetings, facilitating information sharing and leveraging relationships built with government counterparts to funnel requests to the most appropriate development partner.

> *"We see the Facility work with other partners like Switzerland, we can see them working together with ADB, World Bank and other development partners."*
> - Government Partner

The Facility's macro view of the development landscape, as well as upcoming priorities for GoL, allows the Facility to effectively leverage strong relationships with GoL stakeholders, to identify niche areas for the Facility's projects as well as direct the GoL's requests to the most appropriate development partner based on their resources. The Updated Renewable Energy Strategy and Roadmap prepared by the Facility has further directed GoL requests.

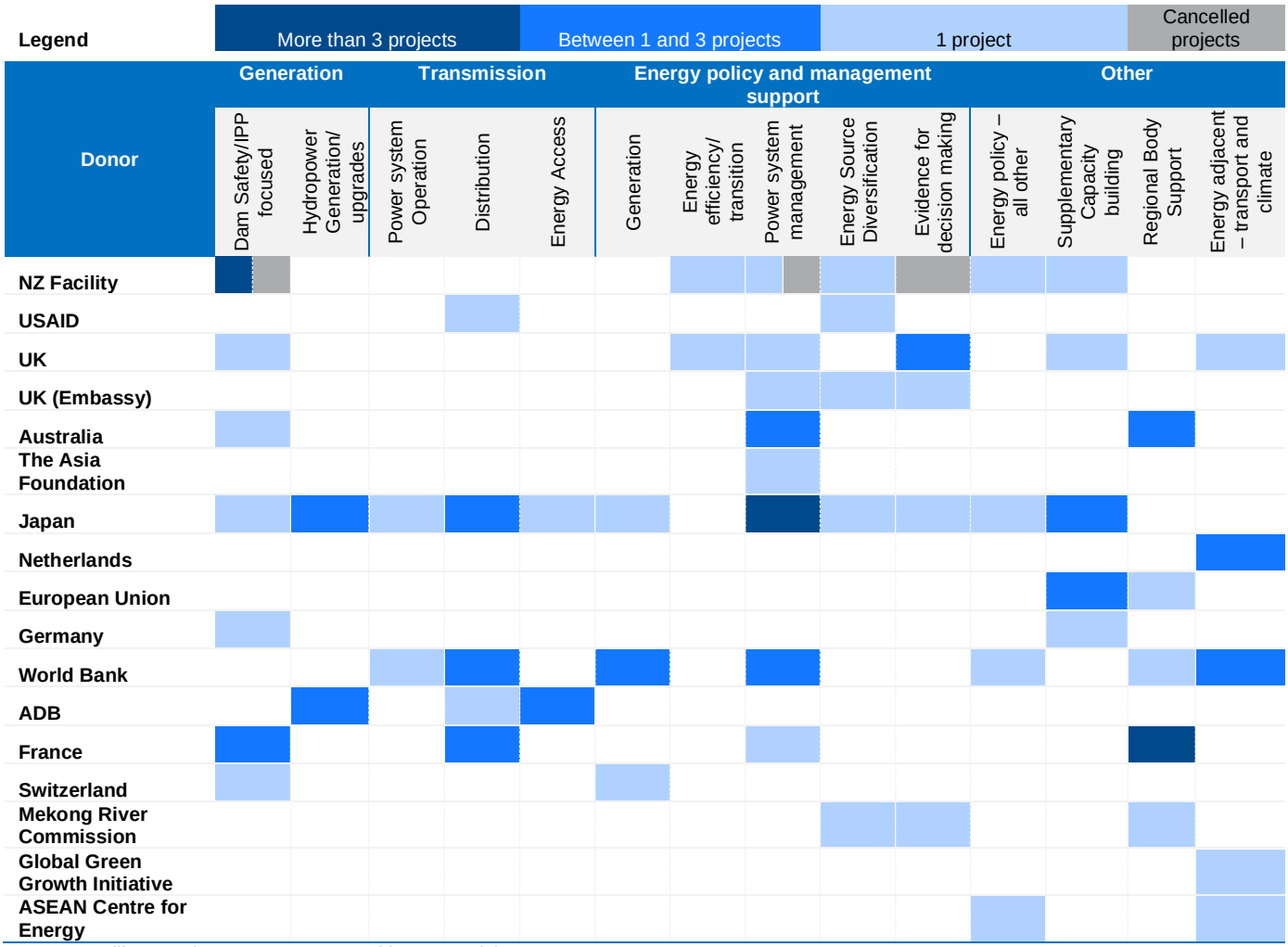
> *"At first, I proposed both solar and wind to New Zealand. After I consulted with the team, they said that New Zealand has wind technical expertise, and it would be better if we separate the requests and propose solar to Australia."*
> - Government Partner

The support landscape for RE in Lao PDR is less duplicative and more harmonised due to the

collaboration and communication between development partners and between development partners and GoL, which has been largely facilitated by the Facility in recent years. Once development partners have identified an area to pursue (see Table 5), the Facility is seen as an important contact point due to their willingness to assist with introductions to government stakeholders and other development partners as well as sharing useful resources and research. For example, the Facility presented the results of a control room gap assessment of EDL with development partners at the request of EDL staff.

The Facility's leadership role in facilitating coherence in the development landscape is greatly appreciated by both GoL and other development partners. Accordingly, these efforts have had significant reputational and relational benefits for New Zealand. While these outcomes related to strengthened external coherence, reputational capital and increased profile are positive results from the Facility, there are no mechanisms to capture or report these in regular monitoring cycles.

Table 5. Areas of engagement across donors in the Lao Energy Sector



Source: Facility Development Partner Tracking Spreadsheet

The Facility has proactively ensured external coherence by avoiding duplication and maximising synergies. The Facility has adopted a project development approach that considers areas of government demand, broader activities in the RE development landscape and areas of New Zealand's niche expertise. The Facility responds to priority areas with less concern for pursuing 'hot topics', and this was appreciated by several GoL stakeholders and noted by development partners. The Facility fills gaps and leverages NZ's niche technical expertise in essential, fundamental areas (i.e. power systems operations).

The Facility has leveraged connections with other development partners' activities to contribute to large activities beyond the resource capabilities of the Facility. The Facility has delivered collaborative impact with the USAID Southeast Asia Smart Power Program through which, USAID is developing guidelines for MEM to review any wind energy feasibility studies they receive. The Facility complements this by developing a practical manual about applying the guidelines. Clear roles and responsibilities relating to wind energy feasibility studies were agreed, reducing duplication and enhancing resource use.

The Facility has identified and cancelled potentially duplicative projects. For example, it was identified that an energy management system support project and an energy database project were similar to a UK-

funded research project. The Projects were accordingly cancelled (see Table 5).

Due to the breadth of the Facility's projects, there is only some evidence of internal coherence between the Facility's projects which limited opportunities for synergies and maximising impact. Analysis of PCNs showed that the Facility's projects demonstrated some alignment to the broad Programme Logic (Annex D), but less alignment to each other. Nonetheless, there are examples of related projects which focused progress in one area. Of note, the Renewable Energy Strategy Update ties together work on diversifying RE sources and supporting enabling environments for RE development. The Facility's three projects on dam safety (small dams, large dams and EAPs) also demonstrated some coherence, noting that dam safety was not a priority focus for MFAT and is only somewhat linked to improving IPP management as intended under medium-term outcome (MTO) 2.

Driven by the flexible and responsive modality and a broad Programme Logic that provided limited strategic guidance for project prioritisation, the Facility delivered a diverse range of activities with varied implementing suppliers, project amounts and timeframes (see Figure 7).

The breadth of the Facility's projects diluted efforts towards achieving intended outcomes, and in particular the medium-term outcomes which were expected following six years of Facility operations. The next section expands on how this affected the Facility's effectiveness and impact.

Figure 7. Alignment of the Facility's Portfolio to intended results

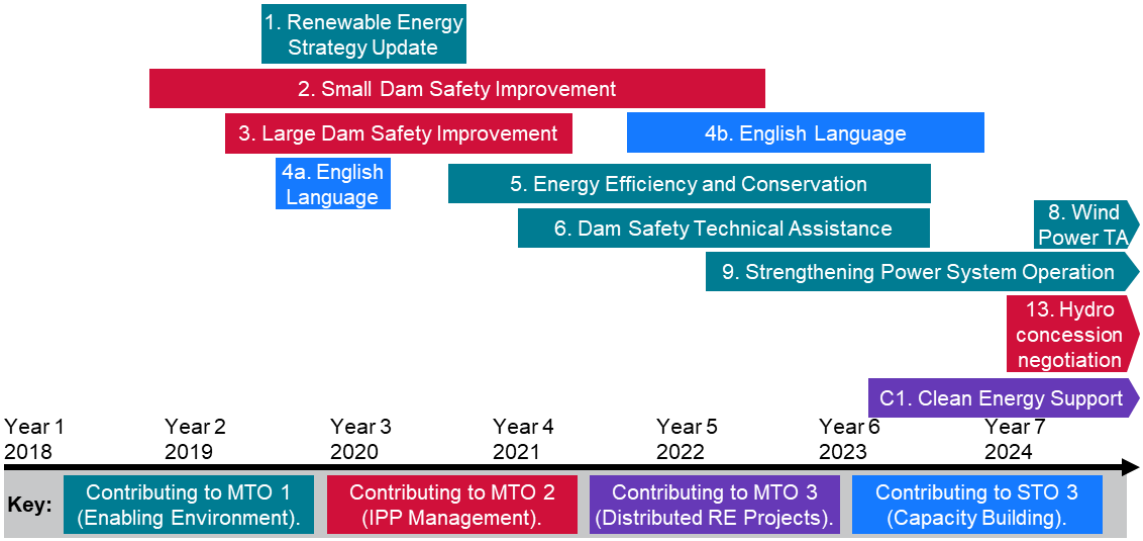
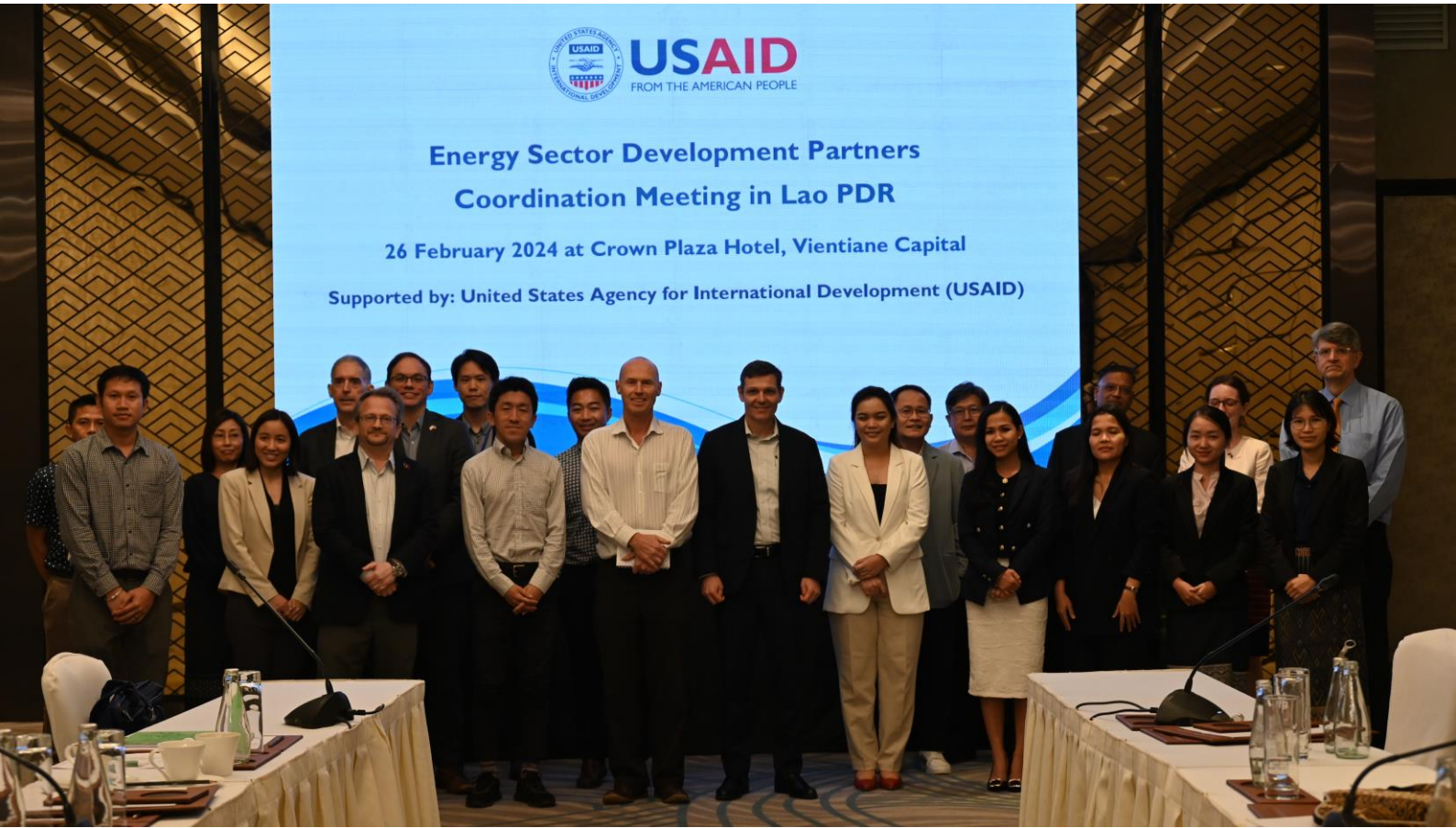


Photo: Energy Sector Development Partner Coordination Meeting
Source: Facility Management Team



5 Effectiveness and impact

This chapter presents the evaluation's assessment on the extent to which the Facility has realised its intended outcomes and impacts. This chapter first assesses the outputs and results of the Facility (which are reported in the Facility's progress reports and validated by GoL partners) against the intended outcomes, before presenting the unintended outcomes achieved by the Facility and the factors that have affected effectiveness. This chapter also includes an assessment of the Facility's Monitoring, Evaluation, Research and Learning (MERL) approach, and outlines key limitations and gaps.

