

LAO PEOPLE DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

Prime Minister's Office

No. xx/PM

Vientiane Capital, dated xx

DECREE

ON SOLAR ENERGY DEVELOPMENT

- Based on Law on the Government of Lao PDR No 02/NA, dated 6 May 2003;
- In pursuant to the Prime Minister's Instruction No. 09/PM, dated 25 May 2008, on the fuel saving;
- Based on the Electricity Law, No 03/NA, dated 08 December 2008;
- Considering the Prime Minister' Decree adopted on 11 August 2005 on a Local and Rural Electricity Development Fund (LREDF), known as the Rural Electrification Fund (REF),
- Pursuant to Renewable Energy Development Strategy (hereinafter-REDS);
- Refer to the Proposal Letter of the Minister of Energy and Mine, No.

The Prime Minister Issues the Decree:

Section I: General Provisions

Article 1. Objectives

This Decree defines the principles, rules, and measures on the implementation, operation, regulation and supervision of solar energy business, to promote solar energy utilization, including the on-grid and off-grid option, for increasing cleaner energy for self consumption and creating economically and technically viable promotion mechanism for solar technology development in Lao PDR.

Article 2. Definitions of terms

- A solar photovoltaic system (or photovoltaic system) is a system that produces electrical energy by means of the direct conversion of solar radiation through the photovoltaic effect; it mainly comprises a series of photovoltaic modules, hereinafter also referred to as modules, one or more inverters that convert direct current into alternating current and other minor electrical components
- Solar Home System: individual solar kit including one or more photovoltaic panel, the controller and the battery box installed for a unique household,
- Solar thermal systems include: individual system for including a solar panel producing hot water for internal use; or large solar thermal power systems, producing large amount of high pressure steam for power generation by traditional thermodynamic principle;
- Solar hybrid applications where solar energy contributes only for a share in the primary energy utilized to produce electricity or heat
- Decentralized PV solar energy systems: including PV solar plants and decentralized mini grids not connected to the national electrical grid
- Grid connected solar energy projects includes large solar PV projects and solar thermal power projects (CSP - Concentrated Solar Power).
- Rural Electrification Program (REP) is the program implemented by the Government of Laos through the Rural Electrification Division (RED) of the Department of Electricity (DOE) of the Ministry of Energy and Mines (MEM)
- Power Purchase Agreement (PPA): -A legal document between a power producer and EDL spelling out the terms and conditions including the prices and quantities of the power to be purchased by EDL from the power producer.

Article 3. Principles on Development of Solar Energy

The Government of Laos is committed to develop solar energy through the 4 main following orientations:

- continue and upscale the off-grid rural electrification in line with the recently prepared Rural Electrification Master Plan
- develop solar hybrid systems
- assess the feasibility to develop grid connected solar PV systems
- explore the possibility to promote solar thermal applications

Article 4. Principle of solar energy systems operations

The solar energy systems operations are required to observe the following principles:

- Comply with the Renewable Energy Development Strategy of Lao PDR,
- Be effective, save and sustainable,

- Be environmental friendly,
- Avoid and reduce social impact,
- Ensure social safety

Article 5. Scope of application

This Decree applies to all individuals and organizations that invest in solar energy facilities for non-commercial and commercial purpose within the Lao PDR.

Section II

Types of Solar Energy System

Article 6. Types of solar energy system

Based on size and energy supply destination, solar energy systems can be classified into two types as followed:

1. Non commercial solar energy systems
2. Commercial solar energy systems

Article 7. Non commercial solar energy system

Non commercial solar energy system is a production of energy for meeting domestic demand using photovoltaic panels in the case of electricity generation (known as solar home system - SHS) and solar water heater for production of hot water.

Article 8. Commercial solar energy system

Solar energy system for commercial purpose is a solar-based energy production for heat or/and electricity generation, either for owner's own use and supply to neighboring users either through battery charging station or through mini grid, or for feeding in to the grid.

Solar based energy production for commercial purpose shall be subject to licensing and regulation procedures as provided for in this Decree.

Section III

Installation, Utilization and Supervision of

Non commercial Solar Energy System

Article 9. Declaration of Installation

Individuals or communities willing to install solar energy facility for self consumption shall declare the installation to the District Office of Energy and Mines for registration and assistance.

Article 10. Registration of the Installation

The installation of a non commercial solar energy facility shall be approved and registered by the District Office for Energy and Mines.

Article 11. Technical Instruction for Installation

The installation of a non commercial solar energy facility from the initial phase shall be subject to the technical instruction and guidelines available at the Ministry of Energy and Mines.

Article 12. Technical and safety requirements for utilization of solar energy facility

The utilization of solar energy shall comply with the specific technical and safety standards as determined by the Ministry of Energy and Mines and all other legal requirements. The owner shall be responsible for the management, operation, maintenance and safety of the facility.

Article 13. Technical Supervision

The technical supervision shall be carried out by the District Office of Energy and Mines on regular manner.

