REQUEST FOR TENDER

Tender:	**Improve Energy Resilience in Lao PDR Support**
Required:	Delivery of Climate Change and Natural Hazards Risk and Vulnerability Assessment, Knowledge Exchange, Capacity Building, and Resilience Action Plan for Grid Infrastructure in Lao PDR
Duration:	December 2024 – June 2025
Location:	Remote, with a minimum of two trips to Lao PDR required
Reports to:	Climate and Inclusion Director, Disaster Risk Reduction and Climate Change Portfolio Manager with support from LASEP Team Lead
Closing Date:	11:59pm (Bangkok time) on 18 November 2024

About P4I

Partnerships for Infrastructure (P4I) is an Australian Government initiative partnering with Southeast Asia to drive sustainable, inclusive, and resilient growth through quality infrastructure. P4I partners with Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, Timor-Leste, Vietnam and the Association of Southeast Asian Nations (ASEAN).

Delivered through a single team, P4I is led by the Australian Department of Foreign Affairs and Trade (DFAT) in collaboration with Ernst & Young, Adam Smith International, The Asia Foundation and Ninti One.

P4I works with partners to strengthen infrastructure decision-making and practice across the transport, energy, utilities and telecommunications sectors. P4I's focus is on the early stages of the infrastructure lifecycle, including planning and prioritisation, financing strategy, and procurement. Foundational to quality infrastructure, P4I integrates gender equality, disability, social inclusion, and disaster risk reduction and climate change (DRRCC) considerations into all activities.

P4I has a head office in Bangkok, with other staff located around the region. More information about P4I is available at www.partnershipsforinfrastructure.org

Overview of Laos-Australia Sustainable Energy Partnership

Background

Australia and Lao PDR have launched the **Laos-Australia Sustainable Energy Partnership (LASEP)** to support the development of a more sustainable, reliable, and resilient energy sector. This partnership aims to improve planning and decision-making within the Government of Laos (GoL), focusing on fostering evidence-based policies to drive the country's energy transition. A key aspect of LASEP is the emphasis on integrating disaster and climate resilience into energy sector planning, ensuring that the country's energy systems are sustainable in the long term. This approach is underpinned by a comprehensive understanding of energy supply options and the importance of informed decision-making.

The official launch of LASEP took place with the signing of a Memorandum of Subsidiary Arrangement (SA) on May 15, 2023, followed by the inaugural Program Steering Committee (PSC) meeting on August 10, 2023. At this meeting, a work plan was approved, extending through December 31, 2024, setting the stage for the implementation of key activities.

One such activity is **Activity 1.4**, which specifically aims to strengthen energy resilience in Lao PDR by improving planning and enhancing the resilience of infrastructure against natural hazards and climate impacts. The development of this activity was informed by discussions held during a visit to Vientiane in March 2024, involving the LASEP team, the Ministry of Energy and Mines (MEM), and Electricite Du Laos (EDL). The **Department of Energy Policy and Planning (DEPP)** will lead the work, with significant support from EDL and other related departments.

This tender document focuses on **Component 1 of Activity 1.4**, which is designed to strengthen the resilience of Lao PDR's grid infrastructure. The specific objectives of Component 1 include:

- Conducting early-stage geospatial mapping of grid infrastructure to assess exposure to natural hazards and climate impacts.
- Identifying vulnerabilities and risks to the country's power grid (transmission and distribution) from natural hazards and climate change.
- Facilitating knowledge exchange sessions to share best practices on grid resilience.
- Conducting a qualitative risk assessment of grid infrastructure, considering specific impacts, likelihood, and consequences.
- Developing a prioritised resilience action plan to guide future planning and investment decisions.

Component 2 of Activity 1.4 will run in parallel, focusing on improving institutional preparedness for natural hazards and climate change. This will include developing a Continuity of Operation Plan (CoOP) for the power sector to ensure operational continuity during disruptions. While Component 1 addresses the technical and infrastructural resilience of the grid, Component 2 aims to enhance the institutional capacity of energy stakeholders to effectively manage risks and respond to disasters.

Energy resilience in this context refers to the ability of Lao PDR's energy systems to anticipate, withstand, adapt to, and rapidly recover from shocks (such as natural disasters) and stressors (such as climate change). This is particularly critical given the vulnerability of Lao PDR to increasing climate risks, including floods, droughts, and heatwaves, which pose significant threats to the country's reliance on hydropower and other energy infrastructure located in climate-sensitive areas.

