Chapter 3

Policy Recommendations

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Chapter 3

Policy Recommendations

This study surveyed the methods of financing energy efficiency and conservation (EE&C) investment and quantitatively analysed the economic efficiency of EE&C financing. This chapter will outline the policy implications based on this analysis.

3.1. How to Materialise Energy Efficiency and Conservation Potential

Chapter 2 indicated that a country can expect large benefits from EE&C investment. This raises the question of what is needed to enjoy these benefits fully. To this end, this study makes three policy recommendations, as follows:

(i) re-recognise the benefit of EE&C investment;
(ii) establish a special agency to strengthen policy implementation; and
(iii) maximise EE&C potential by
    (a) building up EE&C education and public relations, and
    (b) providing low-cost or free EE&C diagnoses.

3.1.1. Re-Recognise the Benefits of Energy Efficiency and Conservation Investment

According to the estimate in Chapter 2, the internal rate of rerun (IRR) of EE&C investment can be as high as 30%. Although the results may differ by country and/or project-specific conditions, this clearly indicates that EE&C investment is a profitable business in general. Recognition of the profitability of EE&C investment may not be as high as is recognition of the importance of EE&C. Re-recognition of the high profitability of EE&C investment is a necessary first step to materialise EE&C potential. In addition, the results of this estimation also indicated that earlier investment can give larger benefits. Thus, governments are urged to promote and eventually materialise EE&C investment as early as possible.

3.1.2. Establish a Special Agency to Strengthen Policy Implementation

When implementing EE&C policy into a market, professional knowledge, such as practical knowledge on available technologies and energy management, is required. The role of the policy execution body grows larger when a country is at an early stage of implementing EE&C, and private businesses or the general public lack sufficient knowledge of EE&C. At such times, it may be better to consolidate existing knowledge and know-how in a country to make EE&C implementation more efficient. One way to do this is to acquire and educate personnel within the government. Another way is to establish a specialised agency outside of the government. The advantages of such an agency include the following:

(i) An agency can enhance its expertise through specialised daily work experiences.
(ii) An agency can efficiently execute policies thanks to their accumulated expertise.
(iii) An agency can reduce government costs if it can leverage human resources and funds in the private sector.

3.1.3. Excavation of Energy Efficiency and Conservation Potential

Some examples of actions required to materialise EE&C potential include the following:

(i) Build up EE&C education and public relations

Although this is an unspectacular area that does not easily yield instant and visible results, countries must build up EE&C education and public relations, because no EE&C investment will be made if there is a lack of knowledge thereof. In the medium to long term, education in schools is the most important action. Countries should offer classes on energy and the environment, including EE&C, as part of compulsory education. As a first step, a country may be required to develop teaching guidelines on energy and the environment to help teachers who may not necessarily be well educated about it. A country can refer to the example of some developed countries that have already implemented such education.

In the short term, particularly for private businesses, raising awareness of energy costs and presenting the amounts of possible cost reductions can be an effective incentive. Private businesses would start taking EE&C actions autonomously when they recognise that energy saving equals cost saving.

For the general public, the organisation of a special event, such as a 'no-light night to enjoy the starry sky,' can be useful. People may be willing to join and enjoy the event, and eventually they can incidentally contribute to and raise awareness of energy saving. Countries can raise public awareness though this and other ways. In any case, a long-term approach is necessary as it takes time to see the results of education.

(ii) Provide low-cost or free EE&C diagnoses

Countries can incentivise EE&C investment, particularly amongst private businesses, by showing the potential of energy saving and corresponding cost savings. However, businesses may be deterred from ordering a diagnosis of their factories by the expense of hiring an expert. Thus, the provision of low-cost or free diagnosis services may help businesses understand their opportunities to reduce costs and thus encourage them to invest in EE&C. If such services are provided to energy-consuming industries and buildings, country could tap a large EE&C potential.

If a government wants to reduce the cost of diagnosis as much as possible, they could make the initial diagnosis free of charge, with repayment tendered after the materialisation of an EE&C investment as a result of the diagnosis.

3.2. Seeking a Better Way to Finance Energy Efficiency and Conservation

Even if a country applies the various actions identified in section 3.1, the fulfillment of EE&C investment still faces bottlenecks. One of the most critical of these is financing. No one can invest without funds, regardless of the expected profitability. This kind of obstacle becomes more evident in small and medium-sized enterprises. Therefore, financial support can play an important role in promoting EE&C investment.

