



Ministry of Energy and Mines
Department of Energy Policy and Planning

Power Development Plan in Lao PDR

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Power Sector Policy and Strategy

- **Develop all Hydropower Potential as far as practical for export and provide domestic electricity throughout the country;**
- **Implement the Policy on Sustainable Hydropower Development;**
- **Increase access to electricity by grid extensions and off-grid rural electrification;**
- **Maintain an affordable tariff to promote economic and social development;**
- **Increase electrification ratio to > 95% by 2020;**
- **Promote energy efficiency and conservation;**
- **Increase power consumption on domestic industries 60% of total consumption next 5year;**
- **2015-2020: Establishment of Grid-To-Grid trade;**
- **2020-2030: Establishment of GMS Grid.**

Hydropower potential versus existing

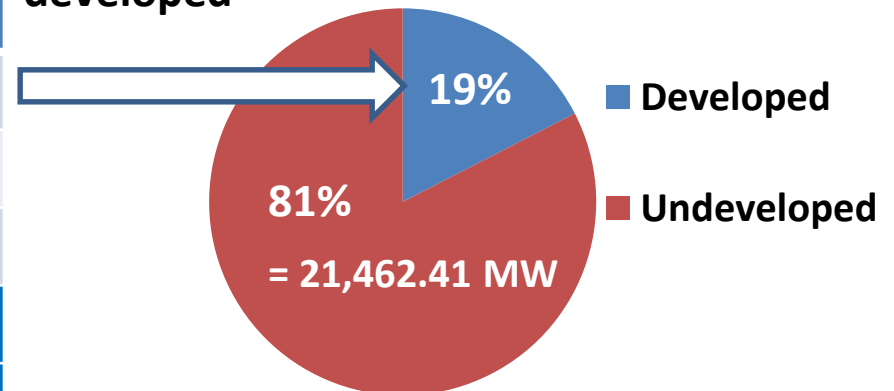
Existing power plants in 2017

Type	No	MW	%
Hydropower	49	5,045	72.6
Coal thermal	1	1,878	29.16
Biomass	2	25	0.39
Total	52	6,948	100
Max output/year, GWh		36,377	

Other potentials:

- Coal
- Solar
- Wind

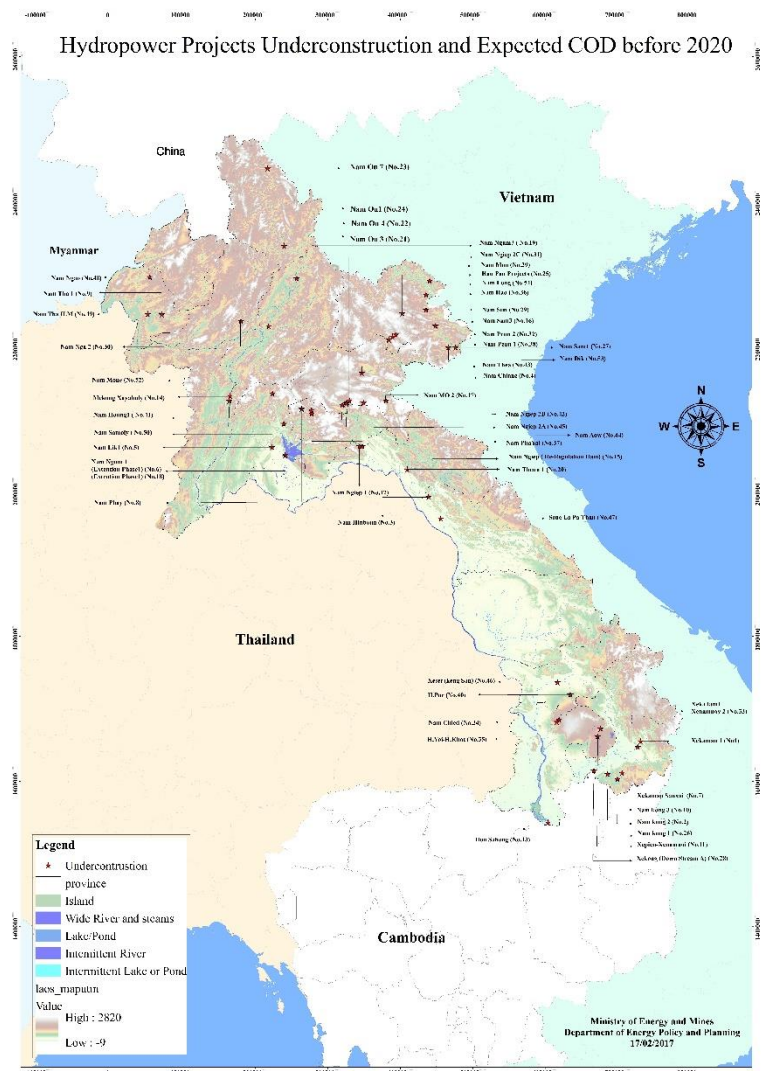
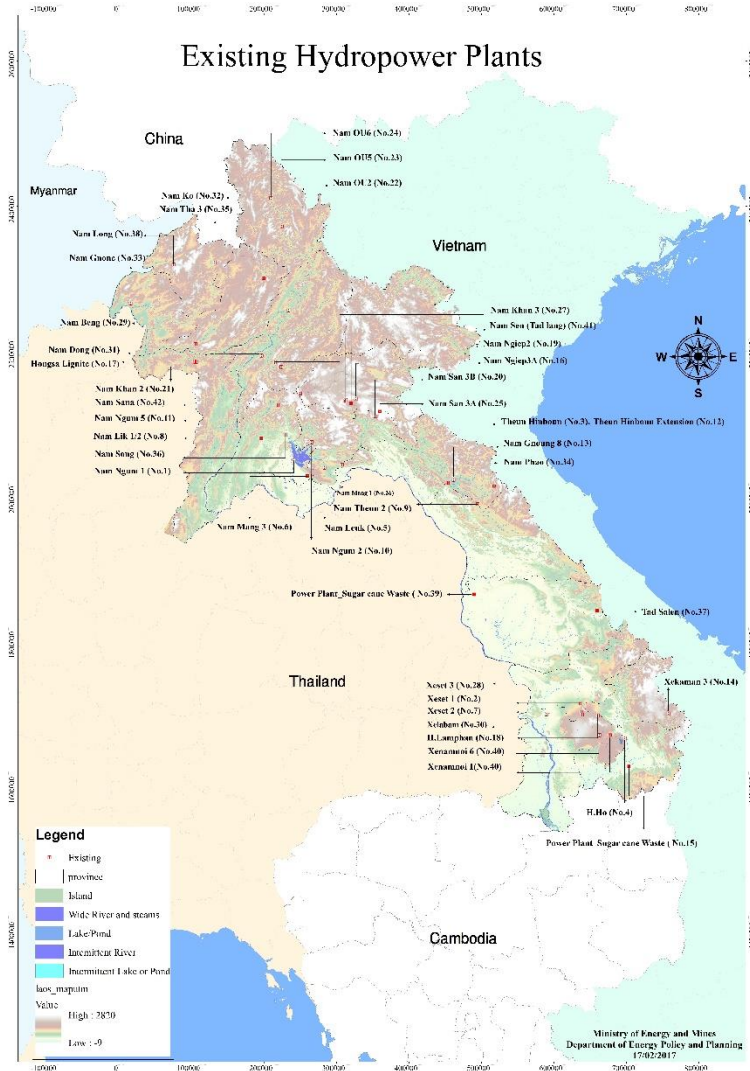
Hydropower potential of Laos: 26,000 MW, from which 19.4% or 5,045 MW has been developed



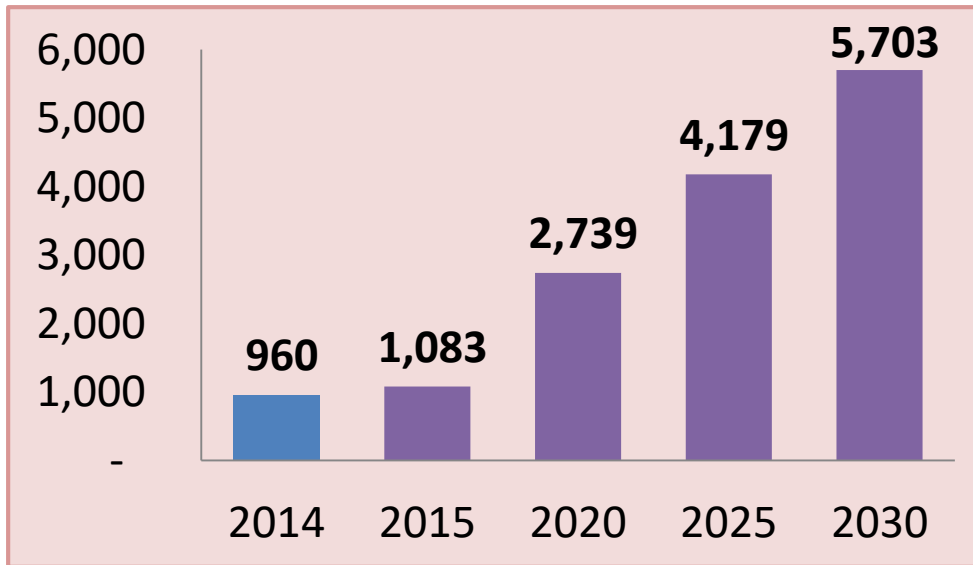
2015:

- Generation: 16,501 GWh
- Export: 11,542 GWh = 69.9% of total generation
- Consumption: 4,239 GWh

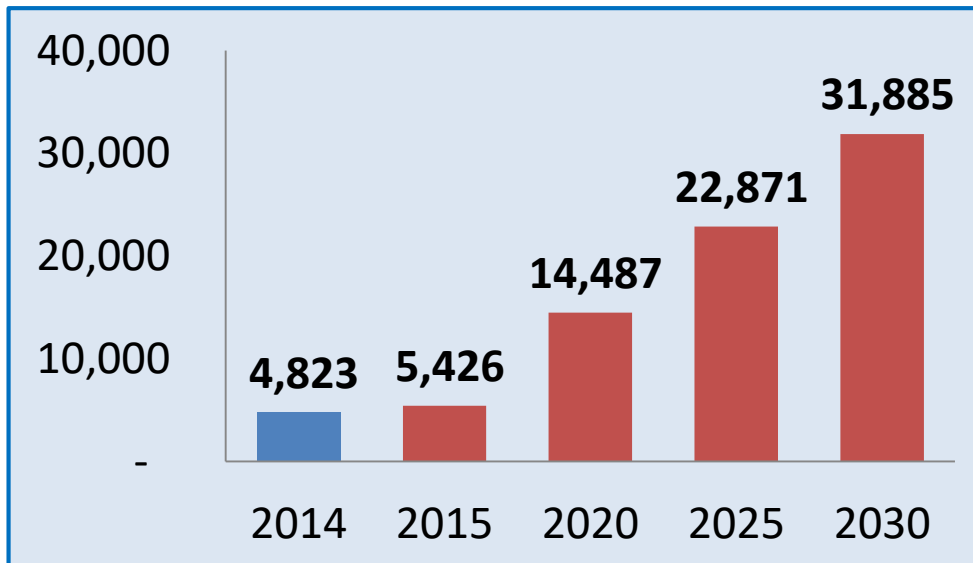
Hydropower Location



Power Demand Projection



Peak demand in MW is expected to grow at 12% per year



Power demand in GWh is expected to grow at 13% per year

Power Development Plan

Projects under construction and to be complete by 2020

Type	No	MW
Hydropower	46	5,511
Coal thermal	1	600
Total	47	6,111
Max output/year, GWh		29,931

By 2025, Laos will have 145 power plants:

Projects prepared for construction and to be complete by 2025

Type	No	MW
Hydropower	46	3,581
Max output/year, GWh		16,425

Type	No	MW
Hydropower	141	14,136.59
Coal thermal	2	2,478.00
Biomass	2	25
Total	145	16,639.59
Max output/year, GWh		82,733

Other RE projects

WIND: 2000-3000 MW

- 600 MW (1st phase: 250MW) under negotiation for development in Sekong Prov.
- 8 additional projects under field investigation

SOLAR:

- Only Home Solar System (SHS) (50-100W) (25,000 HH)
- 700 kW grid connected (demonstration project by Japanese grant), 3 MW in commercial operation (2017)
- 100 MW solar farm under study in Vientiane.
- More 4000 MW under Feasibility Study