The "Vision 2030 and 10-Year Socioeconomic Development Strategy (2016-2025)" underscores the importance of energy infrastructure resilience as a key element of the nation's broader development goals. It calls for a balanced and sustainable energy mix, with an emphasis on expanding renewable energy sources such as hydropower, solar, and wind to meet future energy demands while reducing environmental impacts. The strategy highlights the need to modernise the national grid to better withstand climate risks, as this is essential for maintaining long-term economic stability and growth.

Additionally, the 2020 USAID-funded Lao Power Sector Vulnerability Assessment and Resilience Action Plan serves as a foundational document for this activity. It identifies key risks to the grid, particularly the vulnerability of hydropower assets and transmission systems to climate impacts. Building on the findings of this assessment, our work will provide a more detailed and actionable plan to address these vulnerabilities. Strengthening the resilience of energy systems is an urgent priority for Lao PDR as climate change continues to disrupt energy supply and increase the frequency of natural disasters. The outcomes of this activity will also align with national objectives outlined in the 9th Five-Year National Socio-Economic Development Plan, which emphasises the importance of a secure and resilient energy sector for sustaining long-term economic development.

Objectives

This tender relates to Activity 1.4, Component 1, which aims to strengthen the resilience of Lao PDR's grid infrastructure. The goal is to identify vulnerabilities and risks to the power grid and develop measures to enhance its resilience, ensuring a stable and reliable energy supply in the face of climate change and natural disasters.

Scope of Work

- Scope of Work for **Component 1: Strengthen the Resilience of Grid Infrastructure**
- This component focuses on:
- Identifying vulnerabilities and risks to grid infrastructure (transmission and distribution) from natural hazards and climate change.
- Conducting knowledge exchange sessions on energy infrastructure resilience.
- Developing a qualitative risk assessment of grid infrastructure.
- Delivering high-level geospatial mapping to assess exposure and vulnerability.

- Formulating a prioritised resilience action plan with the involvement of DEPP and EDL to inform future planning and investment.
- In addition, the scope of work should also encompass generation assets, ensuring that the resilience efforts address the entire energy system—from production to distribution. This comprehensive approach will strengthen the system's ability to withstand climate risks and natural hazards.
- In collaboration with P4I and LASEP in-country Team, suppliers are expected to ensure that activities under Component 1 are aligned with the institutional preparedness work under Component 2, fostering collaboration and information sharing between these two streams.

Gender Equality, Disability, and Social Inclusion (GEDSI) considerations will be integrated into all components of this activity. Suppliers are required to work closely with the P4I GEDSI team to identify opportunities to promote inclusivity and align their work with the LASEP GEDSI Action Plan. This includes ensuring that women, people with disabilities, and marginalised groups are considered in resilience planning and capacity-building activities. Suppliers are expected to embed these principles in their approach to ensure that the benefits of resilient energy systems are equitably shared across Lao PDR.

Modality of Delivery and Project Deliverables

Timeframe

December 2024 – June 2025

Phase	Key Activities	Deliverables	Timeline
1. Inception Report	- Confirm scope of work with MEM, EDL, and other stakeholders. - Explore cross-collaboration with Component 2. - Establish a working group for project engagement.	- Inception Report detailing scope, methodology, timeline, and work plan. - Formation of a working group (MEM, EDL, DEPP) for regular coordination throughout the project.	Dec 2024 - Jan 2025
2. Geospatial Mapping Report	- Conduct high-level geospatial mapping of grid infrastructure. - Ensure data contributes to broader government strategies (e.g., 10th NSEDP) and Component 2 alignment.	- Geospatial Mapping Report highlighting exposure and vulnerabilities of grid infrastructure and areas for further investment.	Jan 2025
3. Knowledge Exchange and Capacity-Building Workshops	- Conduct workshops for MEM, EDL, and GoL stakeholders on resilience, climate change, and natural hazards. - Implement post-training evaluation and mentorship mechanisms.	- At least one workshop with materials (English & Lao). - post-training evaluation and mentorship program to track knowledge retention and application.	Mar 2025
4. Qualitative Risk Assessment Report	- Collaborate with DEPP and EDL to conduct a risk assessment of grid infrastructure. - Adapt existing risk assessment tools where possible to enhance efficiency.	- Qualitative Risk Assessment Report identifying grid vulnerabilities and providing resilience recommendations for technical, operational, and institutional domains.	Apr 2025
5. High-Level Resilience Action Plan	- Develop the action plan in iterative stages with stakeholder feedback. - Align the plan with national objectives (e.g., 10th NSEDP) and institutional needs from Component 2.	- High-Level Resilience Action Plan detailing prioritised short- and long-term resilience measures, with indicative costs and climate finance opportunities.	Jun 2025

Phase	Key Activities	Deliverables	Timeline
6. Final Project Report	- Summarise all project activities, including workshops, risk assessment findings, and the finalised action plan. - Gather GEDSI insights and recommendations.	- Final Project Report summarising all findings, stakeholder feedback, and recommendations, including GEDSI integration efforts.	Jun 2025

*The Supplier will explain how the timeframe will be met in the technical offer. If bidders feel they need more time, they should describe and justify this in their technical offer.

