

The transformative pathway towards low carbon development in the energy sector in Lao PDR

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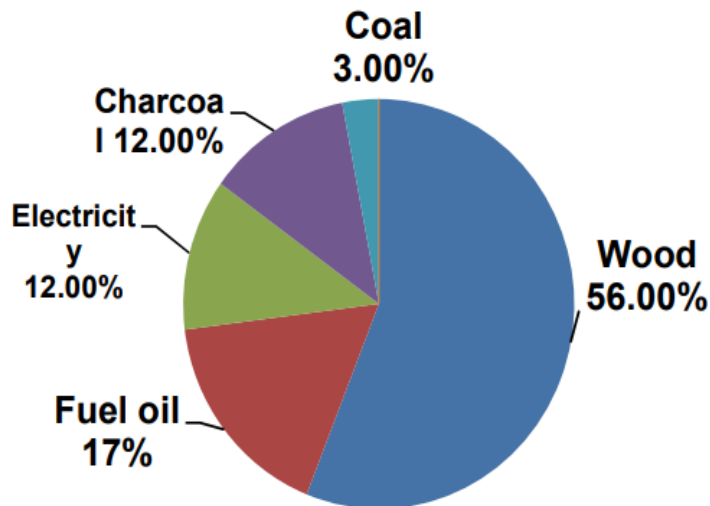
Ministry of Energy and Mines

Outlines

- Energy consumption
- Energy transition pathway to low carbon emission
- Policies
- Clean cooking stoves initiative (CSI) project
- Support needed

Energy consumption

In 2009, the average fuel use in Lao PDR was 0.935 tons of TOE. Fuel consumption in Lao PDR however remains very low compared with other developing countries. Energy consumption in the country is mainly in the form of traditional fuels, i.e. the use of biomass such as fuel wood (56%) and charcoal (12%) for cooking and heating in rural areas. This represents around 69% of the total energy consumption (Figure 1.4).



Energy transition pathway to low carbon emission

Energy	Consumption in 2018	Target in 2030
Renewable Energy	16.8% of total energy	20%
Renewable Energy + traditional biomass	41%	
Access to clean cooking	8% of population	20%

Energy transition pathway to low carbon emission (cont.)

Target for emission reduction from the energy sector

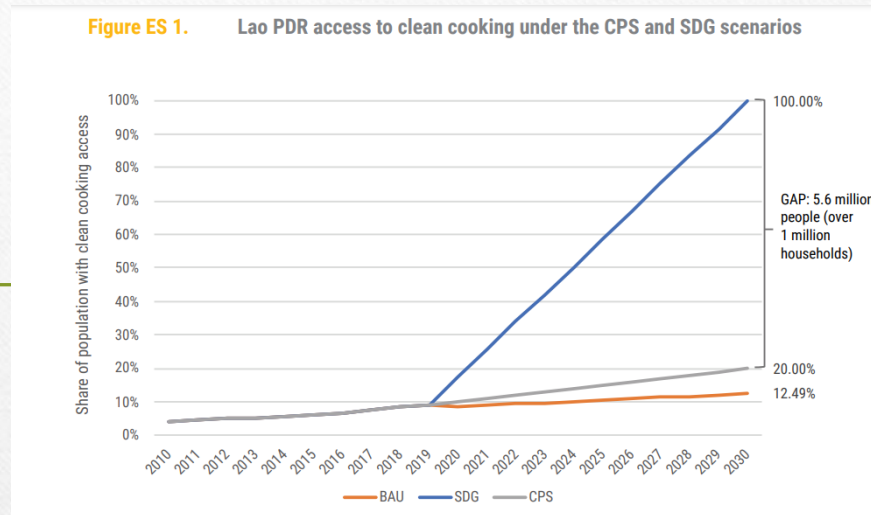
Energy	Average target by 2030
Increase hydropower capacity to 13 GW	2,500 ktCO ₂ e/y
Add an additional 1 GW of solar and wind (combined) to the national power generation	100 ktCO ₂ e/y
Add an additional 300 MW of biomass	84 ktCO ₂ e/y
increasing biofuel to 10% of the fuel mix in the transport sector	29 ktCO ₂ e/y
the adoption of 30 per cent of electric vehicles for two-wheelers and passenger cars	30 ktCO ₂ e/y

Policies

The Government of Laos is committed to promote an inclusive green growth development agenda that ensures lowered GHG emissions and increased energy efficiency.

- The Lao PDR NDC to the UNFCCC notes the country's ambitious plans to lower energy consumption and reduce GHG emissions.
- The NDC identifies increasing forest cover, expanding electrification and hydropower, growing the role of renewable energy and improving the road network and public transport as key mitigating actions.
- In addition, the Lao PDR Renewable Energy Development Strategy states a commitment to reduce energy consumption of 10% by 2030.
- The country's National Strategy on Climate Change sets a goal to achieve low-carbon economic growth; specifically, within the energy sector, where the policy calls for the implementation of more energy efficient appliances.