Key findings

- The Facility's Programme Logic contains broad and ambitious outcomes that do not reflect the timeframes and interdependencies required for achieving such outcomes. The Programme Logic did not enable strategic guidance for project prioritisation, and contributed to a diverse portfolio of shorter-term projects that limited the Facility's achievement of MTOs and a few STOs.
- The inappropriate indicator selection within the results framework was more beneficial for context monitoring, and was not suitable for assessing the Facility's effectiveness and impact.
- Consultations with MEM stakeholders and analysis of Facility reporting showed:
  - Improvements in the availability and quality of RE policy, legislation and regulations (i.e., dam safety laws, EE&C Policy), noting barriers to implementation hindered benefit realisation.
  - Strong progress in building the capacity of MEM staff, and emergent evidence of staff utilisation of new RE knowledge and skills.
  - Enhanced knowledge of MEM staff on safety aspects of IPP management, noting challenges to implementing Facility-produced recommendations limited outcomes.
- It is too early to tell the results of recently approved Facility projects that are intended to progress other aspects of IPP management (assessment and approval) and advance distributed RE projects.
- The Facility has delivered substantial partnership outcomes that are not captured in the formal Programme Logic or results framework.

5.1 The Facility's Programme Logic

A brief assessment of the Facility's Programme Logic (see Figure 1) against the energy context in Lao PDR and Cambodia and the Facility's delivery of TA and capacity building activities revealed that the Programme Logic is too broad, contributing to a diverse portfolio of projects. The ambition of the Programme Logic and intended outcomes do not appropriately reflect the nature and type of Facility activities which are primarily shorter-term TA or capacity building projects. The realisation of the current intended outcomes would require complementary investments and commitments from key stakeholders (including various GoL ministries and development partners) and interdependencies being achieved in parallel.

The Programme Logic also does not account for the time required for projects to move from a project ideation and development to project completion stage, and to see the realisation of both the short-term outcomes (STOs) and MTOs. Longer timeframes for achieving the majority of STOs and MTOs were necessary to reflect the time required for internal processes (i.e., collaborative project development processes, time required for procuring and contracting suppliers) and to reflect external contexts and circumstances such as the COVID-19 pandemic and the shift in Lao PDR to explore variable RE sources due to energy stability needs from a relatively recent focus on electrification. Additionally, a significant lead time was required to build relationships and trust to effectively operate in the politically and economically sensitive RE sector.

Given the timing of this evaluation in the sixth year of the Facility's operations, the evaluation had intended to assess the Facility's activities against the Facility's MTOs as shown below:

- Strengthened enabling environment (planning, regulation, management and oversight) for RE development
- Better management of the IPP portfolio increases the value of the resource to the economy
- Increased number of distributed RE projects under investigation, development and sustainable operation.

However, due to the broad and ambitious nature of the Facility's MTOs, this chapter only provides a high-level assessment on the achievement of the Facility's MTOs, which shows limited progress. The inappropriate selection of indicators within the Facility's results framework further exacerbated the challenges with assessing the Facility's effectiveness at the MTO (and LTO) level. As such, this chapter focuses on assessments against the Facility's STOs, noting that some of the STOs are also ambitious and may have been more appropriate as MTOs.

5.2 Assessment against intended outcomes

The Facility's Programme Logic sought progress against the following STOs:

- Improved implementation (development and coordination) of RE policy, law and regulations
- Improved management of IPP project assessment, approval and monitoring processes
- Increased public sector skills, knowledge and capacity in agreed areas
- Increased number of distributed RE projects identified and assessed
- New Zealand's expertise harnessed to respond to agreed Lao PDR and Cambodia priorities in coordination with other stakeholders / actors.

Evidence shows improvements in the quality and availability of RE policies, laws and regulations in Lao PDR. However, there are limited examples of progression from the policy development to implementation stages. Of note, the Facility supported MEM to update its 2011 RE Strategy to guide strategic decision-making about future RE priorities. The Facility has also supported the drafting of other new and updated strategic and guidance documents and provided ad-hoc quality reviews and translations of policies and regulations. Progress against this STO was notably slower due to COVID-19 related delays, bureaucratic processes and the lead time required to build relationships and trust to work collaboratively on key guiding documents.

The key results presented below show strong progress against this STO, with policies and regulations endorsed and emerging examples of early implementation (noting not enough time has passed to fully see the results of implementing these policies, laws and regulations).

STO1: Improved implementation (development and coordination) of renewable energy policy, law, regulations

Targets	Key progress
• **Improved or new policy, legislation, plans, strategies (relating to Facility activity areas) drafted, approved and implemented in consultation with key stakeholders.** • **Electricity Law, Lao Electric Power Technical Standards (LEPTS), Dam Safety Guidelines (DSG), new RE Strategy approved and implemented** • **Lao Association of Dams (LAD), Lao National Commission on Dam Safety, Department of Dam Safety (DDS), Law on Dam Safety institutional improvements**	• Renewable Energy Strategy Update and Roadmap accepted by IREP and under consultation with other key stakeholders • Progression of some recommendations from the updated RE strategy despite no formal adoption: – Calculation of the grid emission factor to monitor emissions from power generation – Shift in responsibility for RE to DEPP responding to challenges identified in the updated Renewable Energy Strategy • Final Electricity Law, LEPTS and DSG approved by GoL, printed, disseminated, applied and socialised by the Facility • Approval of EE&C Policy Roadmap but without budget allocation for implementation • Uptake of recommended Energy Efficiency indicators and targets but limited implementation because of data gaps

Outputs that contributed to this STO

- Draft EE&C rules and regulations for mandatory reporting developed for GoL
- Development and introduction of an Energy Data Management System (EDMS) was undertaken but delayed
- Energy data source mapping, EDMS guidelines and Terms of Reference for EDMS Task Force
- Technical, economic and financial analysis report produced during the update of the RE Strategy

The Facility has contributed to the knowledge of MEM staff to impose safety-related requirements on IPPs, which supports one aspect of IPP management. The allocation of safety management to the new DESM signalled the continued importance of dam safety to the GoL. The significant increase in the development and implementation of EAPs by IPPs (and EDL-GEN) was perceived by various MEM departments consulted to be a positive result attributable to the Facility's work. Resulting from the Facility's project recommendations, the development of new dam safety laws and sub-law regulations demonstrated good progress at the high-level.

Stakeholders referenced the high-quality Dam Safety Review Reports produced by the Facility's suppliers and New Zealand's technical expertise. However, they also acknowledged barriers to progressing report recommendations, including the slow growing influence of the GoL over IPPs to enforce change, and high costs for IPPs to implement some recommended changes. Post-project implementation support was requested to fully understand concepts within Review Reports, to assess EAPs from IPPs and to assess future IPP projects as well as to train new staff (due to high turnover and the recent separation of functions to DESM) in safety management for hydropower and wind power plants.

The key results presented below show mixed progress against this STO. There is strong progress against the 'monitoring' aspects of the STO, but minimal progress evidenced on the 'project assessment' and 'project approval' aspects.

STO2: Improved management of IPP project assessment, approval and monitoring processes

Targets	Key progress
• **100% of organisational systems/processes are operational during Facility's involvement** • **100% of organisational systems/processes are operational after 12 month Facility involvement**	• New law on dam safety sent to an international advisory body based on recommendation from Facility Project that reviews designs and documents, monitors construction, operation and emergency management • Intent to operationalise through sub-law regulations • 7 EDL-GEN EAPs prepared and implemented • 34 small dam EAPs produced (13 accepted) • Nam Mang 3 dam EAP practice drill • Ongoing discussion between the department and IPPs using Facility-produced reports and some improvements such as a spillway in one IPP project in South Lao PDR • Establishment of the LAD • Lao PDR joining the International Commission on Large Dams (ICOLD)

Outputs that contributed

- 65 Dam Safety Review Reports (30 small and 35 large) and five letters of concern
- Dam safety workshops and training with national, regional and provincial audiences. Requests for additional support received
- Support for establishing the Lao Association of Dams and application to join ICOLD
- Dam safety database spreadsheet delivered to DEM
- Dam Safety Management Implementation Strategy to guide the development of an appropriate dam safety management regime published and submitted to GoL
- Terms of reference for developing EAPs

The Facility's core focus on capacity building efforts has delivered significant results in terms of enhancing knowledge and understanding and building relationships. There is evidence that the Facility has built the capacity of GoL, SOEs, and IPPs throughout its diverse project portfolio, and this was verified by GoL stakeholders and local consultants involved in delivering Facility projects. There is emerging evidence that some groups are applying the new skills, knowledge and capacity to their roles in RE development and that it has helped them to improve their work and career trajectories in the RE sector in Lao PDR.

Capacity building activities have also been an important relationship building tool for the Facility, particularly where the Facility has responded directly to identified capacity needs (Section 5.4). Several MEM departments noted the need for and benefits of learning technical RE language and strengthening English language skills to progress RE development in Lao PDR and for officials to be able to negotiate with IPPs and investors and complete technical application forms and procedures.

> *"We want outcomes, not just outputs. With the Facility, we can see outcomes in building local staff capacity– they have more experience and knowledge in energy efficiency and dam safety and developed Energy Efficiency Guidelines and documents. International and local experts worked to build local capacity."*
> - Government Partner

The key results presented below show significant progress against this STO, reflecting an overarching Facility approach to capacity building across projects.

STO3: Increased public sector skills, knowledge and capacity in agreed areas

Targets	Key progress
• **Noticeable/ significant increase in level of confidence in having appropriate skills and knowledge to fulfil their role** • **Noticeable/significant increase in attitudes, skills, knowledge or behaviour levels.**	• Almost all English language training attendees reported that their confidence had increased. • Participants found EE&C training increased their confidence in EE&C, was relevant and useful to their work • Staff trained in EAP development have produced seven EAPs with potential to apply this to 22 other dams • With Facility support, EDL led its first development partner coordination meeting in February 2023 with the Facility Suppliers presenting the findings of the gap analysis

Outputs that contributed

- Capacity Building Needs Assessment to support EE&C
- A total of 490 individuals have received a total of 290 days of support across 25 entities on dam safety, English language, EE&C and renewable development. (N.B. other activities note that training/workshops were delivered but do not provide participant or training day numbers)
- Site visits and train-the-trainer approaches used in projects

Photo: Power Sector Operation Training
Source: Facility Management Team

The evidence shows limited Facility progress towards increasing the number of distributed RE projects, but there is a renewed focus on supporting MEM to explore variable RE sources. There has been slower progress towards this STO given a conscious decision was made going into Phase 2 to narrow the focus on distributed RE towards biofuels and clean cooking (as part of the broader energy efficiency project). However, as shown in Figure 7, there has been a renewed focus on supporting the enabling environment for other distributed RE projects. This reflects the GoL's recognition of the importance of diversifying RE sources for future energy stability and reliability.

Within this context, some positive results (as shown below) were achieved and an early indication that upcoming TA will be beneficial and utilised by MEM to further identify, assess and approve wind projects. It should also be noted that the Facility has directed the GoL to seek Australian assistance for solar power-related support to minimise duplication.

STO4: Increased number of distributed RE projects identified and assessed

Targets	Key progress
• **3 distributed RE Projects operational by end of Facility's term.**	• Solar and wind projects in planning including grid integration studies

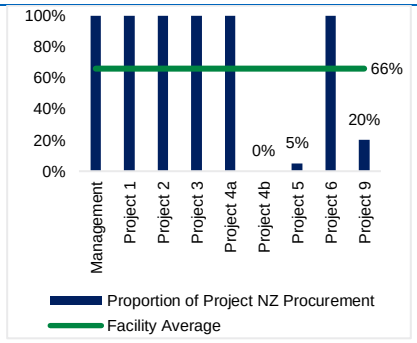
Outputs that contributed

- Gap Analysis for EDL to enable greater uptake of RE in line with RE Policy and Nationally Determined Contribution (NDC)
- System planning support and training to manage grid connection
- Increasing focus with new projects (Wind technical assistance, Energy Lab Support).

