Carbone Credit Policy and NDC 3.0 in Energy Sector

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Policy and Regulatory Framework

Develop all potential power sources in the country with power generation mixed for domestic use and export;

Power generation mixed for domestic use from hydro accounts for 75%, coal based 14% and renewable energy 11%;

Promote power generation for export and power exchange among neighboring countries.

Promotion of Green Hydrogen and Ammonia for domestic and Exports

Promotion of Self Energy Consumption by Solar Rooftop and other sources

Promotion of the Carbone Credit and Energy Attributed (Renewable Energy Certificate)

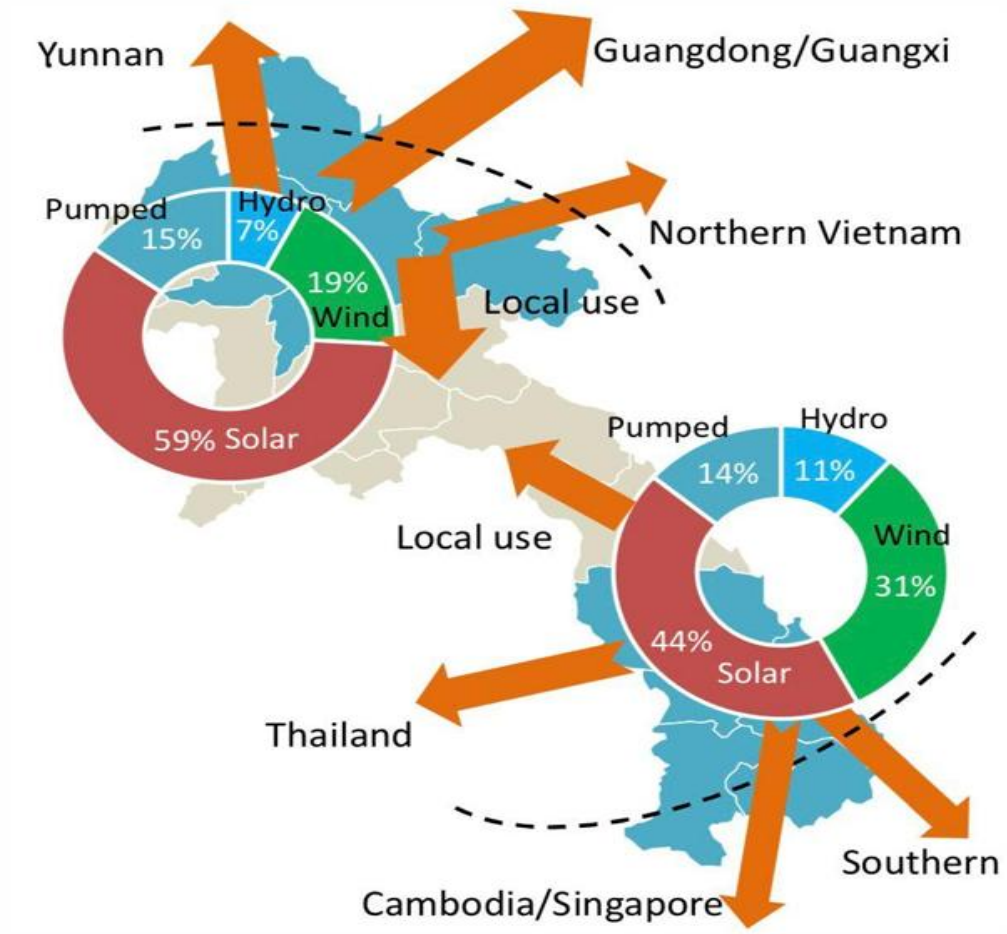
Promoting the increased use of electrically-powered vehicles in the transportation sector. EV target in 2025 cover 15% of the total vehicle in country and up to 2030 will be increased to 30%

• Transmission Line System Development: “Link up the transmission line system to achieve nationwide coverage” and integrate export systems with domestic consumption systems into a single system to advance towards a subregional connection hub.

• Electricity Distribution System Development. The government has set targets of 95% for 2020, 98% for 2025, and 100% for 2030.