Section IV

**Installation, Utilization and Supervision of
Commercial Solar Energy Projects**

Article 14. Approval of solar energy facility

Developers, individuals or legal entities, who wish to invest in a solar energy facility with commercial purpose shall first submit an application consisting of a short description of the proposed installation to the Provincial Department of Planning and Investment for consideration and approval.

The Provincial Department of Planning and Investment shall issue the approval to the applicant within fifteen (15) working days starting from the date of submission of the complete application in accordance with this Decree.

Article 15. Operation Licensing Authority

The Authority with power and authority to issue license for installation or construction and operation of solar energy projects for commercial use shall be:

- The Provincial Department of Mines and Energy for facility with total installed capacity of less or equal to 5 MW;
- The Ministry of Energy and Mines for facility with a total installed capacity higher than 5 MW.

Article 16. Licensing Conditions

Developers who wish to install and operate a solar energy facility for commercial purpose shall submit an application to the relevant licensing Authority as specified in Article 16 that includes the following documents:

1. Site location;
2. Business Plan or Feasibility Study;
3. Technical design
4. Financial Plan;
5. Environmental Certificate ;
6. Operation and Maintenance Plan.

Article 17. License Terms and Conditions

The Ministry of Energy and Mines shall develop a standard license terms and conditions for licensing, regulation and supervision of solar energy system for commercial purpose including regulation and supervision procedures that shall be implemented and complied with by the relevant operation licensing Authority.

Article 18. Consideration of the Application

The Provincial Department of Energy and Mines shall issue the Operation License to the applicant within fifteen (15) working days starting from the date of submission of the complete application in accordance with this Decree.

When the licensing Authority is the Ministry of Energy, the delay to issue the Operation license to the applicant is extended to thirty (30) working days starting from the date of submission of the complete application in accordance with this Decree.

In case of rejection, the licensing Authority shall provide written reasons for its decision.

Article 19. Technical and Safety Requirement for the Utilization

The solar energy facility shall be operated in accordance with the technical and safety standards issued by the Ministry of Energy and Mines and all other legal requirements.

Article 20. Technical Supervision

- After commercial operations have commenced, the operator shall submit quarterly reports to the Provincial Department of Energy and Mines.
- The operator shall provide access to the solar energy facility to the staff of the Provincial Department of Energy and Mines for inspection purpose whenever required, either regular or risk-based inspection. The inspector's visits shall take place during normal business hours and shall be subject to prior notice whenever possible.
- Inspection of solar energy facility shall at least cover:
 1. Compliance with the requirements of the relevant laws and regulations;
 2. Compliance with terms and conditions of Operation License;
 3. Compliance with Technical and Safety Measures;
 4. Compliance with terms and conditions of Environmental Certificate or Environmental Management Plan;
 5. Compliance with Business Plan;
 6. Compliance with Operation and Maintenance Schedule.

Article 21. Principle on Price Determination

Determination of solar energy price shall be based on market principles in the Lao PDR.

The State shall intervene only if there is a need to regulate the price of energy to support the socio- economic development in rural and remote areas where people have no access to grid system.

Section VI

Access to Technical and Financial Assistancess

Article 22. Technical Assistance

Ministry of Energy and Mines and its relevant departments and divisions, in collaboration with Ministry of Science and Technology and other parties concerned shall provide technical assistance to any solar energy project developers.

Article 23. Conditions for Financial Assistance from the Rural Electrification Fund

Developers and investors in solar energy production may apply for financial assistance from Rural Electrification Fund when the following conditions are met:

1. Facility located in a remote off grid area;
2. No other better alternative for electrification;
3. Project financially and operationally sound.
4. Fund available from the REF;

Article 24. Other Funds likely to be mobilized to support solar energy industry

In addition to the fund from the REF, solar energy system developers and investors may appropriately apply for financial assistance from other financial sources such as Poverty Reduction Fund, Small and Medium Enterprise Development Fund, Environmental Fund, Renewable Energy Fund.

Article 25. Application for Investment Incentive under the Law on Investment Promotion

Solar system developers may apply for investment incentives and other fiscal incentives as provided in the law on investment promotion of the Lao PDR.

Article 26. Access to carbon finance and issuance of green certificates

The solar energy system developers are encouraged to access carbon finance through the intermediation of the Designated National Authority.

MEM shall issue necessary certification required for accessing carbon finance following the procedure in place.

In addition, green certificates shall be issued by the Ministry of Science and technology upon request by the developers and in accordance with procedures in place.

Section VII

Solar Energy Supply

Article 27. Solar Energy Supply

Developers of solar energy system for commercial purpose may supply energy to neighboring users or to a distribution company.

The terms and conditions of such supply shall be negotiated and agreed between the developers and the distribution company or neighboring users.

Article 28. Conditions for Supply

The conditions for the supply of solar energy are the following:

- 1. Meeting the demand of the users or buyers;
- 2. Be financially competitive;
- 3. Meeting the distribution company technical standards and energy requirements.