Targets relating to harnessing New Zealand expertise were not fully met, nor were they deemed appropriate as the Facility progressed. The inclusion of an STO to use majority New Zealand-based suppliers may have been appropriate at the time of Facility design and aligned with the then Facility's intent. However, in line with good development practice and over time, the Facility has moved towards a more localised approach (which appears to be at odds and in conflict with this STO). The Facility has engaged locally based suppliers in some cases to ensure activities and implementation are relevant to the local context; build local capacity and/or enhance cost effectiveness (e.g., the second phase of English language training). The Programme Logic, however, was not updated to reflect this.

It was noted, however, that New Zealand expertise was particularly valuable when independence and niche technical expertise was required (e.g., Dam Safety Review projects). The evaluation found that despite not meeting the stated target shown below, the use of a mix of New Zealand-based and locally based suppliers was appropriate and met the requirements and expectations of relevant GoL stakeholders and led to higher-quality, context-specific outputs.

STO5: New Zealand's expertise harnessed to respond to agreed Lao PDR and Cambodia priorities in coordination with other stakeholders / actors

Targets	Key progress
• **75% of all Project outputs utilise New Zealand expertise.**	 *Source: Analysis of STO reporting in Facility Annual Report March 2024 (Draft)* Although achievement for this indicator has been lower than the target, this has been driven by an increasing contextual understanding of the Facility and improved localisation of Facility activities (chapter 5.5).

Outputs that contributed

- No specified outputs are expected to contribute to this STO in the Facility's Programme Logic.

There are external barriers and factors beyond the Facility's control which inhibit translation of STO achievements to MTO progress. The Facility's experience, triangulated with the experiences of other development partners has highlighted several challenges to progressing from STO to MTO level results. Such challenges include:

- Significant bottlenecks to approval and implementation of recommended policies, strategies and processes
- The COVID-19 pandemic impacting momentum, relationship building and delivery of projects through online / virtual mechanisms
- GoL capacity to take action based on technical advice and need for implementation and follow-up support to turn recommendations into actions
- RE is still a relatively new sector and many GoL staff have engineering or similar backgrounds from local universities, but not necessarily specific education in RE.

Internal factors, including portfolio diversity, short-term projects and limited implementation support also hindered progression from STO to MTO achievement. The barriers to MTO progress identified in the Lao PDR context require concentrated and prolonged effort to overcome. The Facility's broad Programme Logic and resulting diverse portfolio diluted focus from fully achieving any one MTO. The short-term nature of the TA projects and limited availability of implementation support did not enable the translation of high-quality outputs and enhance knowledge into improved implementation, management and coordination across the RE sector. GoL stakeholders requested that outputs and reports be delivered to face-to-face to maximise learnings and opportunities to understand technical matters.

The available evidence from the Facility's results framework makes it difficult to adequately determine progress towards MTOs. This is exacerbated by the fact that three to eight years of operations is not adequate to see the Facility's MTOs realised given the internal and external factors identified. The Facility's three MTOs and their associated results measures are outlined in Table 6.

Table 6. The Facility's MTOs and how their progress is measured

Medium-term outcome	Expected outcome (design and business case)	How results were intended to be measured	Evaluation brief assessment of the measures
1. Strengthening the enabling environment for RE 	A strengthened enabling environment for RE development, measured by improvements in planning, regulation, management and oversight	• Gaps/weaknesses in RE legislation, plans, strategies and standards that have been identified and improved (new or strengthened) • Proposed RE in National Power Development Plan (NPDP) vs actual development. • Changes to Lao PDR Energy Policy to increase future share of RE. • Scope of training and mentoring delivered by the Facility – this counts the number of people or organisations receiving training and the total number of days.	• The selected measures are appropriate as they are focussed on the legislative, regulatory and policy environment governing RE in Lao PDR. • However, the measure for the scope of training and mentoring involves counting the number of entities supported through training which is an output measure. • At the medium term, the focus could have been on changes in behaviour / understanding. • There are weak linkages seen between the Facility's activities and how they have advanced some of these measures for example, the 600MW Monsoon wind farm's planned construction in 2023 was cited as a result. However, it is unclear how the Facility contributed to this.
2. Enabled better management of the IPP portfolio which in turn increases the value of the resource to the economy 	Improvements in the GoL management of RE resources, measured by increase in the value of those resources to the economy	• Renewable power generated per annum including: – GWh per annum generated, exported and domestic – MW large hydro, small hydro, solar, biomass and wind EDL – Grid Emissions Factor • Hydropower dam safety indicators: – % priority dams subject to independent review – % dams confirmed as meeting the LEPTS and DSG or having risk mitigation plans in place – Institutional improvements i.e., LAD, Lao National Commission on Dam Safety, Document of Dam Safety & Law on Dam Safety	• The Facility's results showed a growth in RE generation from 2018 to 2021, however, it is not clear as to why this is related to the MTO which is about the management of the IPP portfolio to increase their value to the economy. Additionally, given the number of donors operating in the RE space in Lao PDR and the progress being made in the sector more broadly, it is not possible to attribute these increases in RE generation to the Facility's activities (see section 5.3 for more detail on attribution) • The second measure which counts dam safety reviews and compliance is correct for this MTO, however, it is singularly focussed on dam safety alone while the MTO is intended to be broader.
3. Increasing the number of distributed RE projects under investigation, development and sustainable operation 	Increased number of RE Projects that are under investigation, development and sustainable operation	• Number and total installed capacity of distributed commercial rooftop solar systems • Number of existing distributed RE mini-grid projects in sustainable operation • Number of distributed RE mini-grid projects in development	• A conscious decision was made to narrow the focus on distributed RE towards biofuels and clean cooking due to the higher than anticipated electrification rates in urban and rural areas of Lao PDR and that further electrification required the construction of mini-solar grids. The latter was also noted to be limited due to the low feed-in tariff offered by EDL, the lack of options to offtake excess solar power and the high cost of solar systems. • Given this, the chosen measures / indicators are no longer relevant to this change in strategic direction and required revision.

As shown in Table 6, the results framework hampered the assessment of results given:

- Indicators are not specified at the correct 'level' e.g., output used as an outcome measure
- The use of some measures is not directly relevant to an MTO
- Measures used are highly specific to one aspect of an MTO
- Indicators required revision (such as what was observed for MTO 3)
- Extremely high-level indicators (e.g., MTO 2) do not enable attribution of the results reported to the Facility's activities.

This evaluation, therefore, cannot rely on an assessment against the Facility's results framework to ascertain progress towards the MTOs. Further, as described above, this evaluation has also determined that the Facility's Programme Logic did not:

- recognise what is achievable in a given timeframe or by a small-scale flexible, TA Facility in a changing RE landscape and context
- provide clarity as to what 'success looks like' given overly broad outcome statements presented.

5.3 Appropriateness of the Facility's MERL processes

The framing of the STOs and MTOs are not necessarily appropriate for the specified timeframe. The Programme logic suggests the following timeframes for achieving intended outcomes:

- Short-term outcomes – 1- 3 years
- Medium-term outcomes – 3 - 8 years

Long-term outcomes – 8+ years.

In addition, the outcome statements are generally too broad for assessing progress without a clear and realistic results framework. See Table 7 which provides a brief appraisal for each of the outcome levels, noting a comprehensive redesign process should further investigate how the outcome statements could be narrowed to reflect what is achievable for a flexible and modality delivering TA and what timeframes are realistic.

Table 7. Appropriateness of the Facility's Programme Logic

Legend Highly challenging outcome | Challenging outcome | Minimally challenging outcome

LTO1: Improved economic and social benefits from power sector	**LTO2:** Increased economic and social development opportunities from distributed RE projects
The Facility's LTOs are very broad statements lending themselves to a perceived ambitiousness that may not be intended. Underpinning assumptions or factors outside of the Facility's control necessary to achieve these LTOs are not fully detailed.	

MTO1: Strengthened enabling environment (planning, regulation, management and oversight) for RE development	**MTO2:** Better management of the IPP portfolio increases the value of the resource to economy	**MTO3:** Increased number of distributed RE projects under investigation, development & sustainable operation
This MTO may not be feasibly achievable within three to eight years of Facility implementation given the lead-in time to ensure that the legislative and regulatory frameworks are in place, supported by systems, tools and processes. An alternative is to modify STO1 to replace this MTO and recognise that by the medium-term, it is more reasonable to expect that governments are beginning to enact laws, regulations and policies around RE development. It may also benefit from further specificity of what aspect of RE is being considered e.g., energy transition etc.	This MTO may also not be feasibly achievable within three to eight years of Facility implementation as it requires that management frameworks, systems, tools and processes are in place and are adhered to by IPPs. An alternative is to modify STO2 to replace this STO and recognise that by the medium-term, it is more reasonable to expect that governments are beginning to show effective management of IPPs. The outcome should be targeted towards GoL's management activities (e.g., undertaking effective dam inspections) or adherence of IPPs to rules and regulations with more direct alignment to the Facility's contribution.	Given there was a shift away from focussing on distributed RE projects during early implementation and changes to priorities regarding diversifying RE sources, this STO warrants reframing (i.e. potentially to focus on supporting the GoL to explore variable RE sources to enhance energy stability).

STO 1: Improved implementation (development and coordination) of RE policy, law, regulations	**STO2:** Improved management of IPP project assessment, approval and monitoring processes	**STO3:** Increased public sector skills, knowledge and capacity in agreed areas	**STO4:** Increased number of distributed RE projects identified and assessed	**STO5:** NZ expertise harnessed to respond to Lao PDR & Cambodia priorities in coordination with other stakeholders
It may not be reasonable to expect that the GoL is able to implement RE policy, law or regulations within one to three years. The outcome statement instead could focus on GoL having the capacity (through knowledge, tools or guidelines) to implement RE policy, law and regulations. It may also benefit from further specificity of what aspect of RE is being considered e.g., energy transition etc.	It may not be reasonable to expect that the GoL will have the capacity or frameworks in place to manage IPP projects within one to three years. The outcome statement instead could focus on GoL having the capacity (through knowledge, tools or guidelines) to manage IPPs. It may also benefit from further specificity on what aspect (i.e., monitoring) of IPP management is being considered.	This STO is appropriately targeted in terms of being achievable within the intended timeframe and as a first step to translating outputs to outcomes. However, if STO 1 and 2 were amended to focus on the built capacity as suggested, then this STO may no longer be necessary.	Given there was a shift away from focussing on distributed RE projects during implementation, this STO is less appropriate now than it was at design. Revision is required to ensure better recognition of the types of distributed RE projects being delivered and priorities for providing TA for diversifying RE sources.	This STO conflicts with more recent progress towards localisation and the Facility's approach of pairing local consultants with international experts. Accordingly, this STO is less relevant now than it was at the time of Facility design which emphasised use of New Zealand expertise and suppliers. This STO could be removed altogether.

Facility reporting includes useful and detailed context monitoring, but the Facility's contribution to these contextual shifts is less clear. The Facility's results framework includes indicators that are high-level and more suited to context monitoring of key sectoral indicators, such as the overall energy mix, EDL's turnover and electrification rates. These indicators are helpful for the Facility and MFAT to keep informed of the context in which they are operating but they are not tailored to capture the Facility's results and how the Facility contributes to shifts in these high-level indicators making causal attribution of the Facility's activities difficult. Strengthened explanation of the causal linkages between the different results levels in the Programme Logic could assist with clarifying the Facility's expected contribution to these changes as part of a larger contribution analysis. More realistic and relevant indicators need to be included to measure the Facility's progress towards outcomes.

Much of the Facility's results, and potential for longer-term impact, are generated from the individual projects supported by the Facility. Completion reporting was not standardised for individual projects, leading to inconsistent reporting quality and ability to trace the contribution of individual projects to overall Facility results. Additionally, completion reports are produced at the conclusion of project activities and do not provide scope for consideration of how longer-term outcomes may materialise. Instead, these reports largely focus on the outputs delivered.

The Facility requires MERL expertise to adequately capture and communicate results to support decision-making and learning. There is no evidence of dedicated MERL expertise being procured by the Facility (nor requests or approval to do so from MFAT) to regularly review the Facility's Programme Logic and/or results framework which is good practice when implementing a flexible and responsive modality. The results framework developed at design does not adequately reflect the reality of Facility implementation and would have benefitted from revision during the life of the Facility (see section 5.2). There is also no evidence of the development of a robust MERL Plan that contains a Results Framework with realistic indicators. Realistic outcomes and indicators that are suitable for TA and capability building activities are critical for assessing effectiveness and impact (see section 7.3 for additional details about MERL expertise).

5.4 Facility's unintended impacts

The Facility has delivered significant partnership outcomes, building a visible profile for both the Facility and New Zealand which was not targeted in the Programme Logic. The Facility's co-location with MEM has facilitated the development of strong relationships and enabled dialogue and collaboration, placing the Facility, MFAT and New Zealand front of mind. The Facility's collaborative and responsive nature, combined with proximity to MEM, has built strong and trusted relationships with the GoL.

> *"New Zealand is represented well by the Facility. So MFAT has huge value out of the Facility."*
> - Development Partner

Feedback about the Facility's ways of working is very positive across all stakeholder groups including from across GoL, donors and partners. The flexibility of the Facility in response to new areas of demand has been a strength of New Zealand's support, especially compared with other more traditional approaches to overseas assistance that is more structured and focused on achievement of donor-imposed goals.