• Promote electricity exportation across GMS countries to achieve under MOU that was signed and the ASEANespecially Lao-Thai-Malaysia-Singapore (LTMS) project

Planning of RE development

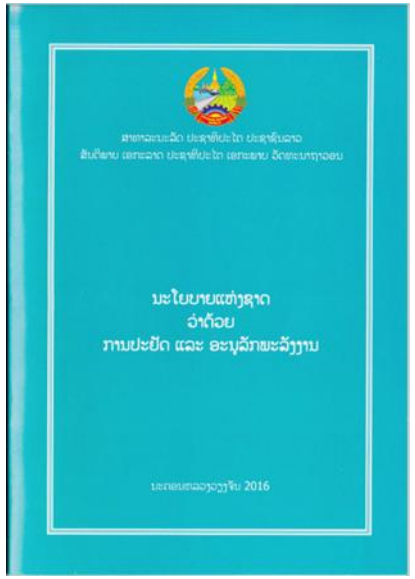


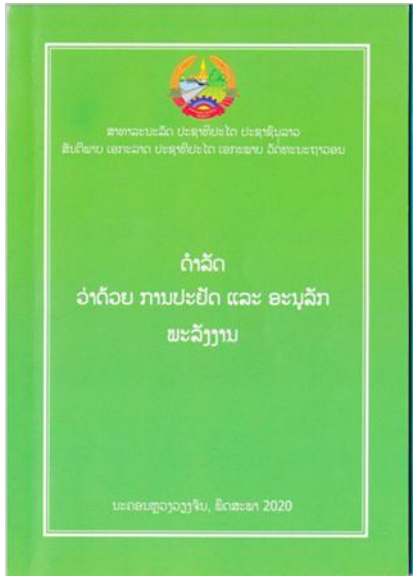
Hydropower	No	MW
Existing	83	9,768.6
Under-Construction	21	1,259.3
CA	18	2,466.2
PDA	109	6,431.9
MOU	245	8,143.4
Total	**476**	**28,069.4**

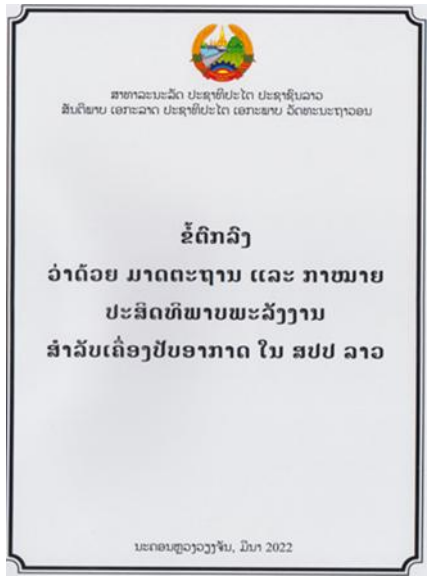
Solar	No	MW
Existing	12	73
Under-Construction	0	0
CA	4	2,688
PDA	13	873
MOU	25	12,147
Total	**50**	**15,781**

Wind	No	MW
Existing	0	0
Under-Construction	0	0
CA	1	600
PDA	1	187.2
MOU	28	14,150
Total	**30**	**14,937.2**

Energy Efficiency Policy







the target of the final energy consumption reduction by 10% in 2030 based on business as usual (BAU).

Carbone Credit Policy in Energy Sector

- Vision and Target Make the energy sector a key sector to move towards net zero emissions by 2050 and make carbon credits and renewable energy source verification an important source of revenue to contribute to the state's socio-economic development in a green and sustainable manner It is expected that by 2050, it will be able to reduce emissions of 79,837,635 tones of CO2/year, of which at less 10% will contribute unconditionally to the obligations set out in the National Action Plan to address the problem of climate change in accordance with the International Convention on Climate Change at the National Action Plan
- Policy To encourages individuals, entities and organizations, as well as non-profit organizations and communities, to carry out carbon neutrality activities in the development of projects for greenhouse gas mitigation activities from the energy industry to generate revenues from such activities in the carbon market, in line with bilateral, multilateral cooperation and market mechanisms as stipulated in the Paris Agreement on Climate Change.

Carbone Credit Policy in Energy Sector

Strategy 1: Carbone Credit in Power Sector In the past decade, there were a total of 49 power projects, achieving carbon reduction of 9,169,261.83 tones of CO2 that were traded in 4 forms of carbon trading standards, and the markets for carbon trading were mainly from European countries, including: through the Clean Development Mechanism (Clean Development Mechanism) with 22 projects with 2,297,958 tons of CO2, through the Gold Standard with 17 projects with 495,215 tons of CO2, and with the Verified Carbon Standard (Verra) with 7 projects with a total of 6,356,623 tons of CO2 The Joint Crediting Mechanism (JCM) has 3 projects totaling 19,465.83 tones of CO2 (in the form of energy produced, the Japanese government and the Japanese government will calculate the amount of carbon that can be reduced by itself according to international standards). Lao PDR has a potential clean energy project, technically with a capacity of 60,000 megawatts, of which, about 30,000 megawatts of hydropower, about 15,000 megawatts of solar power, about 13,000 megawatts of wind power and more than 2000 megawatts of biomass energy. In according to an estimate by 2050, has the potential to reduce carbon by 23,252,967 tCO2, of which small hydropower is about 5,820,226 tCO2/year, solar power is about 8,196,954 tCO2/year, wind power is about 9,221,288 tCO2/year and biomass power is 14,500 tCO2/year

Carbone Credit Policy in Energy Sector

- **Strategy 2:** Promote carbon neutrality from the efficient use of energy by sectors and clean cooking stoves.

