

Chapter 8

Conclusions and Recommendations

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1. Conclusions

The energy data collection system is of two types: mandatory basis and voluntary basis. The mandatory basis system sets up laws, sub-decrees, and regulations first. A relevant government office collects energy demand and supply data from energy market players – suppliers and consumers – using specific questionnaires and definitions. Under the voluntary basis system, a relevant government office requests the energy market players to submit their energy demand–supply data to the office using specific questionnaires and definitions. But regular communication and a trusting relationship between the office and the market players are indispensable. This time ERIA recommends that the DPC apply the mandatory basis system. The necessary contents of an energy statistics regulation are in Chapter 2.

In chapters 3 to 6 the technical aspects of data collection of coal, oil (petroleum products), electricity, and biomass are examined. The chapters describe questionnaires that cover supply (production and import) and demand (sales to external buyers [export], wholesalers, and final users comprising the industry, transport, commercial, and residential sectors). The beginning and end stock levels are also required. For electricity, two questionnaires were prepared: one for EDL and the other for independent power producers. The questionnaires comprise power generation, import and export of electricity, and fuel input in thermal and biomass power plants. The EDL questionnaires only have the demand-side part comprising sales data of the country's final users. The biomass questionnaire targets the business entity of biomass. And only charcoal is commercial biomass. Thus, the biomass questionnaire covers only charcoal production, fuelwood input, and sales to wholesalers and final users.

Chapter 7 summarises the results of the biomass consumption survey conducted by a local Lao consulting company. This survey also included LPG and electricity consumption for cooking and water heating as a competitor of biomass. The first significant result of the survey made clear that (i) LPG consumption in urban and rural households is minimal; (ii) electricity consumption for cooking and water heating in urban areas is much higher than in rural areas; (iii) biomass is the primary fuel for cooking and water heating in urban and rural areas. The second significant survey result were obtained unit biomass consumptions (kg/month, household) of wood and charcoal by urban and rural areas. The unit consumptions were appropriate because national biomass consumption estimated using the unit consumptions were similar to the DPC's national biomass consumption in 2018.

2. Recommendations

When the DPC starts energy data collection from energy market players in the Lao PDR under regulation, the DPC must designate the energy market players, that is, energy companies. For coal, all coal mining companies to engage in the country's coal business are extracted as objectives for the energy data collection referring to a member list of coal mining associations in the Lao PDR or

registration list of relevant office or department or ministry such as Ministry of Industry and Commerce. For oil, all the oil companies to engage oil businesses which are import of petroleum products out of Lao PDR and wholesales (purchase petroleum products such as gasoline from oil import companies and sales to final users) are extracted referring to a member list of Laos State Fuel Company or registration list to the relevant office, department and ministry in Lao PDR. For electricity, the EDL and independent power producers are selected from a registration list of IPPs with EDL. For biomass, charcoal producers are objectives referring to charcoal associations in the Lao PDR. Thus, the coverage of the supply data of each energy in the country will be 100% and the DPC will prepare the sales data which are balanced between demand and supply. But the DPC must estimate fuelwood consumption based on the number of households in urban and rural areas. The unit fuelwood consumption (kg/month-house) will come from the biomass survey.

Before collecting the energy data using the specific questionnaires under a regulation, the DPC must hold seminars for energy market players regarding the questionnaires and definitions. Market players refer to coal mining companies, oil business companies, the EDL and IPPs, and charcoal producers. After the seminars, the DPC must conduct a pilot data collection from sampled companies (around 10) with volunteer-sampled companies and assess the data quality in the sample companies' questionnaires. The DPC should then fine-tune the questionnaires and definitions based on the pilot collection results. Then official energy data collection starts, first annually with the DPC shifting to a monthly basis using the same questionnaires.

The DPC should release an annual report on the Lao PDR's energy demand and supply situation through MEM's website and publications, based on the primary energy data collected from Lao energy companies under a MEM regulation. This annual report is excellent feedback for the energy market players to submit their yearly energy data to the DPC. Through the annual report, the energy companies can understand their position by comparing national numbers and company numbers. This information will undoubtedly contribute to improving their business policies and planning.