Clean cooking stoves initiative (CSI) project



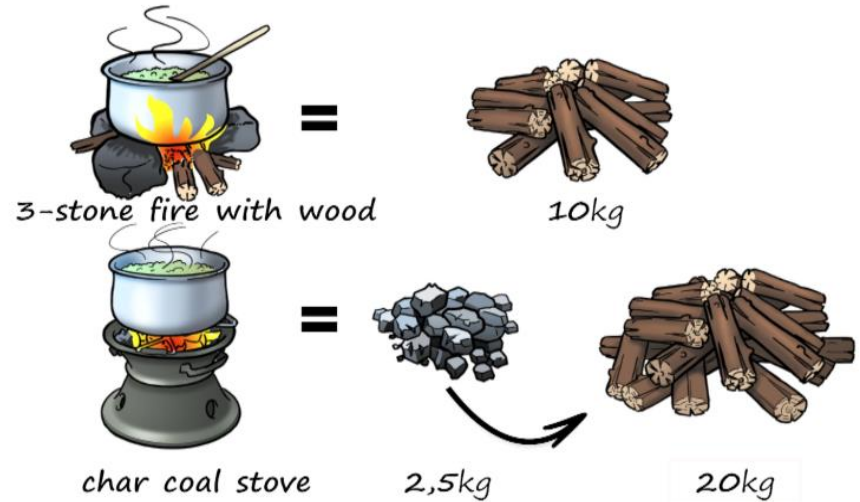
Only 8% of the population of Laos has access to clean cooking. 91% of households continue to use solid biomass for cooking and heating purposes; with wood (67%) and charcoal (24%). The rest use LPG or electricity.

The transition to electricity for residential cooking energy has been slow. One barrier has been the relatively high electricity tariffs. Another barrier to the adoption of the electric cookstove, is its ability to cater to taste preferences. Lao menu is largely grill-based, which gives it a specific smoky flavor.

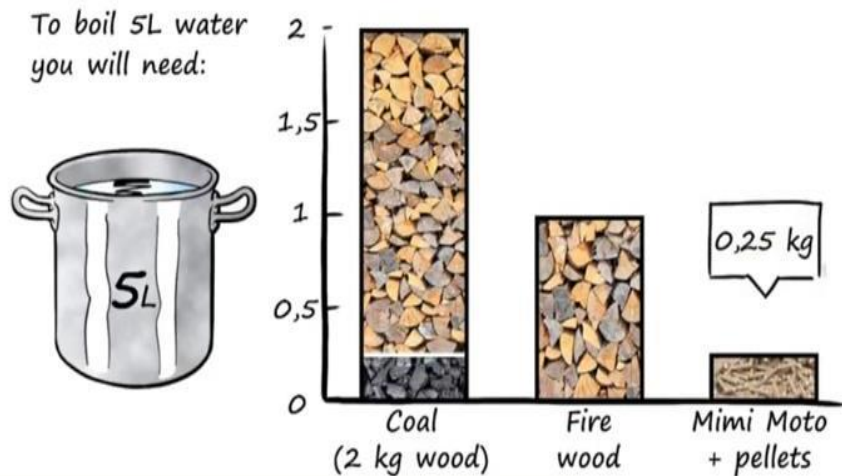
The only other alternative, LPG suffers from the same barriers as electricity as well as lack of widescale distribution networks.

Clean cooking stoves initiative (CSI) project

The consistent use of solid biomass for cooking has multiple adverse socio-economic impacts. Besides CO₂ emissions, the use of solid biomass can contribute to deforestation, loss of biodiversity and health impacts.



Pathways to Cleaner Household Cooking in Lao PDR. CSI project has been implementing and collaborating with world bank.



Purpose of CSI project

To generate environment and gender benefits for targeted households through a switch to clean, energy-efficient gasifier cookstoves using biomass pellets.



CSI Project Components

Component 1: Procurement and Sales of Forced Draft Gasifier Stoves

Component 1A: Procurement of 50,000 Forced Gasifier Stoves

Component 1B: Sale of Forced Gasifier Stove to Customers

Component 2: Ensuring Supply of Pellet Fuel
Component 2A: Ensuring an adequate supply of imported pellet fuel

Component 2B: Building up supply of domestically produced pellet fuel

Component 3: Technical Assistance

Component 3A: Creation of a Supportive Policy Environment

Component 3B: Domestic Pellet Sustainability

Component 3C: Public Awareness and Information Campaigns

Component 4 Monitoring and Evaluation

Component 4A: Evaluation and Verification of Carbon Credits

Component 4B: Support Producers and Distributors of Cook Stoves and Pellets

Implementation process

Project design
and
preparations

Verification by
independent third
party

Registration

Implementation
and ongoing
monitoring

Third party
verification
and issuance
of credits

CSI project implementation

There are 3 phases:

- Phase I: Proof of concept (PoC), focuses on the pre-selected 300 stoves, which have been distributed and operated in Vientiane, Lao PDR.
- Phase II: Distribution of 49,700 stoves in Vientian, Savanakhet and Champasak provinces
- Phase III: Scale up the project to others province in Laos

Progress

- 1) Users are interested to buy a large number of stoves, but the project cannot provide them because it is still in the evaluation and discussion phase to continue the project in the next phase;

- 2) Environmental and social work;
- 3) Complete the design of the stove code (QR code) to track users and calculate carbon reduction in the project.
- 4) Monitoring and evaluation of the project
- 5) complete project design and business plan;
- 6) Completing the definition of the framework for the promotion of biomass pellet production in Lao PDR, Biomass Pellet Company and is conducting studies to move towards certification according to the standards of the International Forestry Industry Council.

Barriers

- Covid-19 outbreak and the project could not be implemented due to difficulties in traveling to the target area;
- Carbon trading time: according to the original plan, it was from 2020-2024, but due to the outbreak of Covid-19, our project was unable to carry out the project and reduced the delivery time of carbon to users to only 2 years (2023-2024).

Support needed

- Financial support;

- Capacity building on carbon finance;
- Expert support to draft carbon trading legislation;
- Technologies for clean energy.

Thank you