The decision to fund and work with EnergyLab and Sevea Consulting in Cambodia was strategic given their relationships and knowledge in-country. The November 2023 Clean Energy Week supported by the Facility with other development partners, was successful in building understanding of relationships and context and scoping potential areas for future Facility involvement. EnergyLab and Sevea Consulting facilitated key meetings for the Facility with senior MME officials.

The Facility stepping into a vacant donor coordination role in Lao PDR (see chapter 4.2) has further enhanced both the profile and the reputation of the Facility, MFAT and New Zealand. Adoption of this role has improved the overall service offering of international support to RE in Lao PDR and enabled improved attribution of results to the individual development partners, including MFAT, because of the clarity of roles and support provided.

Photo: Facility Lunch with Ministry of Energy and Mines, Department of Energy Management
Source: Facility Management Team

The partnership outcomes generated place the Facility in a strong position to pursue strategic and impactful projects into the future. As a result of the Facility's ways of working and strong relationships, the Facility is viewed as a trusted partner in the RE development space. Several different stakeholder groups approach the Facility as a respected source of advice and a key coordinating partner in the RE space.

These foundational partnerships, combined with the trust stakeholders have in the Facility, mean the Facility is well placed to play a key role in prioritising and influencing the strategic direction of RE development in Lao PDR. Additionally, stakeholder consultation indicates that there has been an increased willingness to discuss and engage the Facility in politically and commercially sensitive areas such as IPP management. This is testament to the strength of relationships built.

> *"[The Facility] has done an exceptional job to carve out a political and technical contribution. No one is doing the work, and no one is doing it as well. MFAT is getting disproportionate bang for buck in terms of policy influence."*
> - Implementing Partner

Direct Facility support to MEM has enabled increased access to development funds for GoL. The Facility responds to varied requests from GoL, through either the development of project concepts or through the provision of direct advice from the Facility Management Team. The Facility Management Team has assisted the various departments of MEM with preparation of policies and applications, external to the Facility. Anecdotally, this has helped GoL to access opportunities and funding from external sources. For example, Facility support assisted DEPP to access support from both USAID and the Australian Department of Foreign Affairs and Trade. Ongoing Facility engagement with EDL to address critical system upgrades has the potential to unlock support from other development partners.

The facilitation of intra-government networks for improved efficiency and collaboration. Stakeholder feedback indicated that the Facility's capacity building activities forged cross-department and cross-ministry connections. For example, English language training participants were from several departments within MEM as well as EDL and EDL-GEN. Participants and implementors indicated that, in their everyday roles, participants do not have the opportunity to meet and collaborate but participation in the English course allowed these connections. As a result, participants were exposed to a broader view of the RE management and development landscape in Lao PDR to foster collaboration and improved public sector performance.

The Facility's responsiveness and adaptability to pursue a diverse range of activities has had multiple benefits beyond direct capacity building outcomes. The range of benefits being delivered by this approach include:

- Meeting a critical identified need builds trust and relationships with GoL stakeholders

> *"All of the donors would like to work with the government but how do you compete and show the government that you can deliver what they really need? English language is one of the ways to build this trust."*
> - Development Partner

- Enabling stakeholders to benefit from other RE activities

> *"Most have studied in Laos so English is quite lacking. We need regular English training first to get to benefit from renewable energy training."*
> - Government Partner

- Building influence through response to ad-hoc requests places the Facility in a strong position to move beyond scoping and relationship building activities to pursue a strategic portfolio.

5.5 Factors affecting effectiveness

There was insufficient strategic guidance from the Programme Logic and governance mechanisms to focus Facility projects towards achieving intended outcomes. The broad and ambitious nature of the Facility's MTOs and LTOs has not provided sufficient clarity about how the Facility is expected to contribute to longer-term results. Inclusion of such a range of MTOs targeting the enabling environment, IPP management and the RE project portfolio encouraged a mix of projects that aimed to respond across these areas resulting in less concentrated support to any one area of RE development. The Facility, together with MFAT, aimed to operationalise the high-level intent of the Programme Logic through a Menu of Services designed to support project prioritisation in line with the Facility's strategic focus and shared GoL priorities. However, this was not systematically utilised.

A lack of clarity and specificity within the Programme Logic was compounded by the infrequent Steering Committee meetings in Lao PDR to adequately steer project prioritisation towards achieving the Facility's MTOs and LTOs. Accordingly, this resulted in a diverse range of projects largely contributing at the output and STO level. Additional detail about the Facility's governance is available in section 6.2.

Progression of recommendations generated by the Facility's activities was hindered by a lack of longer-term and post-implementation support. The Facility's activities have produced high-quality outputs and built foundational understanding and capacity. However, the short-term nature of TA

projects provided has inhibited the Facility's ability to provide deeper support for the actioning of recommendations or to provide options for addressing systemic barriers. Post-implementation support from implementing suppliers was limited and was provided virtually when made available.

Accordingly, the evaluation of the five completed projects shows that completion has largely meant the provision of in-scope deliverables including technical materials, training or activities rather than a focus on producing longer-term results. With the exception of a few MEM departments reaching out to implementing suppliers via WhatsApp following project completion (and receiving helpful responses), the evaluation found that implementation support was not provided consistently to support the implementation of recommendations from the Facility's projects.

Additional barriers exist related to partner resourcing and influence over other stakeholders to progress technical recommendations. Reported barriers to achieving outcomes include inadequate resourcing of GoL departments and mechanisms responsible for RE development and ongoing power imbalances between GoL and IPPs which hinder implementation of recommendations (i.e., dam safety). The evaluation found that while outputs and reports produced through the Facility's projects were unanimously seen to be of a high-quality and appreciated by GoL, there is limited evidence that MEM is implementing recommendations within outputs produced (i.e., dam safety reports). However, there is some anecdotal evidence that policies, regulations and legislation (i.e., draft updated RE Strategy, dam safety laws and EE&C Policy Roadmap) arising from recommendations or support from the Facility's projects were being referred to and purposed for implementation.

It should be noted that larger scale impact required other factors to be resolved (e.g., the availability of data to inform energy efficiency indicators) which demonstrates that while the projects were useful, there are greater systemic factors that need to be addressed before real outcomes can be generated. The Facility attempted to address these where possible within the scope of short-term TA and capacity building projects (e.g., the cancelled Energy Data Collection, Management and Reporting System project). However, without scope for more focused and longer term support the progress to overcome such systemic issues is limited.

Further, there was limited evidence of the Lao PDR Steering Committee engaging in strategic discussions with the GoL to provide options for addressing implementation barriers and to support systemic reforms. Without high-level and Post representation, the influence of a small-scale Facility to address issues that are politically sensitive (e.g., IPP negotiations) has been limited.

The Facility Management Team has demonstrated significant cultural capability and delivered localised approaches, enhancing relevance, effectiveness and sustainability. The Facility Team's ways of working and connecting with stakeholders received consistently positive feedback from all stakeholder groups. Engaging a combination of local and international staff has successfully balanced international and independent expertise with contextually appropriate approaches.

The willingness of the team to learn from local stakeholders and adapt approaches accordingly is greatly appreciated by stakeholders and enhanced the results achievable. For example, in designing and implementing the second phase of the English language training, the local implementing partner shared experiences from previous trainings of low attendance and graduation levels with government stakeholders largely due to competing work priorities and conflicting work schedules. Following discussions with the implementing partner, the Facility team was able to leverage existing relationships with MEM, EDL and EDL-Gen to secure assurances that time would be made for selected participants to attend all English classes. This led to high attendance levels with an average of 87 per cent across three cohorts.

Photo: Graduating Class from Second English Language Project at Vientiane College
Source: Facility Management Team

6 Modality and efficiency

This chapter presents the evaluation's findings on whether the Facility model is fit for purpose for achieving intended outcomes in Lao PDR's RE sector and for supporting the overall Activity's efficiency. The evaluation assessed the appropriateness of the Facility's resourcing profile, including how this has enabled a localised approach.

Finally, this chapter examines how MFAT, and the Facility, have utilised time and resources to support the effectiveness and efficiency of the Facility. It also presents findings on the Facility's governance and oversight mechanisms.

This chapter primarily focuses on how the modality applies in Lao PDR given the primary focus of the Facility and this evaluation on Lao PDR, while broadly considering the Facility modality and suitability for projects in Cambodia.

Key findings

- The modality has been fit for purpose for delivering demand-driven and high-quality assistance that met the expectations and requirements of the GoL.
- Key factors contributing to this include co-location with MEM; flexible and responsive programming; and access to a range of suitably skilled implementing suppliers that could deliver work across MEM departments.
- The skills and expertise of the Facility Management Team, their cultural affinity with both Lao PDR and New Zealand, and collaborative ways of working were also acknowledged as being important contributing factors.
- The Facility supports overall efficiency by having: a lean resourcing profile with locally engaged staff; unofficially undertaking supplier management functions on behalf of MFAT; and representing New Zealand at key forums / meetings in the absence of a NZ embassy in Lao PDR and Cambodia.
- While perceived to be minor issues by the GoL stakeholders, lengthy timeframes for procuring the services of implementing suppliers and infrequent Steering Committee meetings in Lao PDR affected the Facility's efficiency and effectiveness.

6.1 Appropriateness of the modality for effectiveness and efficiency

The modality has been fit for purpose for coordinating technical assistance and capacity building activities and flexibly responding to Lao PDR's priorities, particularly for initial phases of RE assistance. The Facility model, involving co-location with MEM, was appropriate and relevant to respond to and understand GoL's needs for RE assistance. The flexibility and responsiveness afforded by a Facility model has facilitated the high degree of relevance and alignment with GoL's priorities and needs. Given that the Facility is New Zealand's first RE activity in Lao PDR, building relationships and having the opportunity to work collaboratively with several MEM departments was pivotal for relevance and coherence, and for understanding how and when New Zealand assistance can yield impact in Lao PDR.

The evaluation found that outputs and reports produced through the Facility's projects were unanimously seen to be of a high-quality and appreciated by GoL. GoL stakeholders reported that the implementing suppliers engaged through the Facility were professional, suitably skilled and appropriate for meeting the expectations of the GoL. The increasingly localised approach of the Facility also contributed to ensuring the relevance of outputs, noting that several departments suggested that additional and in-person support was required to help departments implement the recommendations from suppliers. Within the existing modality, and budget permitting, this could have been provided by extending the scope and timeframes of supplier contracts and/or by engaging the Facility's technical advisers.

The flexibility afforded by the Facility model was also appropriate for exploring the need for RE assistance in Cambodia. The visits and meetings attended by the Facility Manager and MFAT's First Secretary (Development) from Bangkok were appropriate for early phases of work in Cambodia. Further, engaging EnergyLab through a project was strategic given its growing networks of partners and the resulting introductions to RGC and other stakeholders.

The Facility Management Team's collaborative ways of working have contributed to fostering positive bilateral relationships and efficiencies for MFAT. The Facility Management Teams' ways of working are backed by a strong understanding of the local context and genuine engagement of the Local Project Coordinators in Facility-wide tasks. While the positive partnership-related outcomes may be beyond what was targeted in the Programme Logic, they enhance overall Facility relevance and efficiency as the Facility supports implementing suppliers to deliver work in complex, changing and politically sensitive environments.

The Facility's collaborative and responsive ways of working were recognised by several development partners consulted as being critical, particularly given MFAT does not have a diplomatic Post in Lao PDR. The Facility Manager has also supported efficiency by representing New Zealand in unofficial capacities and coordinating high-level visits from MFAT to Lao PDR and Cambodia. While this does substitute an MFAT representative engaging directly with the GoL, the regular presence of a Facility Manager from New Zealand helped to build New Zealand's profile and reputation amongst the GoL stakeholders.

The gradual growth in the resourcing profile was commensurate to the growth in projects and maturity of the Facility to better respond to needs and report on progress from the initial phases. In part due to the localised approach and co-location of

the Facility in MEM, the Facility Management Team's cultural affinity and understanding of both New Zealand and Lao PDR has helped not only to support partnership outcomes for New Zealand, but also to ensure high-quality and professional delivery of TA. This was acknowledged by several MEM departments.

The early employment of the first local coordinator, and employment of a second coordinator in the penultimate year of this phase has been critical for managing the growth in portfolio, breadth of Suppliers and MEM departments the Facility works with, and for supporting day-to-day operations. The Facility's localised approach enhanced efficiency and external coherence through strong collaboration with MEM and development partners, which saw project designs cancelled if found to be duplicative.

Overall, the Facility's Management Team's resourcing profile was adequate and worked well for the majority of the first two phases, noting there are gaps in MERL and inclusion expertise that affected the Facility's effectiveness and impact. The evaluation found the Facility Manager, paired with access to Technical Advisers and local Project Coordinators, had complementary skillsets to manage the design of the Facility's projects and the coordination of implementing suppliers.

Resourcing gaps in MERL and inclusion are evident and affected assessments of how the Facility has achieved intended MTOs and New Zealand's International Development Principles. Gaps in MERL and integrating inclusion were acknowledged by the Facility Team with a request for dedicated MERL expertise and ongoing support to build staff capability to monitor and report on the achievement of outcomes. There is no clear evidence of dedicated MERL or inclusion expertise procured by (nor requests from MFAT to do so) to regularly review the Facility's Programme Logic and/or results framework which is good practice when adopting a flexible and responsive modality. There was also no evidence of expertise or specialist support for assessing activities against intended outcomes and/or New Zealand's other International Development Principles of inclusiveness, resilience and sustainability.