CURRENT STATUS OF WIND DEVELOPMENT

- Completed Pre-feasibility study of the wind potential in Laos at *Nong and Xonbuly* districts of Savannakhet Province with 64 MW
- GoL Signed MOU, PDA with Impact Energy Asia Limited: 600 MW in Xekong Province
- GoL Signed MOU with Phongsaphavi (Domestic Company) in Bolikhamsay and Khammouane Provinces.
- GoL Signed MOU with AIDC in 4 Provinces: Savannakhet, Saravan, Xekong and Attapeu
- 6 Provinces (LPB, VTE CAP, VTE, Xayabury, Xaysombune and Chamapsak) is under wind data collection
- 50 MW is under Feasibility Study



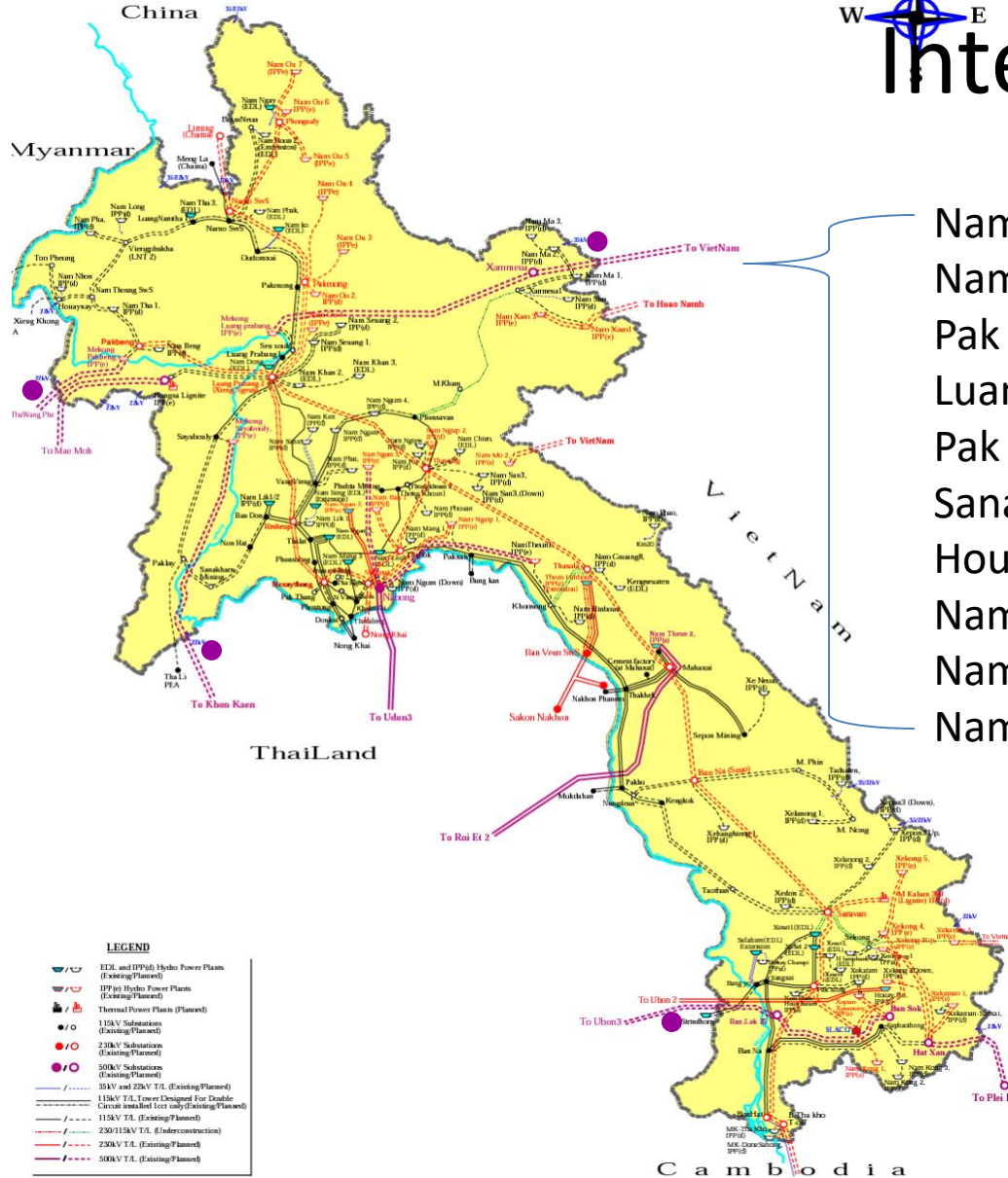
Laos's Power Trade in the Region: MW

Existing capacity	Import	Export		
		In operation	Committed	
6,441	462	4,260	9,000	Thailand
	18	250	5,000	Viet Nam
		10	200	Cambodia
		10		Myanmar
	68			Yunnan, China
			100	Malaysia
				Singapore
Total: 6,441	548	4,530	14,300	