Section VIII

Regulation and Supervision of Solar Energy Business

Article 29. Roles of Ministry of Energy and Mines

Ministry of Energy and Mines shall centrally and uniformly manage solar energy development and production throughout the country.

Article 30. Powers and Duties of Ministry of Energy and Mines

In the administration and inspection of solar energy production, the Ministry of Energy and Mines has the following powers and duties:

1. To elaborate on the strategic plan relating to the development of solar energy production;
2. To draft a master plan regarding the development of solar energy, including short-term, medium term and long term plans for the development of solar energy production;
3. To consider applications and approve the establishment of solar energy production facilities for commercial purpose for which the Ministry of Energy and Mines is licensing authority;
4. To issue operation license for solar energy production facilities for commercial purpose for which the Ministry of Energy and Mines is licensing authority,
5. To permanently review and complete the existing technical standards and guidelines for solar energy systems in collaboration with other parties concerned;
6. To organize provision of technical assistance and training support on installation and operation of solar energy units to its Provincial Departments or District Offices for Energy and Mines;
7. To coordinate and cooperate with international organizations and foreign authorities for the development of solar energy;
8. To summarize and report the status of the development of solar energy industry in the country to the Government;
9. To coordinate with other sectors and concerned local authority for the administration of the solar energy business.

Article 31. Powers and Duties of the Provincial Department of Energy and Mines

In the administration and inspection of solar energy facilities, the Provincial Departments of Energy and Mines has the following powers and duties:

1. To elaborate own solar energy business development in accordance with the Ministry of Energy and Mines' master plan;
2. To consider applications and approve the establishment of solar energy units;

3. To issue operation license for solar energy production for commercial purpose for which the Provincial Department of Energy and Mines is licensing authority;
4. To proceed to technical inspections of solar energy facilities for which the Provincial Department of Energy and Mines is licensing authority;
5. To suspend or remove operation license when developers materially breach the license terms and conditions;
6. To provide technical instruction for solar energy production investment within its scope of responsibility;
7. To gather and prepare information on potential and feasibility of solar project development in the province;
8. To coordinate with other sectors and concerned local authority for the management of the solar energy production business;
9. To gather data on feasible commercial solar projects and report to MEM.

Article 32. Powers and Duties of the District Office for Energy and Mines

In the administration and inspection of solar energy production, the District Office of Energy and Mines has the following powers and duties:

1. To provide technical assistance and support for non commercial solar energy production;
2. To disseminate and provide training on technical guidelines or instructions of the Ministry of Energy and Mines to non commercial solar system owners;
3. To disseminate strategic policy and plan of the Ministry of Energy and Mines regarding the promotion of solar energy production;
4. To regulate and supervise the non commercial solar energy production;
5. To summarize and report the status of solar energy development and production to the Provincial Department of Energy and Mines.
6. To exercise other rights and other duties related to solar energy production as assigned by the Provincial Department of Energy and Mines or defined by laws and regulations of the Lao PDR.

Section IX

Awards and Sanctions

Article 33. Incentives towards outstanding business operation

Individuals, organizations or legal entities that have had an outstanding performance in implementing this Decree, mainly in solar energy related activities and environmental protection shall receive rewards and other incentives accordingly to the laws and regulations.

Article 34. Measures against the Violators

Individuals, organizations or legal entities that violate this Decree shall be subject to measures depending on the seriousness of the violation in the form of education, discipline, fine, damage compensation or penalties accordingly to the laws and regulations.

Section X

Final Provisions

Article 35. Implementation

The Ministry of Energy and Mines and other relevant ministries, organizations and parties concerned have the duty to efficiently implement this Decree.

Article 36. Effectiveness

This Decree is effective from the date of signature herein.

Any regulations and provisions which are contradicted with the provisions of this Decree shall be cancelled.

Prime Minister of the Lao PDR

Appendix 1

Guideline of Incentives (kip) for Solar Home Systems developed under the Rural Electrification Program

Item	Conditions	Approved (1 st January 2009 ^o)
Payments to PESCOs		
Planning Fee	PESCO submits electrification plan and signed agreements to VOPS, with PDEM endorsement	45,000
Local Hardware & transport	After receipt of hardware at PESCO warehouse	110,000
Installation, Customer and VEM training	After receipt of PDEM reports (3) - installation + one month	50,000
		30,000
Yearly post installation and Service Fee	Paid to PESCO after PDEM inspection and VOPS financial evaluation	30,000
Monthly service Fee	for PESCO per unit for the first 1 - 1000 HH	4,500
	for PESCO per unit >1001 HH ----- for the VEM	4,500
System removal fee	When system is at PESCO warehouse	55,000
PESCO Business loan	Max one year, 0% interest	50,000,000
Start up support Fee	1,000,000 KIP per month over the first 3 months of activity	3,000,000

VEAC Inspection fee	per system per month	1,000
PDEM system inspection	for every inspection (month1, month 12, then Every year)	15,000