The Facility Management Team effectively manages the current workload, providing no evidence to demonstrate need for additional staff. However, access to specialist skillsets was required to address gaps and build capacity in technical RE, MERL and inclusion. It was evident that, across departments within MEM, GoL partners appreciated the ad-hoc support provided by the Facility for reviewing policies, regulations, application forms and similar to strengthen the enabling environment. While this was not adequately captured in progress reporting and was revealed through stakeholder consultations, this signalled the value of continued access to technical RE or legal expertise for advancing complementary work that supported the Facility's intended outcomes.

MERL and inclusion expertise was required but not accessed at key points and periods (i.e., for revising the Programme Logic, reviewing the results frameworks and progress reporting, and undertaking inclusion analysis) to support outcomes reporting and assessments about effectiveness and inclusiveness.

For Cambodia, stakeholders reported that an in-country representative of the Facility based in Phnom Penh would be beneficial for making progress and building relationships. However, with only two projects designed and implemented, it was appropriate to have existing Facility Management and MFAT staff undertake current work in Cambodia. There is no clear need for additional resourcing in Cambodia at present given no work was delivered directly to RGC or to SoEs in Cambodia.

The unofficial shift of supplier management / performance monitoring functions from MFAT to the Facility Manager is working well and has contributed to efficiency. The Facility Manager was well positioned with adequate skills and experience to closely monitor the progress and performance of implementing suppliers. A few GoL stakeholders expressed confidence in the Facility's capabilities to help implementing suppliers course correct if required as they are on-the-ground and followed implementation progress closely.

During the Facility's design, it was intended that MFAT would undertake procurement, supplier contracting, contract management, and supplier management and performance monitoring functions. However, as the Facility matured, the Facility Manager took on supplier management and performance monitoring functions (noting this shift is not official nor formally documented). Implementation suppliers reported no issues with this arrangement and did not express a need to engage directly with MFAT for project implementation, despite having a contract in place with MFAT. Implementing suppliers noted that having the Facility Management Team on-the-ground and their experience liaising was beneficial for understanding GoL requirements and contextual challenges, and for providing logistics, coordination and cultural understanding to help projects be more fit for purpose and context specific.

While MFAT's undertaking of procurement, contracting and contract management functions was appropriate for the initial phases of the Facility, there are opportunities to improve efficiency by reshaping future management arrangements. The evaluation found that for the first and exploratory phases of the Facility, MFAT's undertaking of some management functions, in particular procurement and contracting functions, was appropriate despite the lengthy procurement processes and administrative burden on MFAT. MFAT was well placed to identify, procure and contract New Zealand-based suppliers (which formed the basis of STO5) due to its experience engaging

New Zealand-based suppliers for RE programming across the Pacific, South East Asia, Africa and the Caribbean. There was also merit to MFAT having some knowledge of Supplier performance, particularly for the purposes of identifying Suppliers for MFAT's other or future RE activities.

While a few MEM departments and Facility staff acknowledged that in some instances the project approvals and procurement required a long lead time, other stakeholders (including senior MEM officials) considered delays and long lead times to be the norm for development partners working in Lao PDR. The reasons for delays in particular procurement processes were not made evident to GoL, and they requested more transparency and updates from the Facility on the status of procurement processes.

The evaluation found that overall efficiency can be improved by MFAT formally transitioning procurement, contracting, contract management and supplier management / performance monitoring functions to a Facility Manager (or Managing Contractor) for a future phase. MFAT can still access knowledge about supplier performance by requiring clear briefings on supplier selection and performance.

6.2 MFAT's governance and use of resources

MFAT has efficiently provided oversight and governance through a multi-disciplinary Activity Management Team, but opportunities exist to improve the frequency and agenda of Steering Committee meetings in Lao PDR to enhance the Facility's effectiveness and sustainability. MFAT has effectively leveraged existing resources in Wellington and at the closest diplomatic post in Bangkok to oversee the Facility. The Activity Management Team brings multi-disciplinary expertise, including regional and technical, which is necessary for a flexible and responsive modality operating in an ASEAN context with rapidly increasing electrification rates, growing energy demand, and clean energy transition planning occurring to varying degrees.

While the membership of the current Steering Committee in Lao PDR remains appropriate given the Facility's current intended outcomes, existing governance mechanisms can be better utilised to improve the effectiveness, impact and sustainability of the Facility. The Lao PDR Steering Committee, which involves several departments within MEM, were intended to occur every six months to discuss high-level strategic matters, review work plans and discuss arising policy or strategic issues. However, Steering Committee meetings have not occurred as frequently as intended and have more focused on the presentation of updates from the Facility and MEM departments. The lack of in-person engagement has led to limited opportunities to discuss the progress on implementing Facility-produced recommendations.

The Facility has one focal point and sponsor within MEM's DEEP, who liaises between the Facility and other departments within the MEM and at ministerial levels. When the Steering Committee did not meet frequently primarily due to scheduling challenges, the presence of a strong focal point in the MEM enabled continued communications. The focal point expressed confidence that queries and matters arising could also be resolved out-of-session due to the co-location of the Facility within the MEM and positive working relationship with the Facility Management Team.

Overall, the evaluation found that the Steering Committee meetings can be better utilised through in-person and frequent engagement, and a greater focus on discussing strategic matters that support the achievement of the Facility's outcomes and GoL's priorities (i.e., discussing options with MEM departments for addressing implementation barriers and progressing necessary systemic reforms).

The governance arrangements in Cambodia are appropriate for now but should include the RGC's MME if direct technical assistance and capacity building are provided in the future. In the absence of direct TA and capacity building to MME, the current governance arrangements with various staff across MFAT are appropriate. The attendance by staff from Bangkok Post and/or the Facility Manager at key events such as development partner coordination meetings and Clean Energy Week were useful for relationship building, and also for understanding the RE landscape and stakeholders that could form part of a future Steering Committee.

Photo: Emergency Action Plan Drill at Nam Mang 3 Dam
Source: Facility Management Team

7 Future considerations

This chapter presents the considerations for future directions based on the evaluation findings, lessons learned and recommendations from internal and external stakeholders consulted during the evaluation. These considerations are intended to provide options to inform future programming and to identify key priority areas of RE support in Lao PDR, Cambodia, and the broader ASEAN. For brevity, considerations that may apply across several criteria are not repeated under each criterion. However, it is likely that improvements to enhance effectiveness and impact will also strengthen relevance and coherence (and vice versa).

It should be noted that a redesign process was not undertaken as part of this evaluation. Given the primarily summative focus of this evaluation of the Facility's work in Lao PDR and a decision for the evaluation team not to engage with the RGC at this stage, there is merit to testing the future considerations with key GoL and RGC counterparts prior to redesigning and developing a business case for a potential future phase.

The future considerations within this chapter were written on the basis that MFAT continues with a flexible and responsive modality which is working well to service the GoL's needs in a changing RE landscape. A redesign process will be required to determine the best modality (i.e. Facility or Managing Contractor Model) for a potential future phase and to ascertain how a future modality can incorporate the aspects of the current model that are working well and address the opportunities for improvement.

7.1 Key considerations for relevance and coherence

1 Maintain a flexible and responsive modality with collaborative and localised approaches and access to suitable implementing suppliers

The evaluation found that the responsive and flexible nature of the modality, not only ensured the relevance and external coherence of the Facility, but also led to significant partnership outcomes and heightened profile of New Zealand's expertise and assistance in the RE sector in Lao PDR. The Facility's localised approaches, through engaging locally engaged staff as well as Lao-based suppliers, supported collaboration with the GoL and the delivery of context-specific outputs.

Considerations for the future:

- Given the continued need for support by the GoL, MFAT should explore maintaining a flexible and responsive modality that continues to create space for collaboratively identifying and designing projects with the GoL (noting that projects should be aligned to a narrower set of intended outcomes to also maximise effectiveness, impact and sustainability).
- Maintaining beneficial aspects of co-location with MEM and an adequate local presence to coordinate and support the delivery of high-quality outputs relevant for Lao PDR's RE sector.
- Continuing to provide access to a mix of international and local implementing suppliers to maintain relevance to GoL's priorities and needs (see consideration no.9 for further detail on this).

1 Maintain a flexible and responsive modality with collaborative and localised approaches and access to suitable implementing suppliers

2 Continue to lead (or co-lead) donor coordination and harmonisation in Lao PDR

The evaluation found that the Facility has filled a valuable space for donor coordination in Lao PDR, greatly contributing to external coherence of RE support. This has positioned MFAT and other development partners working in Lao PDR's RE sector to deliver relevant work that minimises duplication and fill gaps in assistance to achieve RE priorities in Lao PDR.

Considerations for the future:

- Consider formalising sole or shared leadership roles of the donor coordination mechanism in Lao PDR, which could continue to build New Zealand's profile and position MFAT to maximise coherence and impact for Lao PDR's RE sector.
- Aligning in-country visits by MFAT staff from Bangkok Post with quarterly Energy Sector Development Partner Coordination Meetings in Lao PDR to further maintain strategic engagement with key development partners in the RE sector.

3 Deepen the relationship with RGC and key development partners in Cambodia to further understand the need for direct TA projects

The evaluation found that the current two projects in Cambodia are relevant and aligned with the priorities for the clean energy transition and energy efficiency to improve energy outcomes. They are also key towards developing an initial footprint for the Facility's presence in Cambodia**.** The evaluation also found that the RE sector in Cambodia is a crowded space in terms of development partner assistance, and that working donor coordination mechanisms are already in place. Further engagement with MME is necessary prior to and during a redesign process to understand the need for TA and capacity building projects in the RE sector.

Considerations for the future:

- Consider undertaking senior-level roundtable discussions with MME, EDC and EAC to understand where potential shared or similar priorities in Lao PDR and Cambodia that would warrant the Facility scaling up and/or modifying projects for Cambodia.
- A future redesign should test with MME and other development partners whether there is value in having an in-country representative to facilitate TA or whether certain MME staff or like-minded donors could help play a coordination or liaison role for the Facility's potential projects in Cambodia.
- Maintaining regular engagement with MME and the Development Partner Coordination Group can help to minimise duplication and identify gaps that MFAT could fill (noting they should be aligned to a narrower set of intended outcomes).

7.2 Key considerations for effectiveness and impact

4 Delivering fewer, higher-value and longer-term projects that closely align with more targeted Facility outcomes

The evaluation found that the breadth of the Facility's portfolio limited the achievement of the Facility's intended outcomes (particularly at the MTO level) and affected internal coherence. However, it should be noted that the flexible and responsive modality, coupled together with the diversity of the portfolio to date, contributed to the positive partnership outcomes that enabled New Zealand to build trusted relationships with several MEM departments and positioned MFAT to undertake work in priority areas that are politically sensitive (i.e. IPP management).

Considerations for the future:

- Delivering fewer, higher-value and longer-term projects with adequate implementation support (see consideration no. 5) that are aligned to a narrower Programme Logic (see consideration no. 6)
  - Should a similar sized activity budget be made available for a potential future phase, MFAT could consider four to five key projects in Lao PDR and one or two projects in Cambodia or regionally, together with a small flexible fund (i.e., $200,000) for Technical Advisers to provide ad-hoc reviews of policies, laws and regulations for the GoL.
- Regularly reviewing and updating a Menu of Services (in consultation with the GoL through the existing governance mechanisms) to operationalise a narrower Programme Logic and support project prioritisation. This should include clear examples of the types of projects that are in or out of scope.
- Maximising synergies across projects (including potentially across both Lao PDR and Cambodia) and having complementary projects to other development partners to maximise impact.

5 Incorporating face-to-face implementation support to overcome barriers to implementing recommendations

The GoL stakeholders acknowledged challenges with implementing some of the recommendations provided by the Facility's projects. Several MEM departments required support to implement recommendations from the Facility's projects, and further technical support to address systemic barriers.

Considerations for the future:

- Follow-up implementation support (including to review resulting policies, laws and regulations) is required following delivery of project outputs for at least 12 months. This support should be face-to-face due to the technical nature of Facility's work and systemic barriers to implementation in Lao PDR. Options for providing this support include:
  - Extending the scope of international and local Supplier contracts for follow up and to help implement some of the recommendations.
  - Where appropriate, engaging technical advisers through a Short-term Advisory (STA) Pool to follow up and provide implementation support.
  - Engage a full-time Technical Adviser embedded within the modality itself to continually provide post-implementation support, noting that this is highly dependent on finding one or two persons who can provide TA across a range of technical RE areas.
- Recognising the turnover within the GoL and movement between MEM departments, suppliers should also be required to develop how-to guides, slide decks and training modules that can be maintained in a central repository for the TA to have enduring benefits. The Facility's Project Coordinators could support with recording tools, and formatting, and storage and sharing of resources.

5 Incorporating face-to-face implementation support to overcome barriers to implementing recommendations

6 Revising the Facility's Programme Logic to ensure outcomes are realistic and reflect anticipated key priorities

The evaluation found that while the outcomes in the Programme Logic are all relevant to the GoL's and RGC's broad energy priorities, most outcomes are broad, ambitious and need to better reflect what can be achieved within a particular timeframe and through a flexible, responsive modality delivering TA and capacity building activities to the complex RE sector in Lao PDR. The identified issues with the Programme Logic (and its corresponding results framework) made it challenging to assess and report on the Facility's achievement of outcomes at the MTO level.