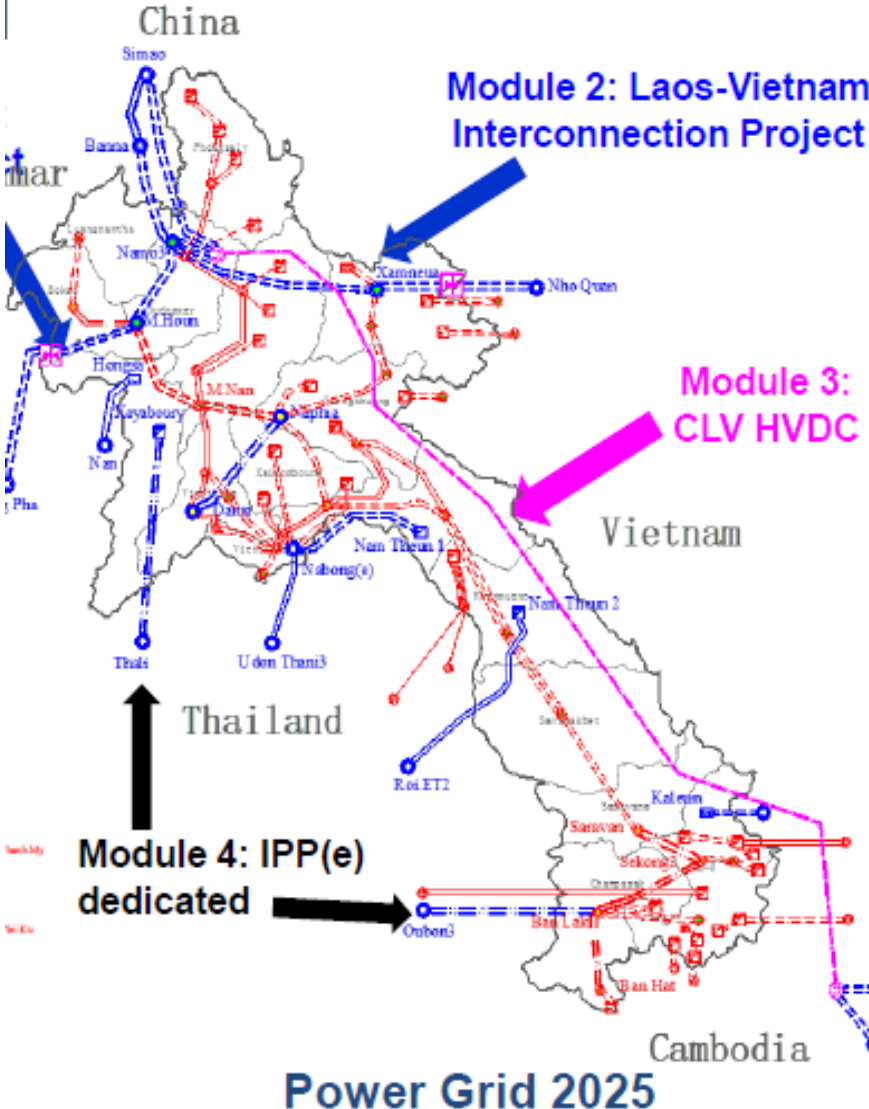
Remarks:

- Committed means two countries are implementing signed-MoUs

Potential of Interconnection:



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Xe Kong Basin	3000 MW
Ka Leum Termal	1800 MW
Xe Kong Termal	700 MW
Xe Kong Wind	600 MW
Attapeu Sola	500 MW

HVDC from North 5000 MW

Existing Power Connections between Laos and its neighbors

Voltage of Transmission lines	No. of connecting points with neighbors					Total
	Thailand	Viet Nam	Cambodia	Yunnan China	Myanmar	
500 kV	4*					4
230 kV	3	2*				5
115 kV	6		1	1		8
35 kV		3		2		5
22 kV	7	4	1	1	1	14
Total	20	9	2	4	1	36

* Including one 500 kV and one 230 kV connections which are under construction.

Thank you for your Kind Attention