COUNTRY ASSESSMENT REPORT Laos

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Contents

1.1 Country Assessment Report Template

Country Name	The Lao People's Democratic Republic (Laos)
Introduction	Laos is a landlocked country sharing borders with Thailand, China, Cambodia and Vietnam. The current GDP is ~ $16 billion, projected to grow considerably in the coming years. Agriculture largely drives the economy, supported by industry and services. While the market is favorable for energy development, the lack of accessibility remains the primary issue, especially in the rural areas. The expansion of the electricity sector is challenging; nevertheless, Lao has committed to electrification and energy expansion, aiming to provide access to electricity to at least 98% of the population by 2030 (TheBorgenProject, 2022).

1.2 Electrical Generation and Demand

Generation	**Technology**	**Capacity (MW)**
	Hydro Coal Solar	38836 GWh 12179 GWh 97 GWh
	Total	51150 GWh
Demand	**Sector**	**Demand** (GWh)
	Industrial Residential Commercial/Service/Public Sector Primary Activities Transport	25636 TJ 9816 TJ 5108 TJ 791 TJ 358 TJ
	Total	41709 TJ

Laos currently has 102 power plants with a total installed capacity of ~11620 MW. A majority portion of electricity is generated from low-carbon sources, predominantly hydropower. However, coal still contributes significantly to at least a quarter of the total generation.

1.3 Electrical Interconnection and Import/Export

Connected country	**Capacity** (MW)	**Annual import from Laos** (GWh)	**Annual export to Laos** (GWh)
Thailand		32265 GWh	1691.29 GWh
China		15.03 GWh	105.44 GWh
Vietnam		1555.36 GWh	50.59 GWh
Cambodia		2590.74 GWh (WITS, 2023)	
Additional information	Laos is integrated in S.E Asia's electricity networks through various cross-border interconnection links that enable electricity trade on a large scale with neighboring countries. Currently, a major high-voltage line is under construction between China and Laos to enable bilateral power exchange of up to 1500 MW to transmit an estimated 3 billion kWh of clean electricity annually. Electricity has become one of the leading revenue-generating exports with an export value of around USD 2.38 billion in 2023 (Laotian Times, 2025).		

1.4 Market Structure

Laos' electricity sector is characterized by hydropower-domination, export-based market with a strong involvement from the state and limited liberalisation. The development of the electricity market has been positioned such that it supports both domestic and regional export demand, making it the 'Battery of Southeast Asia'. Electricity planning, policy oversight, and sector development are primarily managed by the Ministry of Energy and Mines (MEM), while operational activities are concentrated within the state-owned utility (EDL), responsible for electricity generation, transmission, distribution, and cross-border trade. EDL also operates through its partially listed subsidiary, EDL-Generation Public Company (EDL-Gen), which owns and operates several large hydropower assets.

The generation is undertaken by the state-owned generators, including EDL and EDL-Gen, and Independent Power Producers (IPPs) operating under a Build-Operate-Transfer (BOT) concession agreement. This model allows them to finance, build and operate hydropower generators for a set period before the ownership is transferred to the government. These agreements are often backed by PPAs with regional buyers (ITA, 2026)

The electricity market operates on a single-buyer contract-based model. There is no established wholesale competitive market or spot exchange. While private sector participation is permitted, the overall market remains government controlled. Electricity is traded through long-term bilateral PPAs, with EDL as the principal buyer and seller within the domestic system. Dispatch and pricing of electricity are also determined through these PPAs, and the tariffs are regulated. Retail electricity supply to residential, commercial, and industrial consumers is provided primarily by EDL at regulated tariffs (ITA, 2023).

Electricity exports are a central pillar of Laos' power sector strategy. The country maintains high-voltage transmission interconnections with Thailand, Vietnam, Cambodia, and China, enabling large-scale regional electricity trade. In several years, more than half of total electricity generation has been exported, primarily under long-term government-to-government or utility-to-utility agreements. Laos is actively participating in ASEAN Power Grid initiatives, which aim to facilitate multilateral electricity trade and enhance regional grid integration. While regional trading frameworks are evolving, current transactions remain largely bilateral and contract-based rather than market-based (ASEAN, Centre for Energy, 2023).

There is no domestic compliance-based market for RECs currently.