Considerations for the future:

- As part of a potential redesign process, narrow the Programme Logic and ensure that it is realistic for the RE sector in Lao PDR and the provision of TA and capacity building activities.
  - A revised Programme Logic should ensure that all assumptions and barriers outside of the Facility's control are made clear.
  - A partnership-related outcome (instead of one around harnessing New Zealand's expertise) could be added to reflect the role that MFAT could play in leading engagements with the GoL and donor coordination to support overall outcomes in Lao PDR's RE sector.
  - Consider the other issues and suggestions in Table 7 when revising the Programme Logic.

7 Improving the Results Framework and progress reporting to better capture the Facility's contributions

The evaluation found that the Facility's results framework required greater specificity and alignment with the intent of the various outcome statements. There was no evidence of specialist support being engaged to update the results framework or to support the design of a methodology for ongoing data collection and monitoring against intended outcomes.

7 Improving the Results Framework and progress reporting to better capture the Facility's contributions

Considerations for the future:

- In the inception period of a future phase, engaging a MERL specialist to design a results framework with realistic indicators. Ideally, this should be developed in consultation with the Lao PDR Steering Committee to maximise its utility.
- Incorporating relevant indicators and a requirement to report against outcomes within implementing suppliers' contracts.
- Developing a standardised progress and completion report for projects to minimise inconsistent reporting quality and enable better contribution analysis of individual projects to intended Facility outcomes.

8 Recognising the readiness levels, continue to slowly advance and mainstream inclusion

While the Facility did not have evidence of inclusion analysis or action plans, the Facility has integrated some inclusion considerations and generated inclusion-related results and gender-disaggregated data for most activities. Further opportunities exist to consider how inclusion could be mainstreamed into programming.

Considerations for the future:

- Undertaking an Inclusion Analysis and/or developing an Action Plan during a redesign process, noting this should only be developed following the revision of a Programme Logic.
- The Facility should consider mainstreaming and opportunities for advancing gender equality, human rights and inclusion of ethnic and other minority groups, particularly for any projects relating to IPP management, concession agreements and local government capacity building.
- Advocating for increasing the number of women to be nominated for training and capacity building workshops.
- Procurement processes can also emphasise promotion of women, suppliers from ethnic minorities and other vulnerable groups.

7.3 Key considerations for modality and efficiency

9 Considering the possible management arrangements for a flexible and responsive modality in Lao PDR that maximises efficiency

The key elements of the current flexible and responsive modality that supported relevance, external coherence and efficiency included: co-location with MEM; ongoing presence of the Facility Manager and locally employed Facility staff; and access to both suitably skilled New Zealand-based and local Suppliers who could work across MEM departments. These elements can be maintained even with alternate management arrangements (i.e. a Managing Contractor model).

It should be noted that the evaluation found no clear evidence to suggest that a Facility or Managing Contractor model would deliver greater effectiveness or efficiency. Given the need for revising the Facility's

9 Considering the possible management arrangements for a flexible and responsive modality in Lao PDR that maximises efficiency

Programme Logic and the current breadth of the Facility's portfolio (and implementing suppliers), there is no evidence to suggest a particular set of implementing suppliers would be better placed to service the GoL's needs and priorities.

Considerations for the future:

- Continue with a flexible and responsive modality which is working well to service the GoL's needs in a changing RE landscape, noting that this could be through a Facility or Managing Contractor model.
- Undertaking a comprehensive redesign process to determine the best model for management arrangements.
  - Once the Programme Logic is narrowed, MFAT can better test if efficiency could be further increased by identifying a specific set of core implementing suppliers that could be sub-contracted by a Managing Contractor.
- When considering future management arrangements, consider aspects of the modality that are working well including co-location, access to a mix of international and local implementing suppliers, and locally engaged staff (see considerations no.1 and no.10 also), and how improvements suggested can be achieved through the alternate management arrangements (see consideration no. 11 and no.12).

10 Continuing to ensure a localised approach through having locally engaged staff and external consultants for coordination and implementation support

The evaluation found that the Facility employed a strong localised approach, which supported in part by having two local Project Coordinators within the Facility and having local external RE consultants work on some projects (i.e., dam safety reviews). Locally engaged staff and consultants helped bridge gaps in contextual knowledge and supported international suppliers to deliver high-quality outputs and meet key stakeholders.

Considerations for the future:

- Future management arrangements should maintain an on-the-ground and local presence. This will ideally be through continuing co-location with MEM as well as engaging local staff and local Lao-based consultants / suppliers.
- Brokering partnerships between international implementing suppliers and local RE consultants to ensure fit for purpose technical expertise and to start projects with strong relationship and networks in Lao PDR.

11 Ensuring future management arrangements are resourced to undertake all management functions

The Facility has demonstrated efficiency by undertaking supplier management and performance monitoring functions (even though this shift is not formally documented). There is justification to make this arrangement formal in future management arrangements and consider transferring other

11 Ensuring future management arrangements are resourced to undertake all management functions

management functions currently undertaken by MFAT to increase efficiency and reduce administrative burdens for MFAT.

Considerations for the future:

- MFAT should consider transitioning all management functions including procurement, contracting, supplier management and performance monitoring to a Facility Manager or Managing Contractor.
- If MFAT opts to continue with a Facility Model, MFAT should provide a list of potential New Zealand-based suppliers to a future Facility Manager to enable access to a suitable mix of international and local suppliers.
- MFAT should also undertake a Procurement Capability Assessment to ensure that a Facility Manager and/or Managing Contractor has the capacity to conduct procurement and contracting in a manner to MFAT (i.e. with an acceptable level of probity)
- MFAT should continue to provide oversight of these functions, and request clear reporting on procurement, contracting and supplier performance.

12 Embedding access to and budget for regular MERL and inclusion expertise as part of future management arrangements

The evaluation found resourcing gaps in MERL and inclusion, and this affected assessments of how the Facility has achieved intended MTOs and New Zealand's International Development Principles.

Considerations for the future:

- Future management arrangements should include an STA pool to be drawn upon for regular access to MERL and inclusion expertise where required. The STA Pool could include a set number of days per annum for the following specialist support:
  - A MERL Adviser to provide expertise and input at key points and periods (i.e., refining the Programme Logic following key adaptations, reviewing the results frameworks, developing a reporting template, and providing feedback on progress and outcomes reporting). The MERL Adviser could support learning mechanisms through Pause and Reflects, developing case studies and/or outcome harvesting to better support the Facility's reporting of progress.
  - An Inclusion Expert to work collaboratively with the Facility and the Steering Committee to develop an overarching Inclusion Action Plan that serves as a guiding document for mainstreaming inclusion across the Facility's work and review data and actions taken on an annual basis.

13 Maintain the existing governance arrangements for Lao PDR and Cambodia, but ensure that Steering Committee meetings occur more regularly, in-person and are strategic

The evaluation found that the membership of governance and oversight arrangements are adequate given the current scope of work of the Facility. However,

13 Maintain the existing governance arrangements for Lao PDR and Cambodia, but ensure that Steering Committee meetings occur more regularly, in-person and are strategic

the infrequency of meetings and current agenda for meetings have meant limited strategic discussion with the GoL to address the barriers to implementation and to support systemic reforms.

Considerations for the future:

- Maintain the existing governance arrangements (i.e., having GoL as part of the Lao PDR Steering Committee) but refresh the agenda to create space for strategic-level discussions on how the Facility can maximise effectiveness, inclusion, resilience and sustainability.
- The Facility can engage Technical Advisers to provide the research and options to support these strategic-level discussions that will improve overall effectiveness of the Facility.
- In Cambodia, if there is a clear decision for the Facility to provide direct TA or capacity to MME, EAC or EDC, consideration should be given to expanding membership to the RGC.
- Timing high-level diplomatic visits from MFAT with the Steering Committee meetings in Lao PDR and Cambodia, key donor coordination meetings and as launches of key publications or reports with senior officials for maintaining relationships.

14 Continuing assistance to Lao PDR, noting this should be balanced with exploring opportunities that will benefit LDCs at a regional level and support regional integration

The evaluation found that the Facility is well positioned to build on the momentum from the first two phases to now undertake projects in line with a narrower, more focused Programme Logic and the potential future priorities identified in the next section. While all departments consulted within MEM expressed a need for support, this evaluation suggests a focus on fewer, higher value projects to maximise coherence, effectiveness, impact and sustainability.

The evaluation also noted the consistent intention to expand to Cambodia, but the additional efforts required to identify a niche focus area for the Facility to contribute meaningfully in the context of a crowded donor space. The expansion into Cambodia is still warranted given the significant clean energy transition ambitions and increasing energy demand in Cambodia, but further work is required to determine if MFAT's development assistance is beneficial and will not be duplicative.

The evaluation found that with increasing energy demands and energy trading across the region, regional integration and related efforts can also advance the strengthening of enabling environments and diversification of RE sources for LDCs.

Considerations for the future:

- Continue providing assistance to the GoL, and focusing on areas that will benefit most from TA and capacity building (see section 7.4) and channelling all or the majority (i.e., 80%) of the project funding to Lao PDR
- Upon meeting with RGC MME's, EDC and EAC, if there is a need for direct TA and capacity building via the Facility, consider a small allocation (i.e.,

14 Continuing assistance to Lao PDR, noting this should be balanced with exploring opportunities that will benefit LDCs at a regional level and support regional integration

20%) for Cambodia for high-impact and high-profile projects. Ideally, this would be to scale up on activities conducted or to be conducted in Lao PDR, thereby maximising synergies and efficiencies.
- While an in-country representative in Cambodia was seen to be beneficial by some stakeholders, this may only deliver value for money if direct TA is regularly provided to MME, EDC or EAC.
- Should a decision be made not to provide direct TA or capacity building to Cambodia, explore the possibility of pooling resources with like-minded development partners and regional bodies (i.e., ASEAN Centre for Energy) for initiatives that will benefit Lao PDR, Cambodia and other LDCs (i.e., regional research helping countries plan the sequence of investments in RE sources)
- Following a mid-term review of a future phase, the 20% could be reallocated to Lao PDR to support additional projects or to scale up projects if there are no Cambodia, multi-country or regional activities that support the achievement of the Facility's longer-term outcomes.

7.4 Key future priorities for renewable energy support in Lao PDR, Cambodia and the broader ASEAN

This section presents the priority areas requiring RE support in Lao PDR, Cambodia and other ASEAN countries that can be supported through TA and/or capacity building support via a flexible, responsive Facility model. The priorities and areas identified serve as a useful tool for New Zealand to conduct an initial assessment of future RE assistance; support strategic discussions with the GoL, RGC and other key development partners; make decisions on potential future areas of support; and to update the Facility's Programme Logic for a potential future phase.

This section has been primarily informed by a literature review covering Lao PDR, Cambodia and other ASEAN countries. This has then been supplemented with discussions with the GoL's MEM and key implementing and development partners in Cambodia. It should be noted that the areas identified in this section are not designed to be prescriptive, and this evaluation does not extend or substitute a full design process.

Lao PDR

The priority areas for TA and capacity building in Lao PDR as identified by the GoL stakeholders and a desktop review include:

- Diversification of RE sources into wind, solar (including solar storage and batteries) and other clean energy sources through:
  - Developing national regulations, policies and laws that support diversification (i.e. technical guidelines for wind and solar)
  - Development of technical guidelines for wind and solar and training (noting Project 8 is already underway and the Facility has supported discussions between Australia and GoL for solar-related work). This includes support for safety-related issues for both wind and solar.
  - Feasibility studies for clean energy sources, particularly for wind technology which is perceived to require even more niche engineering and technical expertise
  - De-risking investments by drafting high-quality documentation to support risk appraisals by financiers
  - Overall support for project prioritisation, preparation, negotiation management; monitoring and evaluation
- Negotiating good outcomes from existing and future hydropower concession agreements and projects and supporting dialogues with IPPs through:
  - Dam safety TA and training and continued training for reviewing EAPs remains very important to GoL (particularly for small dams) because of GoL's four pillars of high-quality technical, safety, social and environmental aspects during planning, designing, construction and operations
  - TA on possible outcomes for hydropower assets are due to be handed over to the GoL in 2029 and 2035 (or be re-leased to IPPs)
  - Legal, technical and environmental support to improve IPPs, beyond the support on Standard Operating Procedures from the World Bank
  - Training local governments who approve small projects (less than 5 megawatts) and receive funds from IPPs through a Community Development Fund
- Integrated resource planning and addressing variable RE integration
- Power sector operation and management support
- Electricity market regulation including electricity tariffs, power purchase agreement, and business licenses to increase professionalism.
- Energy efficiency policies and promotion
- Clean energy transition (including implementing actions from COP26 and COP28)
- English language training with a focus on learning technical RE terms, rather than basic English language skills and study tours/visits to New Zealand (i.e., RE training programmes).

Cambodia

The priority areas for TA and capacity building in Cambodia include:

- Support to unlock policy barriers to ensure orderly energy transition through complete/complementary policy instruments and necessary guidelines and directions
- Support to de-risking investments, mechanisms and new business models for energy efficiency and RE
- Energy demand-side and peak load management and prepare for energy digitalisation
- Support to increasing human and institutional capacities to implement policies and plans.