Work arrangements

- **Reporting Structure**: The Consultant Team will report directly to the Climate and Inclusion Director and the Disaster Risk Reduction and Climate Change (DRRCC) Portfolio Manager, with additional support from the LASEP Team Lead.
- **Coordination and Monitoring**: Regular meetings will be held with the Partnerships for Infrastructure (P4I) team to monitor progress, ensure alignment with project objectives, and coordinate efforts with Component 2. Meetings will be held bi-weekly to review milestones, track deliverables, and address any emerging issues. These sessions will ensure that progress remains aligned with the project's tight schedule.
- **Work Modality**: The majority of the work will be conducted remotely, with occasional travel to Lao PDR for workshops and stakeholder engagement sessions as required. The travel schedule will be aligned with key project milestones, particularly for knowledge-sharing events and direct consultations.
- **Consultant Responsibilities**: The Consultant Team will be responsible for scheduling meetings with key stakeholders and ensuring all parties are available for decision-making, taking minutes during meetings and distributing them promptly to relevant stakeholders, and finalising documentation for review and feedback, ensuring alignment with project goals and timelines.
- **Reporting frequency**: Provide bi-weekly progress reports to the Climate and Inclusion Director and DRRCC Portfolio Manager to maintain clear communication and ensure consistent tracking of progress throughout the project lifecycle.

Proposal Requirements

Suppliers are requested to submit a proposal that demonstrates their ability to meet the requirements outlined in this tender. Proposals should be no more than 10 pages, not including CVs or Annexes, include the following and be structured accordingly:

1. Company/Team details, relevant experience and team composition:

- Suppliers should outline their ability of their team to meet the requirements set out in the Scope of Work. This should include

<u>Team composition and relevant experience:</u>

- *Climate Change Specialist*
    - The team should include an individual (or individuals) with proven experience in assessing climate change risks and vulnerabilities, specifically in energy infrastructure. Experience in Lao PDR's energy sector will be considered a strong advantage.
- *Grid Specialist/Electrical Engineer*
    - The team must include a technical expert with in-depth knowledge of electricity grid operations, both at the asset and system levels. This specialist should understand the impacts

of climate change on grid infrastructure and be able to propose resilience measures. Experience in Lao PDR's grid infrastructure will be considered a plus.

- *Team Composition*
    - Suppliers are expected to propose a multidisciplinary team with at least two specialists to bring the necessary blend of skills. The team should include experts in both climate risk assessment and grid resilience, ideally with experience in Lao PDR or the broader Southeast Asian region.

Similar Project Experience

Suppliers must provide examples of similar projects they have completed, focusing on:

- *Energy Infrastructure Resilience:*
    - Experience in conducting climate risk assessments for energy systems, with a specific focus on electricity grids.
    - Experience working within Lao PDR or similar contexts will be a significant advantage.
- *Implementation of Resilience Measures:*
    - Demonstration of how the supplier has successfully identified and implemented resilience-building measures in previous projects.

Examples should clearly describe the supplier's role, the challenges faced, and the outcomes achieved.

2. Proposed Methodology:

The suppliers should set out their proposed methodology for meeting the requirements set out in the Scope of Works.

- This section outlines a recommended approach for meeting the requirements of this tender. Suppliers should use this framework to develop a comprehensive methodology that addresses each component of the project, ensuring deliverables align with the specified objectives.