It is next necessary to determine which of the possible financing instruments is more effective or preferable. To this end, this study proposes the following four recommendations:

(i) choose a method with a small impact on a government's financial burden,
(ii) remove any energy price subsidies to improve the EE&C investment climate,
(iii) set aside a government budget through a special purpose tax, and
(iv) build up financing capability.

3.2.1. Choose a Method with a Small Impact on the Government's Financial Burden

There are multiple financing method options as indicated in section 1.2. Amongst those, tax and non-tax incentives will not be repaid, and thus consume the national budget. These methods are less financially sustainable as they contain the risk of harming the national budget or restricting financial support due to future budgetary constraints. In addition, they are high-cost methods from the government's point of view. On the other hand, lending programmes and performance contracts are sustainable methods that are repayable, and thus do not consume the government's budget. Thus, a comparison of the available methods makes it clear which are more preferable.

Of the other elements that should be considered when choosing a financing method, one basis for selection is financial sustainability. For instance, it may be difficult to adopt a loan programme when the technology being used is advanced and its effect is being tested. Adoption of a lending programme can also be difficult when energy prices are low, as this makes the investment's payback period very long. In the case of a high-risk investment, the provision of a grant or subsidy is more appropriate, as this allows the government to take the risk on the company's behalf.

3.2.2. Remove the Energy Price Subsidy to Improve the Energy Efficiency and Conservation Investment Climate

The price of energy is a critical component of a sustainable financing method such as a lending programme or performance contract. This is because under these methods, the reduction in energy bills achieved as a result of improved efficiency is the source of the funds used for repayment. The financial feasibility of EE&C investment is higher in countries where the price of energy (i.e. the expected profit from EE&C investment) is high. In this sense, countries are encouraged to remove energy price subsidies, which pose an obstacle to EE&C investment, as soon as possible.

The profitability of EE&C investment in countries where the price of energy is (artificially) low is likewise naturally low; hence, such countries have no choice but to implement tax or non-tax incentives. This means that if a country provides an energy price subsidy, they must also bear the outflow of government money to support EE&C investment. Such a double burden is

clearly unsustainable for a country.

3.2.3. Set Aside a Government Budget through a Special Purpose Tax

Governments must set aside a budget to adopt tax or non-tax incentives. One way to secure such a budget is to implement a special purpose tax. When designing such a tax, taxpayers (the sources of a fund) and beneficiaries (the recipients of a fund) should be consistent. For instance, if a special purpose tax on the electricity charges of industrial consumers is used to build a fund, tax incentives financed by this fund should be given to the industry in question. This will help minimise any feelings of unfairness on the part of the taxpayers. This can also become an incentive for EE&C investment because those who invest can gain larger benefits than those who are taxed.

Meanwhile, the operation of funds can sometimes become problematic if the funds are used for any other purpose than that initially intended. As this may lead a loss of taxpayer trust, and social problems in the future, the government must maintain tight control of the funds.

3.2.4. Build up Financing Capability

Building up the capability of bank institutions is another important measure to promote EE&C investment.

Energy Efficiency and Conservation Education for Bank Institutions

The barriers to EE&C finance include a lack of knowledge on the part of bank institutions. Since banks cannot evaluate and thereby finance an EE&C project without appropriate knowledge, education for bank institutions, ranging from the importance of EE&C to major technology and its effects, is suggested to improve their financing capability.

Develop Energy Efficiency and Conservation Financing Guidelines for Bank Institutions

Education for bank institutions must cover the methods of evaluating EE&C projects. EE&C investment sometimes cannot provide traditional collateral (e.g. fixed assets). In this case, a bank is able to request holding knowledge to evaluate the project's profitability and risk, as in the case of project finance. The only way to achieve such capability is through the accumulation of experience, which takes time. Developing a guideline for EE&C financing is just

one of several ways that a government can provide support. Countries can also refer to and cooperate with bank institutions in developed countries that have more experience in this field.

3.3. Conclusion

ASEAN is diverse and the state of EE&C policy implementation differs significantly from country to country. Thus, the region is expected to raise the overall level of such policy implementation though either multilateral or bilateral cooperation. Multilateral cooperation would enable the region to share best practices of financing in each country, while bilateral cooperation would enable receiving countries to ask providing countries for specific types of support, including that relating to the financing of policy design and facility diagnoses.