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Choosing the Green Energy Option: A Willingness to Pay Study of Metro Manila Residents for Solar Renewable Energy

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Abstract : The energy market in the Philippines remains to have one of the highest electricity rates in the region averaging at US$0.16/kWh (PHP6.89/kWh), excluding VAT, as opposed to the overall energy market average of US$0.13/kWh. The movement towards renewable energy, specifically solar energy, will pose as an expensive one with the country's energy sector providing Feed-in-Tariff rates as high as US$0.17/kWh (PHP8.69/kWh) for solar energy power plants. Increasing the share of renewables at the current state of the energy regulatory background would yield a three-fold increase in residential electricity bills. The issue lies in the uniform charge that consumers bear regardless of where the electricity is sourced resulting in rates that only consider costs and not the consumers. But if they are given the option to choose where their electricity comes from, a number of consumers may potentially choose economically costlier sources of electricity due to higher levels of utility coupled with the willingness to pay of consuming environmentally-friendly sourced electricity. A contingent valuation survey was conducted to determine their willingness-to-pay for solar energy on a sample that was representative of Metro Manila to elicit their willingness-to-pay and a Single Bounded Dichotomous Choice and Double Bounded Dichotomous Choice analysis was used to estimate the amount they were willing to pay. The results showed that Metro Manila residents are willing to pay a premium on top of their current electricity bill amounting to US$5.71 (PHP268.42) – US$9.26 (PHP435.37) per month which is approximately 0.97% - 1.29% of their monthly household income. It was also discovered that besides higher income of households, a higher level of self-perceived knowledge on environmental awareness significantly affected the likelihood of a consumer to pay the premium. Shifting towards renewable energy is an expensive move not only for the government because of high capital investment but also to consumers; however, the Green Energy Option (a policy mechanism which gives consumers the option to decide where their electricity comes from) can potentially balance the shift of the economic burden by transitioning from a uniformly charged electricity rate to equitably charging consumers based on their willingness to pay for renewably sourced energy.

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