1.5 Responsible Government Department

The Ministry of Energy and Mines (**MEM**) is the principal body responsible for the overall management, policy-making, strategy development, and supervision of all energy-related activities and businesses in the country, including the power sector. The MEM is the main agency responsible for renewable energy development and acts as the NAMA Coordinating Authority. Via its various departments, MEM manages the single-buyer electricity market structure where the state-owned utility Électricité du Laos (**EDL**) is the sole buyer and retailer. EDL manages the national grid, generation, transmission, distribution, and electricity trade, while its subsidiary EDL-Generation Public Company (EDL-Gen) handles power generation.

The Ministry of Natural Resources and Environment (MoNRE) is the responsible entity for environmental protection, natural resource management, and social impact assessments related to development projects, including hydropower. MoNRE acts as the official contact point (focal point) to the UNFCCC for climate change initiatives and approvals related to environmental attributes and certification mechanisms like the NAMA (Nationally Appropriate Mitigation Actions).

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1.6 Existing/Planned Legislation

The main laws and policies that govern the electricity supply in Lao's include

- The Electricity Law 1997, amended in 2012, which governs electricity generation and distribution in Lao PDR. It sets standards for the administration, production, distribution, transmission and imports/exports of electricity.
- The Power Sector Policy Statement 2001 aims to provide affordable electricity to all. This goal includes objectives to increase the electrification rate.
- The 8th National Socio-Economic Development Plan (NSEDP) 2016–20 identifies the direction required for the energy sector: "Focus on hydropower development, thermal electric power, solar energy and industrial plants energy…"
- The Renewable Energy Development Strategy acknowledges the importance of renewable energy sources and their development. It sets a goal of increasing the share of renewable energy over time.
- The Policy on Sustainable Hydropower development in Lao's targets hydropower projects that are larger than 15 MW generation capacity.
- The Power Development Plan is prepared by EDL and reviews electricity demand forecast and prospective project developments.

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As of 2026, Laos is implementing several strategic and legislative measures to diversify its energy mix including

- A Floating Solar Directive to permit hydropower providers to install floating solar capacity equivalent to up to 10% of their reservoir's total energy output.
- Small-Scale Solar Strategy (announced in June 2025) to promote localized solar projects under 5 MW to address regional power shortages and enhance grid stability.
- Updated NDC commitments and the National Power Development Strategy, Laos targets non-hydro renewables to comprise 30% of total energy consumption by 2025, with an additional 1 GW of wind and solar capacity aimed for by 2030.
- The Electricity Strategy 2026–2035 implements a new 10-year development strategy is under review to improve the integration of Independent Power Producers (IPPs) and regional power trade.
- Legislative efforts are underway to implement a nationwide feed-in-tariff to make solar and wind energy prices more competitive against low-cost hydropower.

1.7 Environmental and Renewable Electricity Legislation

See section 1.6, the primary policy drivers are focused on diversifying electricity production incentivizing more renewable energy production.

1.8 Existing/Planned Certificate or Support Systems

Regarding attribute tracking systems, there are no mandatory national schemes in place.

MEM and EDL are the relevant govt entities involved in data sharing and potentially acting as local issuers. MoNRE's role as the UNFCCC focal point could make it a critical key agency for government approval regarding certifying environmental attributes at the national and international level.

1.9 Extent of Engagement with Government

Representatives from the I-TRACK Foundation have met with government and utility representatives in Lao regularly over the years. Concerned national actors have included Ministry of Energy and Mines, regulatory actors, and utility representatives. Discussions have included providing inputs to national actors on the opportunity to appoint a Local Issuer, as well as possible options for the country to participate in cross-border trade and REC tracking associated with Lao hydro exports. In addition, development organizations active in the country have supported trainings and facilitated knowledge sharing between I-TRACK Foundation representatives and government actors to address specific questions and support alignment of REC market activity and growth with national energy sector goals and planning.

1.10 Expected Response from Government

National actors are aware of the operation of the I-REC(E) market, and have also been notified that they may appoint a Local Issuer at any time. While no immediate response or engagement is anticipated, Local Issuer appointment may take place in the future as the market grows or as REC instruments become more deeply integrated into energy policy.

1.11 Proposed Restrictions

Standard GCC checks for govt support and availability of attributes. Otherwise, limited evidence that there is a specific reason to restrict issuance.

1.12 Any Other Relevant Information

N/A

1.13 Author

Complete all fields.

Organization Name GCC			
Signature			
Name Mary Jones			
DATE	20	07	2026