Chapter 8

Policy Implications and Conclusions

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The policy implications of this study are summarised below.

First, the respondents' environmental concerns can justify renewable expansion. The respondents in this research have many concerns about air pollution and global warming issues, and renewables are found to be environmentally friendly.

Second, although the respondents are willing to pay extra money for renewables, the willingness to pay (WTP) is not high, necessitating the continued cost reduction of these technologies. The amount of WTP for renewable energy is only a few percent in Thailand and Malaysia for most cases, and around 10% in the Philippines, with the highest value being about 20% for solar in the Philippines (for an increase in renewable energy share to 60%). These figures are mostly consistent with those indicated for developing countries according to the literature review conducted in last year's report. This can be interpreted as that the consumers are willing to pay more money for renewable energy, but the amount is not significantly large. Renewable energy itself has been steadily decreasing in cost worldwide, but as more renewable energy is introduced, there will be increasing costs for grid measures such as transmission expansion and energy storage deployment. Innovation to lower the cost of system integration as well as to develop renewable energy technologies will be increasingly necessary in the future, and there is a need to strengthen innovation so that the total cost can be kept within this small figure.

Third, different perceptions of renewable technologies imply that different deployment strategies might be needed. Solar photovoltaic (PV) has the highest awareness amongst renewable energy sources and is regarded as the most environmentally friendly energy as shown in the surveys for all targets countries. Furthermore, in all of the countries investigated, biomass energy receives a consistently low value. The willingness to pay also basically corresponds to this tendency. The WTP for solar PV is consistently high and that for biomass energy tends to be low. It is a fact that biomass energy can cause air pollution if not used with end-of-pipe technologies. Also, air pollution ranks high on the list of environmental problems that people are concerned about, which may explain why people have a bad impression of biomass. However, since biomass is an important renewable energy that can be dispatched, it is necessary to properly regulate biomass energy and to dispel its bad image. As for solar power generation, the willingness to pay is high and the impression is good, so it may be prioritised for expanding deployment.

Compared to the results of the phase one, the percentage of people who have been economically affected by COVID-19 has generally increased. Therefore, this may have influenced the results of this year's survey. Although we do not know how long the impact of COVID-19 will last, we need to be careful in interpreting the results from this year's survey of willingness to pay.

In this study, we investigated the willingness to pay not only for renewable energy, but also for electric motorbikes. Although price is not necessarily an important factor in the decision to purchase a motorbike because of the aspect of consumption for status, we devised our research design and conducted the survey. We found that citizens have a good knowledge and positive attitude towards electric motorbikes, even though the current levels of adoption are still very low. We also found that initial cost, speed, range, fuel and maintenance costs, and country of origin have a significant influence on the decision to purchase. Interestingly, the image of Vietnamese brands on electric motorbikes (new, and therefore, with little experience) is similar to the predominant and premium brands (particularly Japanese). Also, it was found that charging time is not a significant concern to purchase an electric motorbike, as is the case for electric cars. When asked about preferred policy actions to promote electric motorbikes, tax reductions and investments in charging facilities in public spaces are the most commonly mentioned. In addition to these, respondents were also very positive about the support to local brands manufacturing electric motorbikes. The results show the potential of electric motorbikes to support a transition towards a more sustainable urban mobility (with reducing air and noise pollution and limiting the impact in traffic conditions from a shift towards private cars) as well as to incentivise the emergence of new (or upgrading of existing) industries in the country.

The results of this study on carbon dioxide removal (CDR) provide suggestions for the direction of international research and development. CDR was little known in the target countries and the awareness was low. When the respondents were given some simple information and asked to think about it, they gave ambivalent answers. That is, the respondents felt that CDR had some benefits, but also recognised that it could hinder mitigation measures such as reducing carbon dioxide emissions. Moreover, as CDR is still an immature technology, it will need to be developed. When asked which countries and regions should lead the way in its technological development, they responded those countries that are affected by global warming (Philippines) (the choice that received largest responses), and those that emit large amounts of carbon dioxide (Malaysia and Thailand). The importance of CDR is increasing day by day, as countries around the world

are planning to achieve net zero emissions by 2050, and sooner or later ASEAN countries as well will need to consider such a drastic reduction.

In addition, it should be noted that the willingness-to-pay figures revealed in this study are limited to renewable energy and electric bikes, and not to carbon pricing applied to the entire economy.