ASEAN Regional

- Supporting regional integration and harmonisation of regional modalities, guidelines and codes to improve interoperability and enhance the sharing of technical know-how across ASEAN member states
- Supporting investments into RE transitions across ASEAN through initiatives such as:
  - Research (i.e., Approach Paper to unlock RE investment in ASEAN markets)
  - Investment handbooks (i.e., an RE project development handbook providing a one-stop shop guide for interested investors)
  - Regional dialogues or sessions on investing in RE in ASEAN member states
- Carbon Pricing Analysis and Advice such as support to:
  - Develop robust market frameworks and modify financial incentives to promote practices that reduce carbon emissions
  - Align carbon pricing policies with comprehensive climate action plans.

The following areas are generally well covered by existing development partners in Lao PDR, Cambodia and the ASEAN region and could be excluded from the potential TA to deliver a future phase of the Facility:

- Energy efficiency
- EV rollout
- Electrification.

8 Conclusion

As the Facility has entered its sixth year of implementation in Lao PDR and its second year of operations in Cambodia, the Facility has delivered high-quality outputs that have led to the adequate achievement of the following:

- STO1: Improved implementation (development and coordination) of RE policy, law, and regulations
- STO3: Increased public sector skills, knowledge and capacity in agreed areas
- STO5: New Zealand's expertise harnessed to respond to agreed Lao PDR and Cambodia priorities in coordination with other stakeholders/actors.

Some results and partial achievements were also reported towards:

- STO2: Improved management of IPP project assessment, approval and monitoring processes
- STO4: Increased number of distributed RE projects identified and assessed.

This has contributed to the partial achievement of MTO 1 (Strengthened enabling environment (planning, regulation, management and oversight) for RE development), but minimal progress towards achieving MTO2 (Better management of the IPP portfolio increases the value of the resource to the economy) and MTO3 (Increased number of distributed RE projects under investigation, development and sustainable operation). It should be noted, however, that the Facility's activities in enhancing donor coordination and coherence have supported partnerships and progress (outside of the Facility's activities) towards these MTOs.

Progress reporting and consultations in Lao PDR and Cambodia revealed several barriers to achieving MTOs that are a combination of the following:

- Ambitious outcomes in the Programme Logic that are not reflective of what is possible for a Facility delivering technical assistance with a modest budget and within a seven-year timeframe
- Building trust and relationships takes time, especially for sensitive matters such as IPP concession agreements requiring consideration of legal, financial and political matters
- Remote nature of working through COVID-19 which saw more remote delivery than optimal for technical RE work that required site visits and in-person presentations of report recommendations.

While all areas of the Programme Logic remain relevant to the RE priorities in Lao PDR and Cambodia, they need to be reframed to reflect what the Facility can do to support the achievement of the longer-term outcomes and goal. The Programme Logic should ensure that causal linkages are tested, and assumptions and interdependencies for the achievement of outcomes are made clear. The Facility's Results Framework and Progress Reporting templates will also need to be refreshed to ensure the indicators are appropriate for context monitoring, and for monitoring how outputs are contributing to the outcomes within the Programme Logic.

The flexibility, responsiveness and demand-driven nature of the Facility have resulted in 11 projects (9 in Lao PDR and 2 in Cambodia). While the breadth of the Facility's portfolio has played a part in hindering the achievement of the Facility's intended outcomes (particularly at the MTO level), it has enabled the Facility to develop a strong understanding the GoL's capacity and needs as well as trusted relationships with several MEM departments to undertake further work (such as Projects 8, 9 and 13) that is more strongly aligned with the Facility's Programme Logic.

There is an opportunity to leverage these positive early contributions to intended outcomes by selecting fewer, higher-value activities that include adequate implementation support to increase the effectiveness of the Facility's work. The Facility's impact and sustainability can be increased by better utilising existing governance mechanisms to discuss progress on implementing recommendations, developing action plans, and options for systemic reforms to address barriers to implementation.

The Facility's activities and ways of working have led to unintended outcomes of elevating New Zealand's profile in Lao PDR as well as strengthening New Zealand's reputation and building stronger bilateral relationships. This was commended by almost all development partners consulted in Lao PDR who acknowledged that the Facility is delivering significant value for money for New Zealand in terms of achieving partnership outcomes. The Facility's unintended role of leading donor coordination in Lao PDR through large periods of the Facility's life to date has minimised duplication and enhanced relevance, coherence and effectiveness for not only the Facility's activities but also for RE support in Lao PDR.

The first two phases of the Facility have established a strong foundation by delivering high-quality outputs and engaging with GoL partners in a context-specific and responsive manner. This has clearly resulted in partners in Lao PDR being eager to continue working with MFAT on current and emerging priorities including diversifying RE sources, considering options for terminating concession agreements, and energy efficiency to ensure energy stability for socio-economic development.

Before any potential redesign for a future phase, key meetings with RGC should be undertaken to understand whether key gaps exist within the priority areas in Cambodia that can be filled through direct technical assistance and capacity building delivered via the Facility. There is an opportunity to maximise efficiencies and synergies by considering the merit of scaling up relevant and effective activities in Lao PDR or having multi-country activities. Alternatively, the Facility could support regional energy initiatives and forums that advance systemic reforms and provide options for addressing barriers that will indirectly benefit the LDCs within the ASEAN region.

Annex A. Details of the Facility's projects

Project (# and name)	Overview	Approved Value (NZD)	Start date	End date	Status	Implementing partner(s)
1. RE Strategy Update	Assistance to update the national Renewable Energy Strategy and Roadmap in Lao PDR as a basis for future renewable energy development.	$550,000	May-19	Jul-20	Completed	Castalia
2. Small Dam Safety Improvement	Technical assistance to support the review of 36 small (<15 megawatts) dams in Lao PDR. Technical input to the DEM to fulfil their regulatory functions, inputs and training to enable the operationalisation of the new Dam Safety Guidelines.	$1,031,436 (and 0.5m from Australia)	Dec-18	Jun-22	Completed	DamWatch
3. Large Dam Safety Improvement	Technical assistance to review all large (>15 megawatts) dams in Lao PDR. The project contributed hydrologist and geologist support to a World Bank-led team of experts.	$550,000	Mar-19	Mar-21	Completed	AECOM
4. English Language	Two English language training engagements targeted GoL staff in the renewable energy sector. The training aimed to provide public servants with the necessary language skills to engage effectively with development partners and the private sector involved in renewable energy. The second engagement was delivered by a separate provider.	Engagement 1 - $173,450 Engagement 2 - $125,000	Engagement 1 – Aug-19 Engagement 2 – Dec-21	Engagement 1 – Dec-19 Engagement 2 – Dec-23	Completed	Engagement 1 – Victoria University Engagement 2 – Vientiane College
5. Energy Efficiency and Conservation	Two phases of technical assistance and training to support GoL understanding, development, prioritisation and implementation of the current EE&C Roadmap, and a strategic action plan and to develop and help to enforce energy standards.	$1,607,824	Jul-20	Aug-23	Completed	FCG
6. Dam Safety Technical Assistance to EDL and EDL-GEN	Capacity building and training to increase the knowledge in dam safety management and improve the safety of hydropower plant dams in Lao PDR. Support was aimed at Électricité du Laos (EDL) and EDL-GEN	$600,000	Mar-20	Aug-23	In progress	Stantec
8. Wind Power Technical Assistance	Technical assistance to MEM's various departments on Wind Power including development of technical standards and guidelines, training and support for review of feasibility studies, guidance for project documentation preparation processes, awareness raising and capacity building for safeguards and assistance to deliver and apply a Power Procurement Policy.	$500,000	Not specified	Not specified	Approved	TBC
9. Strengthening Power System Operation	Technical assistance, training and staff mentoring to GoL for power system planning and operation including needs and gap analysis, detailed implementation planning, data collection, developing system modelling tool(s) and ongoing training and mentoring.	$942,362	Not specified	Not specified	In progress	Robinson Bowmaker Paul
13. Hydropower Concession Negotiation / Hydro End of Concession Agreement	Technical assistance and training to support end of concession negotiations for hydropower schemes. The project will assist GoL to assess the medium and long-term options for ownership and operation of hydropower assets and will aim to assist the GoL staff to achieve optimal outcomes from upcoming hydropower concession negotiations.	$643,000	Not specified	Not specified	Approved	TBC
C1. Clean Energy Support	Capacity building and awareness raising around clean energy in Cambodia including support to specific events, a Clean Energy Fellowship Program, policy dialogue sessions.	$500,000	Mar-23	Dec-24	In progress	EnergyLab
C2. Energy efficiency competitions	An awareness raising and engagement project that supports the implementation of the RGC's National Energy Efficiency Policy, including administration of an energy efficiency competition involving the private sector in Cambodia.	$350,000	Not specified	Not specified	Planning	Sevea Consulting

Annex B. Full list of KEQs and sub-questions

Criteria	Key Evaluation Questions	Sub-questions
Relevance and coherence	1. To what extent is the Facility relevant to New Zealand's bilateral and regional priorities?	a) Is the Facility relevant to Aotearoa New Zealand's past / current priorities as stated within ASEAN Four Year Plan (4YP) and bilateral development cooperation documents?
	2. To what extent is the Facility relevant to the renewable energy priorities of Lao PDR, Cambodia and ASEAN?	b) How is the Facility and its projects addressing the bilateral and regional RE priorities for renewable energy? c) How is the Facility and its projects meeting the needs of local communities in Lao PDR and Cambodia? d) How is the Facility adaptive, responsive and flexible to the needs of Government of Laos, Royal Government of Cambodia and other key local stakeholders?
	3. How are the Facility's activities / projects aligned and coherent to each other and harmonised to the activities of other like-minded donors in Lao PDR, Cambodia and ASEAN?	
Effectiveness and impact	4. What intended and unintended outcomes have the Facility and its projects led or contributed to?	a) Has the Facility strengthened the enabling environment (including planning, regulation, management and oversight) for renewable energy development in Lao PDR (MTO 1)? b) Has the Facility enabled better management of the Independent Power Producer (IPP) portfolio which in turn increases the value of the resource to the economy (MTO 2) in Lao PDR? c) Has the Facility increased the number of distributed renewable energy projects under investigation, development and sustainable operation (MTO 3) in Lao PDR? d) What factors enhanced or constrained the Facility's achievement of intended and unintended outcomes?
	5. Did the Facility contribute to economic and social impacts in Lao PDR that are inclusive, resilient and sustainable?	a) To what extent has the Facility addressed exclusion and inequalities, upheld human rights and/or advanced gender equality? b) To what extent has the Facility increased economic and social resilience to shocks / disasters and the management of negative impacts on the environment? c) To what extent are the impacts of the Facility to date expected to be sustainable into the future? d) Did the impacts vary depending on gender, disability or other socioeconomic status?
Modality and efficiency	6. To what extent is the Facility's modality fit for purpose to achieve the intended outcomes?	a) Does the Facility have the right skills, resources and oversight to achieve outcomes in Lao PDR and Cambodia? b) To what extent has the Facility adopted a localised approach, and how has this supported / hindered the achievement of outcomes?
	7. To what extent has the Facility demonstrated / supported efficient management?	a) Where has the Facility enabled or hindered administrative efficiencies for MFAT? b) Has the Facility's monitoring, evaluation, research and learning activities generated the required information for monitoring progress and sharing lessons learned?
	8. Has MFAT utilised time and resources well to support the effectiveness of the Facility?	a) Do MFAT staff (at Desk in Wellington and Post in Bangkok) have adequate resourcing to manage the Activity, projects and the Facility Management Office in Lao PDR and Cambodia? b) To what extent, has governance and oversight been adequate to maximise effectiveness and efficiency?
Future directions	9. What are the lessons learned from the Facility that could inform future programming and/or a future phase of support?	
	10. What are the key priority areas of renewable energy support in Lao PDR, Cambodia and the broader ASEAN?	
	11. What are the key considerations for a future phase of renewable energy support for Lao PDR and Cambodia?	
	12. What actions can be taken to build capabilities to sustain the Facility's impacts into the long-term?	

Annex C. Summary of key national and regional energy policies

Lao PDR Policy Context

Energy Policy	Date	Summary
National Policy on Sustainable Hydropower Development in Lao PDR	2015	Put in place pre-project requirements for project developers and government agencies including considerations of technical, engineering, financial, environmental and social aspects.
Renewable Energy Development Strategy in Lao PDR	2011	Sets out national energy targets for renewable energy to account for 30% of total energy consumption and 10% of transport energy consumption by 2025.
Strategy on Climate Change of the Lao PDR	2010	Identifies mitigation as the priority for the energy sector including accelerating the development of renewable energy, including solar, wind and hydro for remote communities, seeking cleaner technologies for developing lignite resources, enhancing energy efficiency and low-carbon transport and increasing public awareness of energy savings. Increasing the energy efficiency of industry is also identified as a priority.
Energy Policy	2015	Sets out a focus on: • Electrification • Improving and expanding transmission • Capitalising on hydropower potential • Promoting renewable energy.
Power Development Plan	2010	Prepared by EDL.
Power Sector Policy	2011	Sets out a focus on: • Electricity supply to promote economic and social development • Promoting power exports • Enhancing legal and regulatory framework for public, private or public-private partnerships power sector development • Accessing international technical expertise • Ensuring accountability and transparency.
Nationally Determined Contribution	2021	An update to Lao PDR's first NDC submitted in 2015, this commitment reported on achievement towards targets set in 2015, including that the country was not on track to achieve the 30% renewable energy target. Development of solar and wind capacity was identified as an area requiring financing to achieve targets. Other aspects requiring financing include biomass capacity, electric vehicle penetration, biofuels for transport and reducing energy consumption.