1. Inception and Stakeholder Engagement
    - *Purpose*: Establish a foundation for project execution through coordinated stakeholder engagement with the LASEP activity team.
    - *Approach*: Suppliers will conduct an inception meeting in collaboration with the LASEP activity team to confirm the project scope, align expectations, and finalise timelines. Form a joint working group that includes representatives from MEM, EDL, DEPP, and the LASEP team to facilitate continuous communication, track progress, and maintain alignment with institutional needs and objectives in Component 2.
    - *Deliverable Guidance*: The Inception Report should cover scope, methodology, timelines, and a shared engagement plan developed with the LASEP team, defining roles, responsibilities, and communication channels for efficient collaboration.
2. Geospatial Mapping and Climate Hazard Analysis
    - *Purpose*: Use geospatial data to assess grid infrastructure's vulnerability to natural hazards and climate risks.
    - *Approach*: Suppliers should conduct high-level geospatial mapping, supported by climate models to project risk scenarios for floods, droughts, and heatwaves. Analysis should account for Lao PDR's reliance on climate-sensitive hydropower and align with insights from the USAID Lao Power Sector Vulnerability Assessment.
    - *Deliverable Guidance*: Provide a Geospatial Mapping Report detailing priority areas for future resilience investment and identifying vulnerable grid infrastructure segments.
3. Knowledge Exchange and Capacity-Building Workshops
    - *Purpose*: Equip local stakeholders with skills and knowledge on resilience strategies.
    - *Approach*: Deliver workshops on resilience and risk management, utilising both English and Lao materials. Integrate a post-training evaluation to reinforce learning outcomes.

- *Deliverable Guidance*: Include workshop summaries, evaluation feedback, and recommendations for continued learning support.

4. Qualitative Risk Assessment
    - *Purpose*: Identify and prioritise risks to the grid infrastructure through a qualitative lens.
    - *Approach*: Conduct risk assessments by consulting with DEPP and EDL, adapting tools as needed to fit Lao PDR's context. This assessment should consider technical, operational, and institutional vulnerabilities.
    - *Deliverable Guidance*: Develop a Qualitative Risk Assessment highlighting resilience measures across technical and institutional areas.
5. Development of a Resilience Action Plan
    - *Purpose*: Create a strategic plan for strengthening grid resilience.
    - *Approach*: Work with stakeholders to iteratively develop an action plan that incorporates GEDSI principles, national goals, and climate finance sources.
    - *Deliverable Guidance*: Develop a Resilience Action Plan outlining both immediate and long-term measures, with indicative costs and suggested financing options.
6. Final Reporting and GEDSI Integration
    - *Purpose*: Consolidate project insights and recommendations, emphasising GEDSI considerations.
    - *Approach*: Summarise project outcomes, feedback, and lessons learned, with an emphasis on GEDSI elements to ensure inclusive benefits.
    - *Deliverable Guidance*: Submit a Final Project Report that includes stakeholder insights and recommendations, showcasing the equitable impact of the resilience measures.

3. Budget and Expected Level of Input

Suppliers should submit a detailed budget, presented in AUD, structured as follows:

- *Personnel Costs:*
    - Fee rates for each key team member.
- *Days Allocated:*
    - Number of days dedicated to each task, ensuring sufficient time for:
        - Stakeholder engagement (with MEM, DEPP, EDL, and others).
        - Geospatial mapping and risk assessments
- *Reimbursable Expenses:*
    - Anticipated expenses including trips to Lao PDR for workshops and stakeholder meetings should be itemised.

Scoring Criteria

Proposals will be scored based on the following criteria.

- **Relevant Technical Experience**:
    - Demonstrated experience in conducting climate change risk and vulnerability assessments within the energy infrastructure sector, with a strong emphasis on electricity grid resilience. Specific experience in Lao PDR's energy system will be highly valued.
- **Proposed Methodology**:
    - Detailed steps for stakeholder engagement (MEM, DEPP, EDL).
    - Strategies for cross-collaboration with Component 2.

- Integration of GEDSI (Gender Equality, Disability, and Social Inclusion) principles into the work.

- **Budget and Timeline**:
  - Overall value for money considering overall cost, efficient use of team inputs and effectiveness of the proposed team and methodology.

Application Instructions

Suppliers are requested to submit a proposal that demonstrates their ability to meet the requirements outlined in this tender. Proposals must be submitted via email to the P4I Procurement Manager at tenders@partnershipsforinfrastructure.org by **11:59 PM (Bangkok time) on 18 November 2024**. Only short-listed companies will be contacted due to the high volume of applications.

This tender will be managed through Adam Smith International (ASI). Suppliers located in P4I's partner countries are strongly encouraged to apply. We also seek suppliers who can work remotely from Australia and other countries, particularly those identifying as Aboriginal and Torres Strait Islanders.

P4I is committed to promoting and empowering local and marginalised groups within the region and strongly encourages suppliers identifying as such to apply. Suppliers with strong governance initiatives to engage such groups should also apply.