At present, there are 1,378,772 households nationwide, of which 502,084 are in urban areas, 831,786 are in rural areas with access and 44,902 are in remote rural areas without access, 95% of households nationwide have access to electricity, use energy for daily living, especially residential and service sectors, covering 95% from the use of firewood, black coal, 2% from the use of electric energy (electric stoves, electric pots), 2% from the use of cooking stoves and 1% of the use of LPG is mainly in urban area. By 2040, at least 40,000 households are expected to use electricity for cooking and 1,321,529 households to use clean stoves in urban and rural areas, reducing about 30 million tones of carbon dioxide

Carbone Credit Policy in Energy Sector

- **Strategy 3: Clean Energy for Transportation Sector**

In order to meet the government's expectations in each aspect to reduce foreign energy imports, guarantee energy security within the country and contribute to carbon reduction, the National Action Plan for Solving the Problem of Climate Change in the form of unconditional and unconditional climate change. According to estimates, the amount of carbon reduction under government policies is estimated to be 208,490 tCO2 and by 2040 is expected to be about 1,023,625 tCO2 To encourages domestic and foreign investors to develop the electric vehicle projects, potential conversion from petrol vehicles to electric vehicles to provide green and environmental inputs in the form of direct investment, bilateral and multilateral cooperation to access green finances for Carbone off set in accordance with the International Convention on Climate Change.

Carbone Credit Policy in Energy Sector

Strategy 4: Green Hydrogen and Ammonia

In order to achieve the expectation of developing green hydrogen-ammonia in the country for industrial use and energy storage to guarantee sufficient electricity supply in the dry season and export, the domestic clean energy infrastructure is encouraged to use existing electric energy resources and having a plan to develop it to create domestic products, create jobs and build the domestic economy to replace the export of electricity to foreign countries, at the same time The State will facilitate the appropriate cooperative models on the basis of mutual benefit, bilateral cooperation and cross-cutting in the energy transition to carbon neutrality in accordance with the Government's policy set out in the National Action Plan for Climate Change Solutions.

- It is expected that by 2030, 120MW of renewable energy will be used to produce about 120,000 tons of green ammonia per year, and about 200,000 tons of green urea fertilizer will be produced per year, reducing or off setting about 312,000 tons of CO2 per year.
- It is expected that by 2040, 2000 MW of renewable energy will be used to produce approximately 1,600,000 tones of green ammonia per year, offsetting approximately 4,160,000 tones of CO2 per year.
- It is expected that by 2050, 10,000 MW of renewable energy will be used to produce about 8,00,000 tons of green ammonia per year, which can offset about 20,800,000 tons of CO2 per year.

Carbone Credit Policy in Energy Sector

- Strategy 5: Renewable Energy Certificate (REC)
- Each year, the use of domestic electrical energy is clean energy derived from medium-scale hydroelectric energy sources, and the majority of electrical energy exports are derived from hydroelectric energy, and in the future, it may come from wind power, solar power, biomass power, energy storage system, a total of 86,970,425 REC of which, 49,446,375 REC existing projects have already produced energy and 37,524,050 REC new planned projects

NDC 3.0 in Energy Sector: Challenges

- Meeting the targets identified in the 2021 NDC will require the mobilization of a significant amount of climate finance from various sources, including international climate finance and carbon finance such as under Article 6 of the Paris Agreement. Financing needs for implementing mitigation measures towards the 2030 conditional targets The delayed completion of NDC 3.0, as well as misalignment with the national carbon market strategy, can pose a significant risk to the government in its ability to mobilize carbon finance as well as diffuse low carbon technologies through market mechanisms. This is particularly relevant for international carbon markets under Article 6 of the Paris Agreement, as the eligibility criteria for the export of carbon credits need to be closely linked with the achievement of NDC 3.0

NDC 3.0 in Energy Sector: Challenges

NDC 3.0 in Energy Sector: Challenges This Update NDC will be aligned with energy sector's Carbone market policy, National Green Growth Strategy to 2030 and National Energy Master Plan toward net zero emission by 2050 or beyond which will be integrated and consolidated into NDC to be communicated to UNFCC, the project has three main area focussed:

- To identify the gaps, challenges and Leason learned for preparation of NDC 3.0 in Energy Sector.
- Update GHG emission inventory for the energy sector 2025 and projection to 2035
- Update NDC 3.0 for Energy Sector is determined at national level and COP 30 in December 2025

Thank you so much