Cambodia Policy Context

Energy-related Policy	Date	Summary
National Energy Efficiency Policy	2022	Promotes energy efficiency as a means of economic growth and sustainable development. Includes both policy reforms and project investments with the aim of transforming Cambodia's energy consumption patterns.
Power Development Master Plan (PDP)	2022	Considers various scenarios for the next 20 years including consideration of energy needs, power sources and grid improvements. The aim of the plan is a secure, affordable and environmentally friendly power sector with increased access for more people. The plan lists prioritising renewable energy development as one action.
Clean Energy Transition Roadmap	Under preparation (2025)	Being developed in partnership with the Japanese International Cooperation Agency (JICA), this roadmap aims to facilitate Cambodia's shift towards clean energy and carbon neutrality. Development of this roadmap is part of the Asia Energy Transition Initiative.
National Policy Framework for Electric Vehicle (EV) Development (draft)	2023	Identifies key barriers across the EV value chain and proposes targeted implementation measures to support transport decarbonisation, with a focus on passenger-based EVs across private and public transport.
Electric Mobility Development Roadmap	Under preparation	In partnership with the World Bank, MME and the Ministry of Public Works and Transport are developing a comprehensive plan to meet future transport demand considering vehicle importation and usage, motor vehicle taxes, energy planning and infrastructure and climate objectives.
Roadmap for the Development of an Electric Vehicle Charging Stations Network in Cambodia	2024	Prepared with support from the United Nations Development Program (UNDP), this document outlines the development of the electric vehicle charging stations network including emphasising the importance of: • Establishing quality standards for components

Energy-related Policy	Date	Summary
		• Issuing safety standards for installation • Incentivising the installation of charging equipment • Regulatory and policy framework development • Grid integration • Capacity building • Awareness raising.
Long-term Strategy for Carbon neutrality (LTS4CN)	2021	Outlines Cambodia's ambition to achieve a carbon-neutral economy by 2050 by identifying key mitigation measures for each sector and ensuring compatibility of emissions reductions and economic development, social equity and climate adaptation. The strategy is projected to generate 449,000 additional jobs and increase annual GDP growth by 2.8% by 2050 for Cambodia. Related to the energy sector, the strategy's goal is to make the power sector carbon-neutral and improve energy efficiency.
Cambodia's Updated Nationally Determined Contributions (NDC)	2020	Presents Cambodia's commitments to and needs for the next decade. Cambodia's NDC includes objectives related to: • Reducing emissions • Enhancing resilience to climate change • Ensuring gender equality • Improving climate justice • Sharing information on strategies, plans and actions for low greenhouse gas emission development. In this updated commitment, Cambodia increased mitigation targets to reduce emissions by 41.7% by 2030 compared to a business-as-usual approach.

ASEAN Regional Policy Context

Energy-related Policy	Date	Summary
ASEAN Plan for Action for Energy Cooperation (APAEC) Phase II (2021-2025)	2021	A continuation of the first phase (2016-2020), this plan outlines ambitious goals and actions to improve the reliability and environmental performance of the energy sector in the ASEAN region. The main strategies of the second phase of the APAEC are: • ASEAN Power Grid: Enhancing the interconnection and infrastructure of the power grid in ASEAN. • Trans-ASEAN Gas Pipeline: Developing the gas pipeline infrastructure across ASEAN. • Coal and Clean Coal Technologies: Promoting the use of coal and clean coal technologies. • Energy Efficiency and Conservation: Promoting energy efficiency and conservation. • Renewable Energy: Increasing the proportion of renewable energy in the total primary energy supply. • Regional Energy Policy and Planning: Developing regional energy policy and planning.
ASEAN Strategy for Carbon Neutrality		A comprehensive plan, aligned with the Paris Agreement's commitments, to help ASEAN countries reach net-zero carbon emissions. The strategy is structured to promote green industries, establish globally recognized standards, and decrease emissions through eight cooperative strategies including: 1. Accelerate green value chain integration 2. Regional circular economy supply chains 3. Connect green infrastructure & market 4. Interoperable Carbon Markets 5. Credible & common standards 6. Attracting & deploying green capital 7. Green talent development & mobility 8. Green best practice sharing This strategy is perceived as a forward-thinking initiative that supplements the national efforts of ASEAN member states in fulfilling their respective nationally determined contributions under the Paris agreement. It seeks to expedite an inclusive shift towards a green economy, promoting sustainable growth, and supplementing national efforts as part of a regional collective endeavour.
Renewable Energy Outlook	2022	Prepared by the International Renewable Energy Agency (IRENA), this report presents a comprehensive strategy for developing a regional energy system that is cleaner and more sustainable. It examines the potential of electrifying end-use sectors, increasing renewable generation, implementing energy efficiency measures, adopting emerging technologies such

Energy-related Policy	Date	Summary
		as electric vehicles, hydrogen and battery storage-systems, as well as enhancing regional power sector integration. The Outlook suggests that the energy transition in ASEAN requires a holistic approach across the entire energy system. Main report recommendations are: • Enhanced regional cooperation to accelerate the establishment of flexible and reliable power infrastructure and promote the adoption of energy-efficient technologies through end-user electrification. • Transition to renewable energy to meet energy demands sustainably • Adoption of low-carbon technologies such as clean hydrogen and batteries. • Increased investment in renewable energy to support the transition towards cleaner energy sources • Decarbonization of end-use sectors • Strategic planning for long-term sustainability For LDCs like Cambodia, Lao PDR and Myanmar, the report underscores the importance of tailored approaches to renewable energy adoption to drive sustainable energy development and address the unique energy challenges and opportunities in these countries:
The Greater Mekong Subregion (GMS) Energy Cooperation Strategy	2021	The strategy is a part of the GMS Economic Cooperation Program Strategic Framework 2030. It focuses on cross-border power trade, establishment of regional grid codes, development of regional markets, and expanding clean energy investments. The strategy emphasises: • Promoting Power Trade Across Borders: The strategy encourages the sharing of electricity among countries within the subregion. • Formulating Regional Grid Standards: It involves the creation of norms for the functioning and utilization of the GMS electricity grid. • Fostering Regional Market Development: The strategy advocates for the establishment of regional energy markets to boost trade and investment. • Boosting Investments in Clean Energy: It aims to increase funding in renewable and clean energy sources, emphasizing a significant role for the private sector. The GMS countries, despite being at different stages of economic development, share common goals regarding energy security and environmental protection. The Regional Power Trade Coordination Committee (RPTCC), which managed regional power trade from 2004–2022, transitioned to the GMS Energy Transition Taskforce (ETTF) in July 2022, serving to facilitate the energy transition of the GMS countries through regional cooperation. It focuses on optimizing the use of regional clean energy resources through regional power trade and market development.

Annex D. Alignment of the Facility's projects to its Programme Logic

Goal: Increased beneficial use of renewable energy resources to support economic and social development

Long-term outcomes 8 years +

Improved economic and social benefits from power sector

5. Energy Efficiency and Conservation
9. Strengthening Power System Operation

Increased economic and social development opportunities from distributed renewable energy projects

Medium-term outcomes 3-8 years

Strengthened enabling environment (planning, regulation, management and oversight) for RE development

1. RE Strategy Refresh
2. Small Dam Safety TA
3. Large Dam Safety TA
4. English language Training
5. Energy Efficiency & Conservation
6. Ongoing Dam Safety TA
8. Wind Power TA
9. Strengthening Power System Operation
13. Hydro end of Concession Negotiation
C1. Support to EnergyLab

Better management of the IPP portfolio increases the value of the resource to economy

2. Small Dam Safety TA
3. Large Dam Safety TA
8. Wind Power TA
9. Strengthening Power System Operation
13. Hydro end of Concession Negotiation

Increased number of distributed RE projects under investigation, development and sustainable operation

C1. Support to EnergyLab

Short-term outcomes 1-3 years

Improved implementation (development and coordination) of renewable energy policy, law, regulations

1. RE Strategy Refresh
2. Small Dam Safety TA
3. Large Dam Safety TA
5. Energy Efficiency & Conservation
6. Ongoing Dam Safety TA
8. Wind Power TA
13. Hydro end of Concession Negotiation
C1. Support to EnergyLab

Improved management of IPP project assessment, approval and monitoring processes

1. RE Strategy Refresh
2. Small Dam Safety TA
3. Large Dam Safety TA
8. Wind Power TA
13. Hydro end of Concession Negotiation

Increased public sector skills, knowledge and capacity in agreed areas

2. Small Dam Safety TA
3. Large Dam Safety TA
4. English language Training
5. Energy Efficiency & Conservation
6. Ongoing Dam Safety TA
8. Wind Power TA
9. Strengthening Power System Operation
13. Hydro end of Concession Negotiation

Increased number of distributed RE projects identified and assessed

New Zealand's expertise harnessed to respond to agreed Lao PDR and Cambodia priorities in coordination with other stakeholders / actors

1. RE Strategy Refresh
2. Small Dam Safety TA
3. Large Dam Safety TA
5. Energy Efficiency & Conservation
6. Ongoing Dam Safety TA

Source: Adapted from PCNs.

N.B. Concept notes only draw alignment at the STO level and above.

Annex E. Evaluation methodology and approach

The evaluation applied the following principles in line with the evaluation objectives and scope:

- **Collaborative design of the evaluation** – the scope, objectives, questions and approaches for this evaluation were developed in collaboration with the MFAT Activity Management Team. Similarly, emerging findings were shared in the spirit of a 'no surprises' approach but to also begin shaping the evaluation's recommendations to ensure that they were appropriate, practical and implementable.
- **Incorporating summative and formative assessments** – recognised that the activities in Lao PDR and Cambodia are at different stages of implementation and maturity, requiring different lenses of analysis.
- **Applying a progressive inquiry**– the evaluation team used this technique which builds sequentially on each evaluation question and stage to provide a more comprehensive view of the RE priorities, how the Facility is progressing and the appropriate modality to deliver this
- **Realist approaches** – the evaluation adopted a realist approach to consider what works, for whom, and in what circumstances. It considered how key contextual changes (i.e., shifts in policy/strategic directions at a regional or multi-country level, energy needs, effects of the COVID-19 pandemic, demand-driven approach, etc) have impacted the effectiveness and efficiency of the Facility during a particular period. The progressive inquiry technique mentioned above supported the evaluation team with applying realist approaches throughout the evaluation.
- **Mixed methods approach** – the evaluation utilised a mixed methods approach to data collection and analysis, including a desktop review of key Facility documentation, literature scan and key informant interviews with a wide range of stakeholders and sensemaking workshops. The list of documents reviewed, stakeholders consulted, and literature scanned is provided below.

Documents reviewed

The following Facility-related documentation were reviewed to inform this evaluation:

- Initial Activity Design Document
- Business Case for Phase 2
- Annual Progress Reports
- Six-monthly progress Reports
- Monthly reports prepared by the Managing Contractor
- Project Register (prepared for Tetra Tech)
- The Facility's Results Framework
- Activity Monitoring Assessments (AMAs)
- ASEAN Four Year Plan (4YP)
- ASEAN New Zealand Plan of Action
- MFAT's Energy Theory of Change
- Cambodia Entry Paper
- Cambodia Knowledge Gaps
- Facility Reflection
- Donor coordination documents produced by the Facility
- Project Concept Notes
- Steering Committee meetings
- Memorandums prepared by the Facility.

Stakeholders interviewed

Stakeholder consultations involved a 1.5 week in-country mission in Lao PDR and Cambodia from 8 January 2024 to 17 January 2024. Remote interviews were also held for those that we were not able to meet in-country or those who are based outside of Lao PDR and Cambodia. In total 59, stakeholders were consulted from the following entities:

Stakeholder group	Organisation
Lao PDR interviews	• The Facility Management Team (in Lao PDR) • Ministry of Energy and Mines – Department of Energy Efficiency Promotion – Department of Energy Management – Department of Safety and Mines – Department of Energy Policy and Planning – Department of Energy Business • EDL • EDL-Generation Public Company (EDL-GEN) • Numark • Helvetas • The Asia Foundation

Stakeholder group	Organisation
	• Swiss Development Cooperation • Australian Embassy in Lao PDR • Finnish Consulting Group (FCG) • National University of Laos
Cambodia interviews	• Energy Lab • Sevea Consulting • United Nations Development Programme (UNDP) • Australian Embassy in Cambodia • Lichtenstein Development Service
Remote interviews	• Damwatch • AECOM • Asian Development Bank • East Harbour Energy • Partnership for Infrastructure (P4I) • USAID Southeast Asia's Smart Power Program • MFAT's Activity Management Team (separate interviews)

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